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Using Monetary Aggregates as Intermediate Targets: Easier in Theory Than in Practice

By Nancy J. Kimelman

The monetary aggregates have been the principal intermediate targets set in the conduct of U.S. monetary policy in the last few years. The Federal Reserve has regulated the growth rates of the monetary aggregates to influence the ultimate goals of policy. These include economic growth, full employment of resources, and price stability. Currently, the Federal Reserve announces target growth rates for two narrow aggregates, M1-A and M1-B; two broader aggregates, M2 and M3; and a bank credit measure.

The current emphasis on monetary aggregates evolved slowly over the past 10 to 15 years from a concentration on short-term interest rates. Dissatisfaction with the interest rate focus developed as it became more difficult in inflationary periods to determine the timing, direction, and amplitude of appropriate adjustments in the interest rate targets. Anxious to restore price stability, policymakers in this country instituted a series of reforms that gradually increased the emphasis on the monetary aggregates and tolerated greater variation in interest rates.

Unfortunately, as the Federal Reserve began emphasizing closer control over the monetary aggregates, a series of financial innovations reduced the usefulness of these aggregates as intermediate targets. Changes in asset management, induced by rising market interest rates in the context of interest rate ceilings on deposits at banks and thrift institutions, produced unforeseen changes in the behavior of the monetary aggregates and in their relationships to measures of economic activity.

The Federal Reserve responded to the difficulty in interpreting the monetary aggregates with a general reappraisal of its targeting and operating procedures. Nevertheless, basically all the issues relating to the selection of an intermediate target still remain controversial to some degree.

Intermediate targets necessary for short-term execution of policy

It will be helpful to establish some terminology. First, the "ultimate goals" of policy—economic growth, full employment, and price stability—must be distinguished from the "instruments" of policy—changes in the discount rate, reserve requirements, or the Federal Reserve System's portfolio of U.S. Government securities. The "intermediate target" stands between the Federal Reserve's ultimate goals and its day-to-day operations. A second distinction separates the problems of "strategy" and "tactics." Choosing an appropriate intermediate target is considered an element of strategy because it is concerned with a general, macroeconomic framework for policy. The tactical problem is to select the technique to be used in following the strategy. The Federal Reserve's switch to a reserves-oriented operating procedure in October 1979 exemplifies a tactical decision.

Box A

Control of the Monetary Aggregates

Under present operating procedures, the Federal Reserve sets targets each week on the quantity of reserves of depository institutions so as to achieve desired money growth. As a day-to-day guide to open market operations, primary focus is placed on nonborrowed reserves. Changes in items such as float and U.S. Treasury cash holdings at depository institutions preclude exact control over the level of nonborrowed reserves. To a large extent, however, the Federal Reserve can offset the influences of such factors.

The Federal Reserve is also capable of exerting relatively precise control over the nonborrowed monetary base. The nonborrowed monetary base comprises, essentially, reserves and currency. Consequently, targeting the monetary base under a quantity-oriented reserves policy entails one additional chore—that of estimating and offsetting fluctuations in the public's currency holdings.

Control of aggregates, like M1 or M2, that consist of deposits and other liquid assets is effected through manipulation of the quantity of bank reserves that support the aggregates. The ratio of a monetary aggregate to total reserves is termed the multiplier for that aggregate. A predictable multiplier is essential for precise control over an aggregate. Multiplier stability depends on regulations governing the holding of reserves as well as on the stability of individuals' portfolios.

Aggregates that contain assets carrying different reserve requirements (such as M2 and M3) are expected to display less stable multipliers than aggregates containing assets with relatively uniform reserve requirements (such as M1). Flows between different assets included in the same aggregate but carrying different reserve requirements can generate variability in the multiplier for that aggregate. For instance, instability in the M2 multiplier is generated because money market certificates carry reserve requirements whereas money market mutual fund shares do not. A given quantity of reserves will support a larger amount of funds in M2 if the public holds more money market certificates than money market fund shares.

Multipliers for both narrow and broad measures of money have exhibited variable degrees of interest sensitivity in recent years. Rising interest rates typically result in relatively larger holdings of high-yielding short-term assets (for example, money market fund shares), implying slower growth in a narrow aggregate, higher growth in a broader aggregate such as M2, and little change in the broadest measures of money.

Which monetary aggregate can be controlled most precisely? Considering the importance of uniform reserve requirements, economists generally contend that a narrow aggregate can be controlled more precisely than a broad aggregate. But the destabilizing impact of portfolio adjustments on the multipliers leads to control problems even with a narrow aggregate target. One final item to consider: lags in data collection present a problem for controlling broader aggregates. Information on some assets contained in the broader aggregates is not as readily available as that on bank deposits.

Reliable data on the ultimate goals are not released either frequently or quickly enough to use in the short-term (daily, weekly, monthly) execution of monetary policy. Data measuring nonfinancial activity become available with a lag of, at best, one month. Furthermore, the figures first published are often significantly revised in ensuing reports. The need arises for proxy variables that bear close relationships to the ultimate goals and that can be monitored on a more timely basis; such proxy variables are the intermediate targets.

Intermediate targets also provide information on the actual economic impact of central bank actions. Events other than Federal Reserve actions can influence interest rates or the quantities of money and credit in the economy in such a way as to amplify or dampen the intended results of policy actions. Close and frