

Voice

of
the Federal Reserve Bank of Dallas
El Paso · Houston · San Antonio

September 1978

- 1 Today's Monetary Policy Affects Tomorrow's Economy
- 14 One-Bank Holding Companies Increase Rapidly
- 18 Southwestern Banks Improve Performance in 1977

Today's Monetary Policy Affects Tomorrow's Economy

By Patrick J. Lawler

Monetary policy is primarily concerned with the future. Although day-to-day decisions focus on quickly affected targets such as short-term interest rates, bank reserves, or the money supply, the ultimate goals of policy are in terms of employment, production, and inflation in future periods. So current decisions must take into account the lag between today's short-run targets and tomorrow's economy.

This lag occurs because firms and households adjust gradually to changes in interest rates and availability of credit. While short-term money market interest rates respond immediately, other interest rates that figure more importantly in spenders' decisions—such as the bank prime lending rate, mortgage rates, stock and bond yields, and the return on savings accounts—may take several weeks or more to change, if at all. As these rates change, businesses and consumers adjust their financial asset portfolios to reflect the changes, and reconsider their spending plans.

An easier monetary policy, for example, makes it cheaper to borrow and less rewarding to save. Increased spending raises both production, to meet the increased demand, and prices. Greater production provides increased profits and labor earnings, which further stimulates investment and consumption, causing more inflation—and so on. Eventually the increased spending works to increase interest rates and the process reverses itself. The only

lasting effect is on prices. In the meantime, however, production, unemployment, and the rate of inflation are diverted from their original paths.

But whether these changes take a matter of months or of years is critical. Current policy choices must be made to suit the economy's needs at some future time when the impact of current policy is greatest. The needs of the economy in the next quarter or two may be just the opposite of its needs two years from now. Thus, knowing the length of the lag between policy decisions and their effect on economic activity is essential.

The length of the lag is of interest not only for determining the correct anticyclical policy but also for determining whether we should attempt to smooth business cycles at all. If our forecasts of the future are accurate enough, and if our ability to predict the strength and timing of policy effects is good enough, we can expect that a flexible monetary policy is an effective way to stabilize the economy.

If a recession is predicted, for example, we could offset some of the weakness with a shift to an easier monetary policy. Knowing the length of the time lag until the economy is affected would allow us to determine just when to shift policy. But if the major impact of a policy change occurs beyond the time horizon of our best forecasts, a policy rule, such as a steady growth rate of money, might be preferable.

Current policy choices must be made to suit the economy's needs at some future time when the impact of current policy is greatest. The needs of the economy in the next quarter or two may be just the opposite of its needs two years from now.

These widely differing conclusions reflect differences in definition as much as anything else. There are several ways to define changes in monetary policy and many alternative measures of its effects. Policy has been described variously in different studies as a change in the rate of growth of the money stock, a change in interest rates, or a change in bank reserves. A one-time change in one of the policy measures may be equivalent to a continuing change in another. For example, an increase in the money supply has the same effect as a decrease in interest rates, initially, followed by increases later on. So a policy of attempting to lower interest rates permanently would cause a longer lag since the lower rates would provide continued new stimulation to the economy.

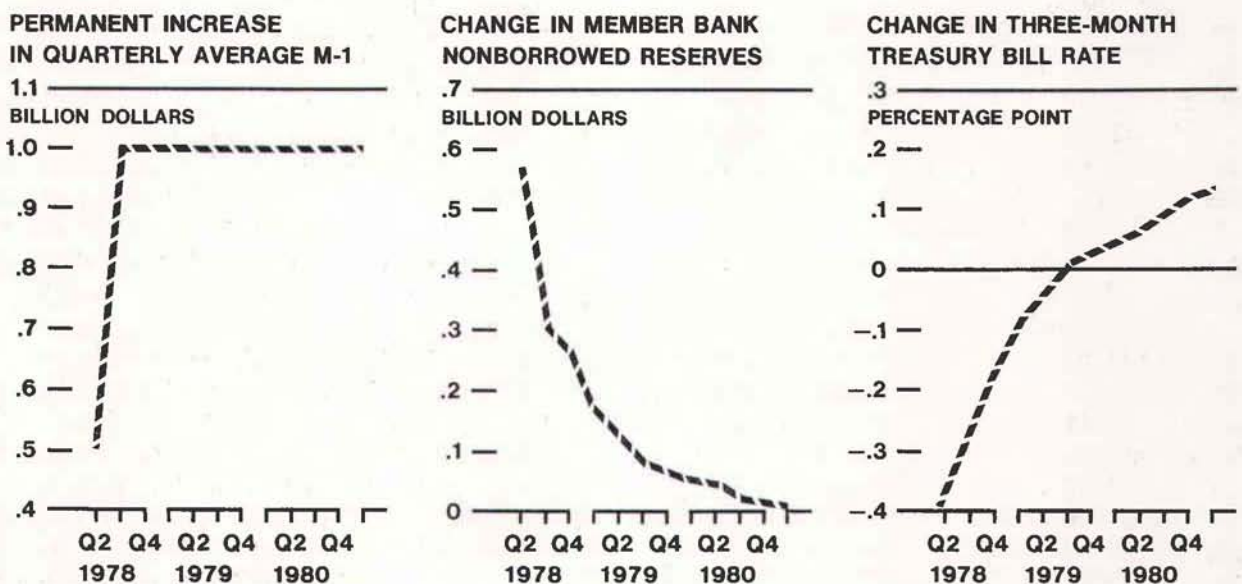
Conceptual difficulties

Attempts to measure the lags have led to widely differing results. Some have found that the maximum effect on economic activity occurs within three to six months. Others have estimated the peak effect to occur two years or more after a new policy starts. While most studies assume that the lag is always the same, some results indicate the lag is variable. It may be short at one time but long another time, which poses a particularly difficult problem unless the differences are predictable.

Differences also arise as to the particular effects of monetary policy that are of primary interest. For example, some studies have focused on the time lag for effects on the level of nominal GNP (current-dollar gross national product). Others have looked at the time lag for effects on the rate of change of GNP. This makes the measured lag

Any policy change can be described in terms of the money supply, bank reserves, or interest rates

CHART 1. Three Definitions of the Same Policy Change



shorter even though the economy is affected in the same way. Other important effects with still different time lags include the effects on real output (GNP adjusted for price changes) and on inflation.

Further problems arise in comparing lags because lags may differ in shape as well as in length. For example, a policy that has virtually no effect for a year and has its full effect from then on is very different from one that has close to its maximum effect almost immediately but does not quite reach its peak until after a year. Yet both have the same lag between the time policy is changed and the maximum effect of the change.

New lag estimates with the MPS model

Bedeveled by these definitional problems as well as by the lack of high-speed computers, the studies of the 1960's were conflicting and inconclusive. But now, large structural models of the economy, such as the MIT-PENN-SSRC (MPS) model, make it possible to consider the effects of alternative policies in some detail. A large structural model of the economy provides the best framework now available for analyzing monetary policy lags.

The model employed here is a version of the MPS macroeconomic model currently used by the staff of the Board of Governors of the Federal Reserve System. It consists of a large number of equations representing economic relationships that have been estimated from historical data. The equations are solved simultaneously in order to take account of the sometimes subtle interactions between economic variables.

Although these relationships may change over time and may even be affected by actual policy choices, a large model has a number of advantages. It is easy to compare two different policies by observing how the economy could be expected to behave differently with each over a past or future period. In doing so, we avoid a problem of some earlier studies that were unable to sort out the effects of monetary influences from other sources of cyclical disturbance in the economy. And by examining policy in different time periods, we can also check whether the lags vary over time in a systematic way.

The best way to measure policy and its effects is still not fully clear. The Federal Open Market Committee (FOMC) makes policy decisions primarily in terms of the money supply and its growth, so the more useful lag measures should

be related to these measures. Although money is controlled only within broad limits, a decision to increase or decrease the boundaries of the range of tolerance almost certainly results in faster or slower money growth.

The preferred policy measure should depend on the alternatives actually considered. Policymaking is a continual process. Each quarter, new decisions on long-term policy are made. A decision to change current policy, by affecting the future course of the economy, would probably also change future policy from what it would otherwise have been. What, then, is the correct measure of the effect of the current change? We could assume future policy unchanged, or we could include the effects of future policy changes caused by the first change. The broadest view of the problem would be to ask, How does action taken in this quarter affect the range of future options for production and inflation? But the answer would require consideration of an infinite number of possible future policies.

To simplify the analysis, we will limit ourselves to comparing a variety of policy options with one specific set of present and future actions. This base set assumes that the narrowly defined money supply ($M-1$) is carefully controlled, growing at an essentially steady rate consistent with recent FOMC long-term targets over a three-year period.

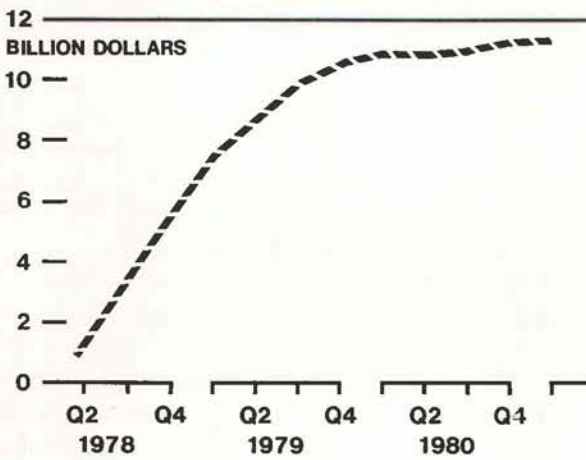
One plausible policy alternative would be to add a small amount to the money supply initially and then maintain the same increment in future periods. To examine this policy, we simulated the MPS model over a three-year period starting with the second quarter of 1978, based on information available in May. We compared the one simulation, which assumed that the base policy was followed, with an alternative in which \$1 billion was added gradually during 1978-Q2 and maintained so that the money supply was \$1 billion higher than in the base simulation in each succeeding quarter. The same policy change can be expressed in terms of changes in either interest rates or bank reserves, but the patterns of these variables are more irregular (Chart 1).

The results show an increasing effect on nominal GNP throughout (Chart 2). The maximum effect would occur more than three years after the change in policy. Had we extended the simulation further, the size of the effect would eventually have started to decline and then moved up and down in a cyclical fashion, settling at about \$7 billion of increase in GNP as a result of the \$1 billion increase in money.

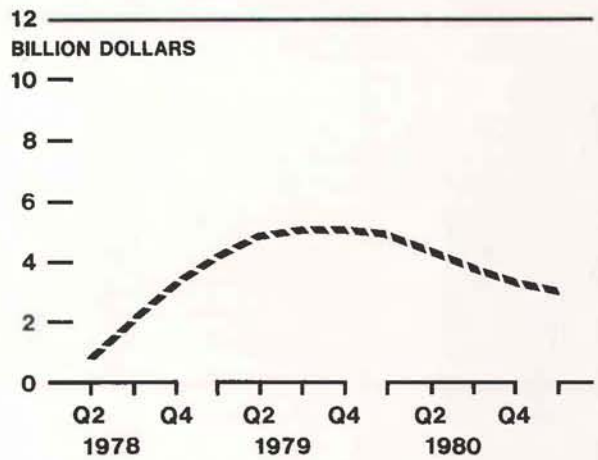
The lag in the effects of monetary policy depends on which effects are examined

CHART 2. Effects of a \$1 Billion Increase in the Money Supply on Different Variables

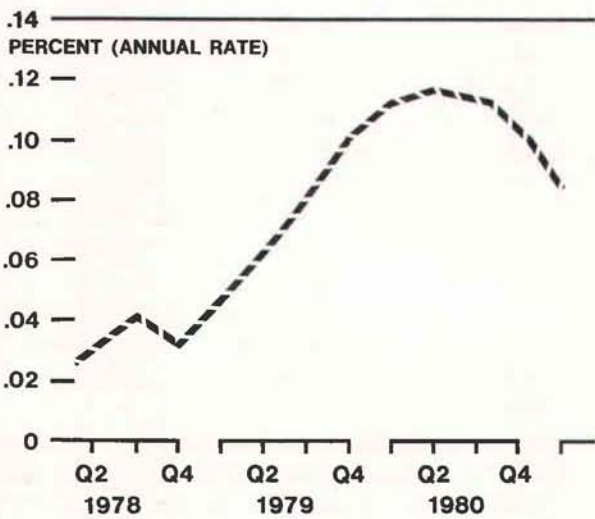
CHANGE IN NOMINAL GNP



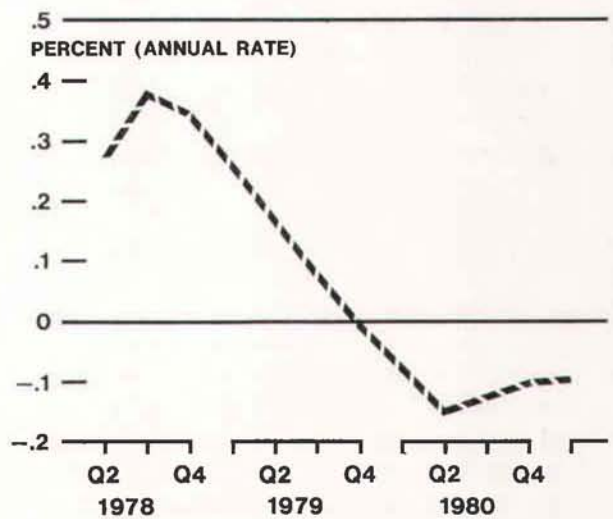
CHANGE IN REAL GNP



CHANGE IN INFLATION RATE



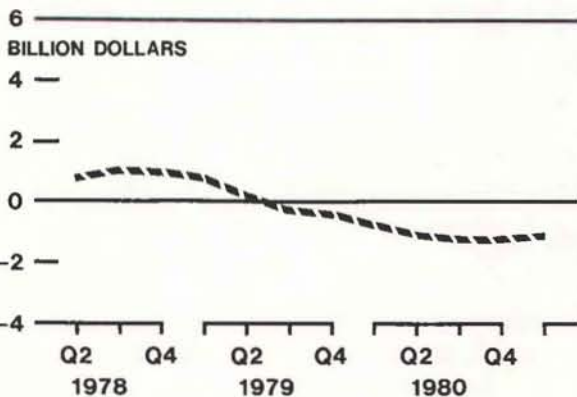
CHANGE IN GROWTH RATE OF REAL GNP



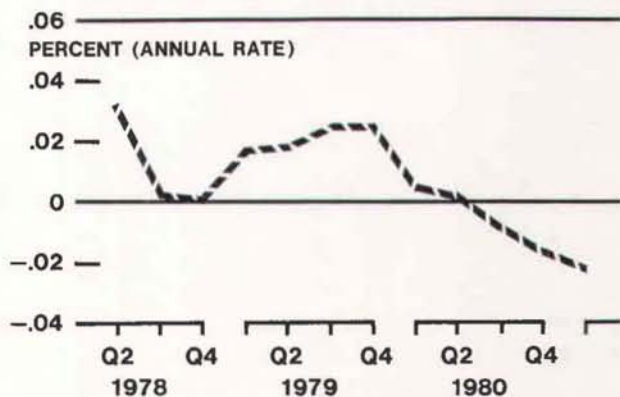
If reversed quickly, the effects of monetary policy are mild

CHART 3. Effects of a \$1 Billion Temporary Increase, Then Decrease, in the Money Supply

CHANGE IN REAL GNP



CHANGE IN INFLATION RATE



The major goals of policy, however, are to influence real output and the rate of inflation. The lagged effects on these variables peak much earlier in the MPS model. These lags are probably more relevant. The maximum effect on inflation of the alternative policy is a little more than 0.1 percentage point after two years. Real GNP is increased by \$5 for each additional dollar of money, with the peak effect coming in a year and a half. The major effects on production growth appear even more quickly—in the two quarters immediately following the quarter during which the policy was changed.

Which of these measures is the most relevant depends on the goals of policy. If the intent is to smooth the boom and recession parts of a business cycle, the effects on the level of real GNP are most pertinent. But if the goal is to stay on a steady growth path, information about the effects on the rate of growth of real GNP would be more useful. Each might be preferred at different times.

Policymakers need not commit themselves irrevocably so far into the future, however. Another reasonable alternative policy would be to increase the money supply by \$1 billion in the first period then gradually reduce it by the same amount in

the next period, so that the money supply returns to its level in the base policy simulation by the end of the second quarter.

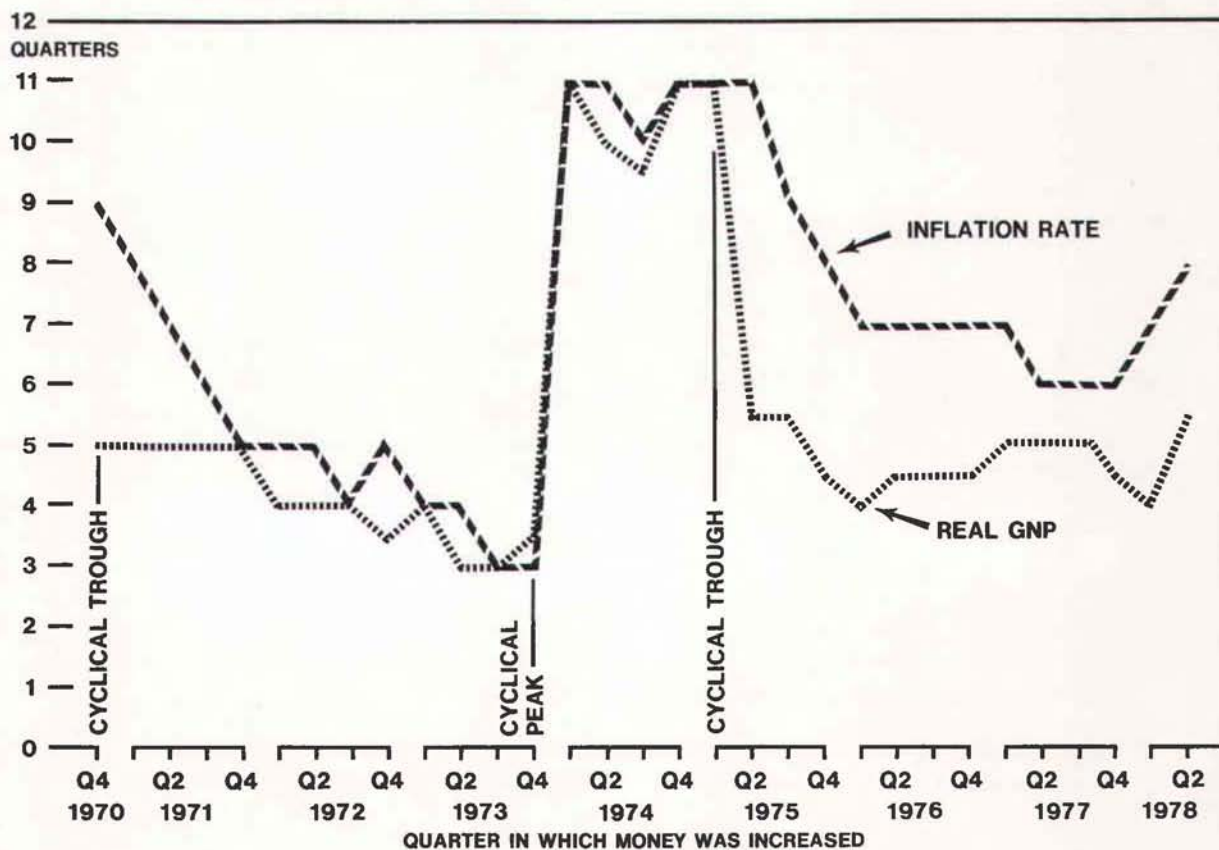
The results (Chart 3) indicate a very short lag, with all the effects comparatively minor. This suggests that if a mistaken monetary policy is reversed quickly, the error need have but little effect on the economy. Or alternatively, if the money stock is allowed to drift up unintentionally during one quarter, compensating action during the following quarter will prevent any serious damage.

The length of the lags in the effects of policy varies considerably over time in the MPS model. By using the model to simulate historical periods, we can compare what actually occurred with what the model estimates would have happened had there been a permanent \$1 billion addition to the money supply at some point in the past.¹ We ran

1. The model was run over past periods using actual exogenous variables. The equations were adjusted so that prediction errors were eliminated. Next, the model was rerun with an additional \$1 billion of money ($M-1$) in each period. This result was then compared with what actually occurred.

Lags in the effects of monetary policy tend to be shorter in economic expansions

**CHART 4. Number of Quarters Until Peak Effect of Money Increase
on Real GNP and Inflation**



simulations starting with each quarter from the fourth quarter of 1970 to the second quarter of 1978. Chart 4 shows how the peaks of the lags have changed over time. For each simulation the vertical axis indicates how long it took for the money addition to have maximum effects on real GNP and the inflation rate.

The results differ dramatically, depending on when the addition to money was made. If the money supply had been increased during the third quarter of 1973 by \$1 billion more than it actually was, with further additions unchanged from their

historical quantities, the maximum effect of the addition on real output and inflation would have been felt only three quarters later, the second quarter of 1974. But the effects of an increase in money during 1974-Q1 would still have been growing at the end of 1976, 11 quarters later.

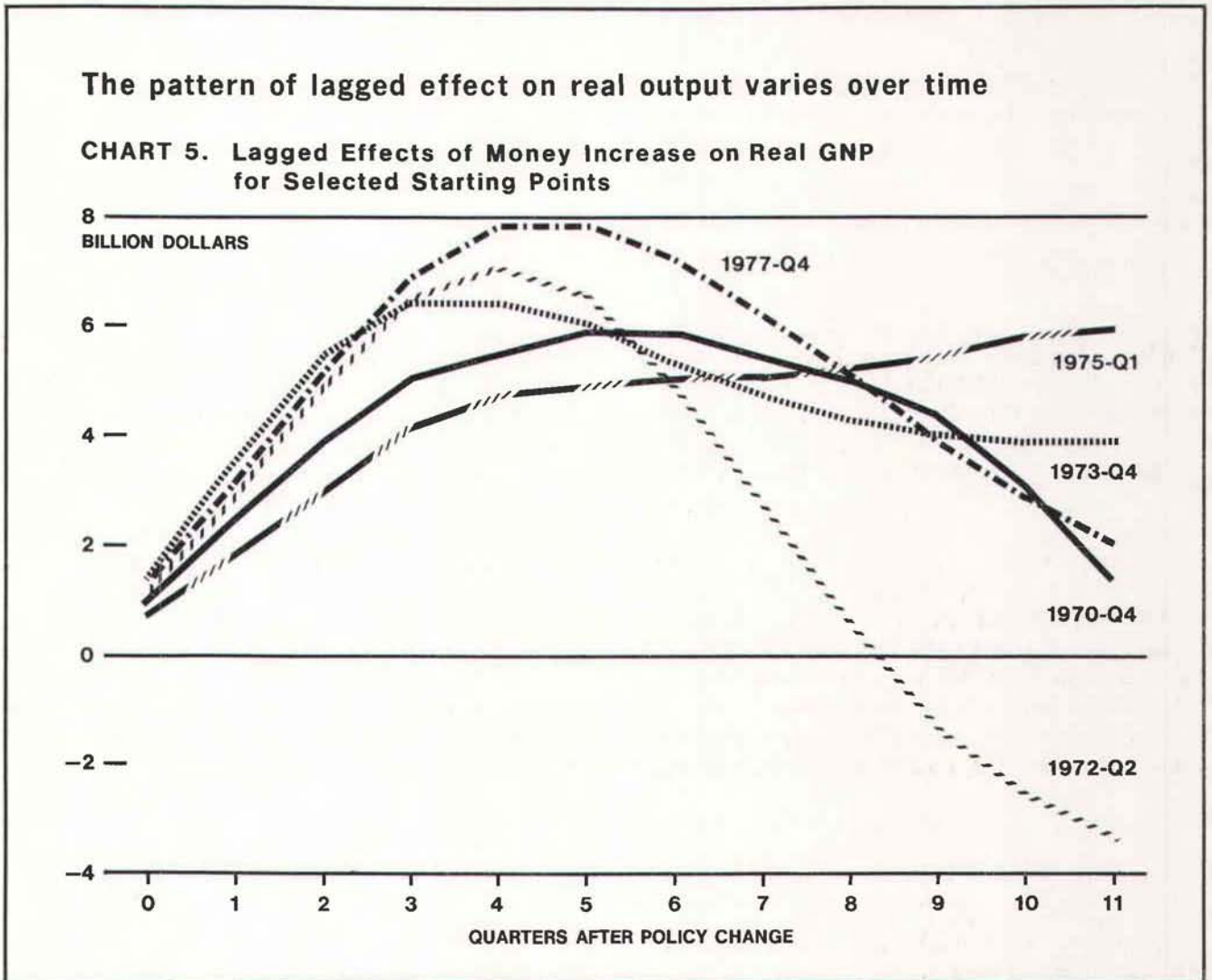
Although our results span less than two full business cycles, it appears that the length of the lags in policy effects behaves cyclically. Long lags occur at the recession trough of 1970-Q4 and immediately after, and throughout the recession of 1973-Q4 to 1975-Q1 and immediately after. The

lags are short only during economic expansions.² This cyclical behavior supports the popular view that it is harder for monetary policy to "push on a string," or get things moving in a recession, than to restrain a boom. When existing capital is fully employed, a small change in product demand alters the investment needs of the economy immediately. But when existing plants and equipment are underutilized, an increase in product demand requires no new investment.

2. The long lags in the most recent quarter may reflect the very weak outlook of the version of the MPS model used here, which does not contain any of the judgmental adjustments that might be made for forecasting purposes.

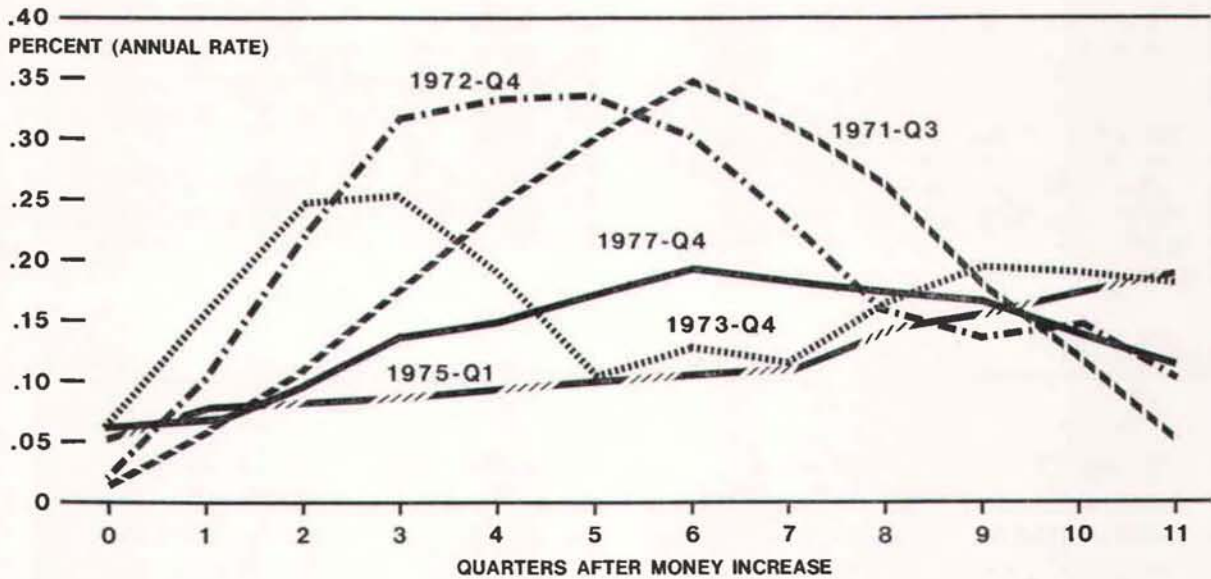
The model indicates a longer lag in the effect of monetary policy on the rate of inflation during the latest expansion than during the 1970-73 expansion. This is somewhat puzzling since the model assumes the underlying structure of the economy to be unchanged over time. The difference may stem from the fact that the last recession was much deeper than the previous one, so that unemployment rates have generally been much higher during the latest expansion. With greater slack in labor markets, a marginal decrease in unemployment has a less rapid effect on wages and prices in the model.

Not only do the peaks of the lag distribution change over time, but the shapes and amplitudes change also. Chart 5 illustrates some representa-



Fighting inflation would have taken stronger policy measures in 1975 or 1977 than in 1972

CHART 6. Lagged Effects of Money Increase on the Rate of Inflation for Selected Starting Points



tive lags of policy effects on real output.³ In recent quarters the potential effects of policy have been more powerful than in the past. An increase in money in last year's fourth quarter would have raised price-deflated GNP a year later by almost \$8 for each additional price-deflated dollar of money.

The shape of the lags indicates the importance of correct timing in monetary policy. The lag structure for policies begun in 1972-Q2 is typical of lags relating to money increases initiated from late 1971 through 1972. By the ninth quarter after a money increase, 1974-Q3, the model estimates that real GNP would have been lower than it actually was. Thus, had the money supply grown more

rapidly than it actually did in late 1972 and early 1973, the peak of the boom would have been higher but the decline in production would have gone deeper. Alternatively, greater restraint during that period would have reduced the peak of the boom but would have softened the recession.

Lag structures of the effects on inflation also differ widely (Chart 6).⁴ The ability to reduce inflation appears to have been much weaker during the current expansion than during the last. The maximum effect on the inflation rate of an equal change in money relative to GNP was more than twice as great in 1971 as last year. This probably results from the overexpansion of the economy in 1973, when policy changes in late 1971 and in 1972

3. To improve comparability, the effects on real output were multiplied by the value of the GNP deflator in the starting period. Thus, the chart in effect shows the impact of an initial \$1 billion increase in real money (the price-deflated money supply).

4. Here, to improve comparability, the effects on the rate of inflation were multiplied by the ratio of 1972 GNP to actual GNP in the starting period. The chart therefore indicates the effects of money increases equal in size, relative to the size of the economy, to a \$1 billion increase in 1972.

would have had their greatest impact. No such boom is or has been projected by the model; therefore, marginal changes in labor market tightness have less effect on inflation.

Much of the effect of a policy decision made today to permanently increase or decrease the money supply occurs far into the future—so far, in fact, that forecasts of GNP for the relevant periods are probably not reliable.

Implications for policy

To put these lags in proper perspective, they must be considered in relation to the accuracy of forecasts of the economic variables that policy is designed to affect. As indicated in the accompanying table, a recent survey by Victor Zarnowitz of the accuracy of major forecasts found large forecasting errors over the 1970-75 period.⁵ Predictions of real GNP four quarters beyond the forecasting date were off by 2.4 percentage points on average, and the errors swelled to 5.2 percentage points for forecasts eight quarters in the future. Although forecasts have been more accurate since 1975, errors of this magnitude create a critical problem for policy. Much of the effect of a policy decision made today to permanently increase or decrease the money supply occurs far into the future—so far, in fact, that forecasts of GNP for the relevant periods are probably not reliable.

But policy decisions are not immutable. Forecasts improve as the time period being forecast draws near, as indicated in the table. The costs of an erroneous forecast depend on how quickly it is corrected. As observed above (Chart 3), if error is discovered quickly, a reversal of policy can prevent much damage from being done. If, however, a policy change is predicated on a mistaken forecast that is not corrected until after the forecast period is over, the full effects of the policy

may be disruptive to the economy. In general, it should be possible, each quarter, to make partial corrections in policy for past forecast errors. Thus, the faster forecasts are corrected, the more effective countercyclical monetary policy can be. Unfortunately, as the table again indicates, the record is not particularly good.

The success of discretionary monetary policy also depends on how ambitious it is—that is, the extent to which policy attempts to offset cyclical disturbances. If policy seeks to smooth business cycles only partially, forecast errors may be less serious. For example, a policy designed to lessen the severity of a recession by half will still be useful if an accurate forecast would have predicted a somewhat larger or smaller recession.

Forecast errors are larger for more distant time periods

(Errors in quarterly multiperiod forecasts of GNP and real GNP, 1970-75, in percentage points)

Span of forecast	GNP	Real GNP
One quarter46	.53
Two quarters98	1.25
Three quarters	1.42	1.90
Four quarters	1.73	2.43
Five quarters	2.19	3.06
Six quarters	2.59	3.83
Seven quarters	2.96	4.68
Eight quarters	3.15	5.24

NOTE: Figures are averages of mean absolute errors in percentage changes, using a sample of major forecasts.

SOURCE: Zarnowitz, "How Well Do Economists Forecast Growth, Recessions, and Inflation?" p. 24.

Policy may also be more effective at some stages of the cycle than at others. Wallace Duncan found that one- and two-quarter forecast errors were higher near turning points.⁶ This suggests that it should be easier to follow a discretionary policy during long expansions, when predictions are more accurate and policy lags are fairly short, than near cyclical peaks and troughs.

5. "How Well Do Economists Forecast Growth, Recessions, and Inflation?" *Economic Outlook USA* 5 (Spring 1978): 22-25.

6. "Forecasting the Economy—The Stock Market Versus Econometric Models," *Review*, Federal Reserve Bank of Dallas, December 1977, pp. 5-13.

Conclusions

The foregoing analysis should make it clear that there is no easy answer to the question, When will the effects of current policy actions be felt by the economy? There are different lags for different types of policy alternatives, for different starting dates, and for different goal variables.

For one specific policy option, a permanent change in the money supply, the MPS model indicates that peak effects on real output and inflation occur as early as three quarters and as late as three years or more after the change.

Considered in relation to errors in economic forecasts, the policy lags are quite long. The major effects of policy generally occur beyond the range of reasonable forecast accuracy. Nevertheless, monetary policy is flexible enough to adjust to minor forecast errors, especially during expansions. During recessions, however, forecasts are particularly poor and, in the MPS model, monetary policy is relatively weak and acts only with long lags.

New member banks

Baybrook National Bank, Friendswood, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business August 14, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$750,000 and surplus of \$750,000. The officers are: Thomas A. Boone, President and Chief Executive Officer; A. W. Schmidt, Chairman of the Board (Inactive); and Mary Evelyn Clift, Cashier.

Southwest National Bank, Hobbs, New Mexico, a newly organized institution located in the territory served by the El Paso Branch of the Federal Reserve Bank of Dallas, opened for business September 5, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$750,000 and surplus of \$750,000. The officers are: S. D. Levenson, Chairman of the Board; Gary C. Lawrence, President; and Richard W. Jones, Vice President and Cashier.

South Park National Bank, San Antonio, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business September 5, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$500,000, surplus of \$500,000, and undivided profits of \$250,000. The officers are: H. Gilmer Williams, Chairman of the Board and President; Wendell H. Rees, Jr., Cashier; and Jesse Santiago, Loan Officer.

New nonmember bank

Bank of Kerrville, Kerrville, Texas, a newly organized nonmember bank located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business August 3, 1978.

“Fed Quotes”

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

On inflation

“Inflation usually is the final link in a chain of well meant actions. The benefits of a tax cut, of increased public spending are felt within a few weeks or quarters. The penalty in terms of inflation, may not come until after a couple of years or even later. Inflation is the long-run consequence of short-run expediencies. Life, to be sure, is a succession of short runs, but every moment is also the long run of some short-run expediency of long ago. We are now experiencing the long-run consequences of the short-run policies of the past. These consequences are as unacceptable as rain on weekends, and just as easy to change. If we continue to meet current problems with new short-run devices, the bill will keep mounting.

“We will not defeat inflation if we always take the short view. We will then always find that the cost of fighting inflation is always too high, the short-run loss of output and employment too great. We shall find ourselves ignoring inflation, in the hope that it will somehow not grow worse. That is pure self-deception. . . . Inflation ignored accelerates.”

Henry C. Wallich, Member, Board of Governors of the Federal Reserve System
“Honest Money” (Remarks at the M.B.A. Graduation Exercises of the Fordham Graduate School of Business, New York, New York, June 28, 1978)

“Inflation is a more fundamental although more slowly operating factor in influencing the international value of the dollar than the current or capital account deficit. In the short run, to be sure, it is the level of business activity that primarily influences imports and exports and therewith the exchange rate. That clearly has been the experience of the United States and of the dollar. But in the longer run, inflation rather than the cyclical gap is likely to be the dominant force, to the extent that U.S. inflation differs from inflation abroad.”

“Success against inflation would directly strengthen the dollar and would also help to reduce the current account deficit. There remains the question what other influences can be brought to bear on this gap in our international accounts.”

Henry C. Wallich, Member, Board of Governors of the Federal Reserve System
“Trade, Capital Flows, and Currencies” (Remarks at the 8th International Management Symposium at the St. Gallen Graduate School for Business and Public Administration, St. Gallen, Switzerland, May 8, 1978)

Fewer and better regulations

"Establishment of a high-growth, low-inflation economy would be facilitated by extensive reform of costly governmental regulations. Regulatory activities in the health, safety and environmental protection areas may not always achieve the desired outcome at minimum costs, and they need to be reviewed with that thought in mind.

"Similarly, market- and price-regulation programs should be carefully reexamined to ensure that their benefits outweigh their costs."

"In the same vein, it is important that we carefully consider alternatives for those programs that tend to limit competition and raise prices. Notable examples are import controls, price supports, and the Davis-Bacon and Walsh-Healy Acts. In addition, it seems appropriate to consider deferring the increase in the minimum wage that is scheduled for January 1, 1979, given its implications for costs and for youth employment opportunities."

G. William Miller, Chairman, Board of
Governors of the Federal Reserve System
"Miller: Cutting Federal GNP Share to 20%
Would Expand Housing, Business Capital"
(*American Banker*, July 17, 1978)

"Turning to the extension of the current deposit ceiling rate authority, the Board continues to believe that such rate ceilings—and the mandated deposit rate differentials between banks and thrifts—should be removed over the long run to promote equity for small savers and economic efficiency. Although in practice rate ceilings probably can be removed only gradually, growing competitive inequities under the present rate structure make it imperative that the process of removing artificial rate and differential restrictions begin soon."

Philip C. Jackson, Jr., Member, Board of
Governors of the Federal Reserve System
(Statement before the Subcommittee on
Financial Institutions Supervision, Regulation
and Insurance of the Committee on Banking,
Finance and Urban Affairs, U.S. House of
Representatives, July 26, 1978)

"The national policy of barring interstate banking, as embodied in the McFadden Act, needs review. Banking has changed. The structure of the economy and its financial needs have also changed since the McFadden Act was passed over 50 years ago. Pending completion of that review, however, it is inconsistent with the principle of national treatment and unfair to domestic banks to allow foreign banks to continue to expand offices across State lines."

G. William Miller, Chairman, Board of
Governors of the Federal Reserve System
(Statement before the Subcommittee on
Financial Institutions of the Committee on
Banking, Housing and Urban Affairs, U.S.
Senate, June 21, 1978)

National monetary policy

"We can debate a specific monetary policy on its merits, but from any standpoint, I can see no public purpose to be served by limiting the effectiveness of the central bank. Monetary policy is made for the entire nation, not a limited sector of the banking community. All depository institutions are chartered in the public interest and all should be directly supportive of and participants in the implementation of policy."

Philip E. Coldwell, Member, Board of
Governors of the Federal Reserve System
(Statement before the Committee on Banking,
Finance and Urban Affairs, U.S. House of
Representatives, July 31, 1978)

Board Proposes to Lighten Penalties for Early Withdrawal of Time Deposits

The Board of Governors of the Federal Reserve System has issued for comment a proposal to lighten the penalty required for early withdrawal of certain types of time deposits at member banks. The proposal, an amendment to Regulation Q (which covers interest on deposits), is expected to benefit particularly time deposits in long-term Individual Retirement Accounts (IRA's) and Keogh Plan retirement accounts.

Under the Board's proposal, changes would be made in the penalties member banks are required to impose in the case of early withdrawal from either time deposit open accounts—accounts that have a specified maturity date—or notice accounts—those that have no specified maturity but require the depositor to give notice (commonly 90 days) of intent to withdraw all or part of the account.

One-Bank Holding Companies Increase Rapidly

By Carol C. Madeley

The number of one-bank holding companies has increased dramatically since the Bank Holding Company Act Amendments of 1970, popularly known as the one-bank holding company act. This relatively new development is spreading rapidly as bankers seek the tax advantages of the holding company form of ownership of small banks. The trend has only recently caught on in the Southwest, particularly in Texas, where the number of one-bank holding company approvals has jumped from a total of 3 for the 1971-74 period to 20 in just the first half of 1978. As of June 30, 1978, there were 82 one-bank holding companies in the Eleventh Federal Reserve District, which includes Texas and parts of Louisiana, New Mexico, and Oklahoma.

Advantages and disadvantages

The major reason for most one-bank holding company formations is to reduce Federal income tax. Interest payments to service the debt incurred by a holding company to acquire a bank's stock are totally tax-deductible, whereas interest deductions by an individual are generally limited to \$10,000 a year. Also, if a consolidated income tax return is filed, dividends from the bank to the holding company are not taxed, as such income would be if the dividends were paid to individual stockholders.

For a better understanding of the tax advantages of the holding company, a simple comparison of the tax situation of the owner of bank stock both

ONE-BANK HOLDING COMPANIES IN TEXAS

Date	Number	Domestic deposits (Millions of dollars)
December 31		
1974	59	\$2,316.1
1975	48	2,672.3
1976	52	2,079.5
1977	61	2,157.5
June 30, 1978 ...	75	2,620.3

NOTE: Includes companies for which regulatory approval has been granted but acquisition of bank stock has not been completed.

before and after a one-bank holding company formation may be helpful. The important point is that before the holding company is formed, there are two taxpayers but after the holding company is formed, there is only one.

Assume that an individual borrows to acquire controlling interest in the stock of a bank. In this situation there are two taxpayers. The bank pays tax on its taxable income, and the stockholder also pays tax on his dividend income. The stockholder may deduct certain expenses from this taxable income, but because of a provision in the Internal Revenue Code, called the investment interest limitation, the individual is not allowed to deduct most of the interest he pays on his stock acquisition debt.

When a one-bank holding company is formed, assuming it controls 80 percent or more of the stock of the bank, it can file a consolidated tax return. In this case there is only one taxpayer, and the net income of the bank (before taxes) is attributed to the bank holding company. From the bank's taxable income the holding company can deduct the interest paid on its indebtedness. This interest deduction, which the individual stockholder is effectively denied, can considerably reduce the tax bill of the holding company.

Another reason for forming one-bank holding companies is to use them as vehicles for future expansion through acquisitions of additional banks or other permissible closely related businesses. While one-bank holding companies that are intended to become multibank organizations normally are virtually debt-free at the outset, those that have tax savings as the major motivation usually assume the debt of the controlling stockholders of the bank. Using the amount of debt assumed by the holding companies as the criterion, it appears that about three-fourths of the one-bank holding companies organized in Texas since 1970 have been largely tax-motivated.

In addition to these two main benefits, the one-bank holding company is also a useful device for the rearrangement or succession of stockholder interests. Because a holding company is an ongoing concern, ownership transfers can be achieved with more flexibility than for privately owned banks. Formation of a one-bank holding company is common, for example, when the stock of a bank is largely owned by an individual nearing retirement. In this case, the holding company acquires the individual's bank stock and issues nonvoting preferred stock to the individual and voting common stock to his heirs. This procedure has the advantage of providing income to the individual for his retirement while passing control to his heirs. Moreover, many tax practitioners believe this procedure favorably affects the individual's estate taxes, because more of the increase in stock value that results from the bank's growth can be expected to flow to the common stock (owned by the heirs) than to the preferred.

One-bank holding companies also have the usual advantages of the corporate form of ownership. For example, when the holding company acquires an individual's bank stock and assumes his acquisition debt, the individual is no longer personally liable for that debt; the liability passes to the holding company.

Another advantage of the one-bank holding company is that it can be used as a vehicle for borrowing money. Because all or most of the bank's shares are concentrated in the holding company, the shares can be used as collateral for borrowing. A holding company formed with little debt can immediately become a source of capital to the bank. A tax-motivated holding company typically has no excess debt capacity at the outset, but after some of the original debt is retired, it too could become a source of additional capital to the bank.

While the one-bank holding company is a valuable tool for realizing tax benefits, future expansion, succession flexibility, reduced stockholder liability, and capital maintenance, it is not without its drawbacks. Compared with its bank, a one-bank holding company is subject to additional regulation, such as by the Securities and Exchange Commission, as well as additional supervision by agencies having existing relationships with the bank, such as the Federal Reserve and the Internal Revenue Service. Organizational expenses increase, especially for legal and accounting functions; and administrative expenses rise, mainly as a result of the additional reporting requirements. Moreover, a state franchise tax—currently amounting to an annual rate of \$4.25 per \$1,000 of a corporation's total capital, surplus, and undivided profits—must be paid by one-bank holding companies in Texas.

The Federal Reserve's role

The Federal Reserve Board was given responsibility for the supervision and regulation of bank holding companies by the Bank Holding Company Act of 1956. In carrying out this responsibility, the Board issued Regulation Y.

Prior Board approval is required for any company to acquire "control," usually 25 percent or more of the stock, of a bank. Because one of the Federal Reserve's responsibilities is to ensure the safety and soundness of the nation's banking system, holding company applications are carefully reviewed to ensure that the proposed formation will not weaken the bank. In general, the one-bank holding company movement has not had adverse effects on the soundness of banks. On the contrary, in instances where the one-bank holding company achieves certain tax benefits and reduces the cash drain on the bank, the company can serve as a source of additional strength.

The first step in forming a one-bank holding company is to file an application with the Federal Reserve Bank serving the district in which the bank is located. In the case of banks in the Eleventh District—Texas, northern Louisiana, southern New Mexico, and southeastern Oklahoma—applications are sent to the Federal Reserve Bank of Dallas.

Upon receiving a holding company application, the Federal Reserve Bank does a background investigation and, if necessary, requests additional information. After receiving a complete record, the Federal Reserve System has 91 days to approve or deny the application. In cases handled by the Reserve banks under delegated authority, 45 days are allowed to approve the application.

While the Reserve banks may, under delegated authority, approve certain holding company applications, all applications for which denial is recommended must be referred to the Board. Two one-bank holding company applications from the Eleventh District have been denied since 1970. However, this does not present a complete picture. Prior to a final decision, there is often a good deal of discussion between the applicant and the Federal Reserve. As a result of problem aspects discussed, some applications are never filed. In addition, a number of applications are withdrawn after the Federal Reserve indicates informally that approval is unlikely. In many other cases, applications are strengthened before filing so as to satisfy requirements for approval.

After an application is formally approved, the applicant must wait an additional 30 days to give interested parties, including the Justice Department, time to object. The Justice Department may try to stop the transaction under the antitrust laws.

Under delegated authority, Federal Reserve banks may approve holding company applications when they meet the following criteria, among others: no more than 75 percent of the holding company's acquisition cost for the bank's stock is represented by debt incurred by the holding company; the initial debt can be retired in 12 years; and no controversial "policy issues," issues to which the Board has not yet spoken, are involved.

The delegated-authority criteria indicate the major areas of concern to the Board of Governors in holding company proposals and, in some cases, spell out fairly clear standards for approval. However, not all applications meeting the specified minimum criteria will be approved, nor will all

applications failing to meet these specific criteria be denied. All relevant information is considered.

Considerations in one-bank holding company applications

The primary considerations in one-bank holding company applications are financial and managerial factors, particularly as they relate to the capability of the holding company to service its debt. It is essential that the holding company not become a drain on the bank's financial strength. Accordingly, the principal issue in the evaluation is whether the holding company can service its debt and pay normal operating expenses and, at the same time, maintain the capital of its subsidiary bank on a par with that of similar banks. The bank should be able to earn enough to maintain its capital at an acceptable level—at least 8 percent of total assets—and still pay the dividends required by the holding company.

Also important in the evaluation of financial factors is the reasonableness of the projected cash flows. In addition, consideration is given to any practices that might adversely affect the bank's capital, such as payment of excessive compensation to the holding company or its principals.

The proposed management of the holding company is also evaluated. Dividend policy is important in this evaluation. The dividends should be realistic compared with those of peer-group banks and not be subject to any statutory restrictions, in addition to having no adverse effect on the bank's capital.

Commitments by the applicant are sometimes an important consideration in a case where an applicant's program to service its debt and maintain capital includes two or three marginal years. Commitments, such as forgoing payment of dividends by the subsidiary bank or injecting additional capital into the bank whenever the capital-to-assets ratio falls below a certain figure, may make the difference between approval and denial if the application is otherwise sound.

Although competitive considerations usually do not play a major role in one-bank holding company formations, occasionally they do. For example, competition is a factor when the principals of the applicant company also have control of other banks in the same market.

In addition to approving holding company applications, the Federal Reserve has three other major areas of holding company supervision. First,

the Federal Reserve requires a number of reports from all holding companies. Second, the Federal Reserve has the authority and responsibility to inspect periodically each bank holding company and its nonbanking subsidiaries. Third, the Federal Reserve can use supervisory measures such as cease-and-desist orders in the case of unsafe or unsound practices, violations of statutes or regulations, or failure of a bank holding company to comply with conditions imposed by the Board of Governors.

Structuring a one-bank holding company

In structuring a one-bank holding company, certain steps are commonly taken. To achieve the tax benefits, it is necessary for the holding company to own at least 80 percent of the bank. This enables the holding company and the bank to file a consolidated tax return so that the holding company can offset interest expenses against the subsidiary's earnings. It is also beneficial to the stockholders of the bank to qualify for a Section 351 exchange under the Internal Revenue Code so their bank stock can be exchanged for stock of the holding company without gain or loss being recognized.

Acquisition of the bank stock is usually handled in one of two ways. The more common of these is for the holding company to directly exchange its stock for that of the bank. Although this is the easier method, it has one major disadvantage. If some of the stockholders do not wish to exchange their stock for that of the holding company, the holding company will have minority stockholders,

and the threat of future minority stockholder litigation constitutes a potential difficulty for the holding company's management.

Another common method of bank acquisition, which ensures 100-percent ownership of the bank, is through an interim bank merger. In this method, a charter for a new bank is obtained. However, the new—or interim—bank never opens but, instead, is merged with the bank to be acquired. Under Texas law, only two-thirds of the stockholders of a company must approve a merger for it to be executed. This allows 100-percent control of a bank with only two-thirds stockholder approval, but 100-percent stockholder approval is necessary in a direct-exchange transaction. Stockholders of the existing bank who do not consent to the merger are entitled to redeem their stock for cash, at a value to be determined by impartial appraisers.

Both methods for forming one-bank holding companies are being used at an increasing pace in the District. This trend reflects the fact that a growing number of bankers are seeking the tax and other advantages that a one-bank holding company offers. The principal advantage, of course, is a reduction of the tax burden of individual ownership of a bank. Because the holding company saves taxes, it can redirect cash to the servicing of its debt and, at the same time, reduce the dividends needed from its subsidiary bank. This allows the bank to retain more earnings, augment its capital, and become a stronger institution. The spread of one-bank holding companies, if properly used, has the potential, therefore, for impacting favorably on banking in the Southwest.

Regulation O Amended

Executive officers of member banks may not receive more favorable credit terms than those offered to the general public, according to a recent amendment to Federal Reserve Regulation O, effective June 30, 1978. Regulation O deals with loans by member banks to their executive officers and applies to bank credit cards, check credit, or similar plans.

Southwestern Banks Improve Performance in 1977

Commercial banks in the Southwest generally improved their performance in 1977 in such areas as return on assets, return on equity, and net losses on loans, according to data released by the Federal Reserve Bank of Dallas. The Bank recently published its annual statement covering operating ratios of commercial banks in the Eleventh Federal Reserve District, which includes Texas and parts of Louisiana, New Mexico, and Oklahoma.

Return on assets, a key measure of bank profitability, reached or exceeded the sought-after 1.0-percent ratio for banks with average deposits between \$10 million and \$500 million. The highest average return on assets—1.12 percent—was achieved by banks in the \$25 million-\$50 million deposit range. While return on assets increased during 1977 for banks in four deposit size categories, it decreased for three other groups. The percentage dropped significantly, from .63 to .56, for banks having under \$5 million in deposits.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	.56%	.63%
\$5 to \$10.....	.89	.93
\$10 to \$25.....	1.08	1.03
\$25 to \$50.....	1.12	1.04
\$50 to \$100....	1.07	.95
\$100 to \$500...	1.00	.83
Over \$500.....	.83	.84

Return on equity improved for banks in all deposit size categories. The highest return was at-

tained by banks with \$50 million to \$100 million in deposits. Their average return was 15.08 percent, up from 13.89 percent in 1976.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	7.18%	6.24%
\$5 to \$10.....	10.30	10.21
\$10 to \$25.....	13.55	12.70
\$25 to \$50.....	14.51	13.66
\$50 to \$100....	15.08	13.89
\$100 to \$500...	14.84	12.09
Over \$500.....	14.11	14.05

Net losses on loans, another important measure of bank performance, improved in 1977 for all groups of banks in the Eleventh District. The largest banks had the lowest loan charge-off—.19 percent, which was down substantially from .53 percent in 1976.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	-.42%	-.49%
\$5 to \$10.....	-.55	-.57
\$10 to \$25.....	-.42	-.49
\$25 to \$50.....	-.38	-.60
\$50 to \$100....	-.37	-.55
\$100 to \$500...	-.35	-.51
Over \$500.....	-.19	-.53

Interest and fees on loans, yet another measure of bank performance, increased slightly or remained stable for all groups of banks except those over \$500 million in deposits. For these largest banks, the average decreased from 9.27 percent in 1976 to 8.43 percent in 1977. This decline brought interest and fees on loans at the largest banks to the lowest charged by any group, while the highest charged was 9.71 percent for banks with \$5 million to \$10 million in deposits.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	9.58 ⁰ / ₁₀₀	9.09 ⁰ / ₁₀₀
\$5 to \$10.....	9.71	9.68
\$10 to \$25.....	9.64	9.64
\$25 to \$50.....	9.65	9.62
\$50 to \$100....	9.50	9.46
\$100 to \$500...	9.16	9.12
Over \$500.....	8.43	9.27

Total operating expenses as a percentage of total assets decreased consistently as the size of banks increased, suggesting economics of scale. Beginning at 6.76 percent for banks having under \$5 million in deposits, the ratio decreased slowly at first but then moved rapidly to 5.45 percent for banks over \$500 million in deposits.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	6.76 ⁰ / ₁₀₀	6.67 ⁰ / ₁₀₀
\$5 to \$10.....	6.73	6.67
\$10 to \$25.....	6.48	6.41
\$25 to \$50.....	6.34	6.40
\$50 to \$100....	6.20	6.27
\$100 to \$500...	5.92	5.96
Over \$500.....	5.45	5.31

The **ratio of time and savings deposits to total deposits** at domestic offices increased at all sizes of southwestern banks in 1977. The highest was 59.68 percent for banks in the \$100 million-\$500 million deposit range, followed closely by 59.66 percent for banks with \$50 million to \$100 million in deposits. The lowest ratios were for the smallest banks (under \$5 million in deposits) and the

largest banks (over \$500 million in deposits). Their percentage of time and savings deposits was 51.72 and 52.60, respectively.

Banks with average deposits (Millions of dollars)	1977	1976
Under \$5.....	51.72 ⁰ / ₁₀₀	49.18 ⁰ / ₁₀₀
\$5 to \$10.....	55.61	54.26
\$10 to \$25.....	57.86	56.70
\$25 to \$50.....	59.41	58.12
\$50 to \$100....	59.66	59.04
\$100 to \$500...	59.68	58.45
Over \$500.....	52.60	51.42

Requests for copies of the report on operating ratios—which includes ratios on profitability, sources and disposition of income, distribution of total assets, and distribution of loans at domestic offices, as well as the rate of return on securities and loans—should be made to the Bank and Public Information Department of this Bank, (214) 651-6267.

South Texas Regional Checks Processing Center Expanded

Effective September 5, 1978, the area served by the South Texas Regional Checks Processing Center (RCPC) was expanded to include 36 banks in the Rio Grande Valley. The South Texas RCPC is at the San Antonio Branch of the Federal Reserve Bank of Dallas and is one of three RCPC's serving banks in the Eleventh Federal Reserve District, which includes Texas and parts of Louisiana, New Mexico, and Oklahoma. The other two are in the Houston and Dallas Federal Reserve offices and

serve the respective surrounding areas. The RCPC's provide same-day credit to participating bank depositors that meet the 12:01 a.m. deadline for deposits.

The South Texas RCPC was established in 1973 and expanded several times until it served all participating banks within a 70-mile radius of San Antonio. Prior to the latest expansion, 179 banks were served by the RCPC.

The expansion will improve the collection of checks in South Texas and improve internal check operations at the San Antonio Branch. The expanded territory includes four Texas counties in the Rio Grande Valley, an area that is experiencing strong growth. Deposits held by Valley banks amounted to \$1,284 million at the end of April 1978, an increase of \$135 million over a year earlier.

Amendment Proposed for Regulation Y

An amendment to Regulation Y that would allow bank holding companies to provide check verification services has been proposed by the Board of Governors of the Federal Reserve System.

Under the Bank Holding Company Act, bank holding companies may not acquire shares of a company unless it is engaged in an activity that is "closely related to banking." The Board's Regulation Y, which regulates bank holding companies, lists a number of activities that have been determined to be permissible for bank holding companies. The Board now proposes to add check verification to that list.

A check verification company accepts the risk for some personal checks in return for a fee from merchants. The company authorizes subscribing merchants to accept certain personal checks, and if an authorized check is not paid, the company buys it from the merchant.

The Board's proposal to allow bank holding companies to provide check verification services was made in response to an application by Barnett Banks of Florida, Inc., to establish such a subsidiary.

Board Withdraws 1965 Interpretation of Regulations G and U

The Board of Governors of the Federal Reserve System has withdrawn a 1965 interpretation of its margin regulations that generally required lenders approving loans collateralized by securities subject to margin requirements to personally meet with the borrower to determine if his purpose statement was true.

The new interpretation allows a lender to accept purpose statements through the mail if the lender adopts a program that requires detailed information from the borrower and includes proper procedures to verify the truth of the information received. Lenders in the Eleventh Federal Reserve District should consult the Consumer Affairs Section of this Bank before setting up such a program.

The regulations affected by the new interpretation are those that deal with margin credit extended by banks (Regulation U) and nonbank creditors other than brokers and dealers (Regulation G).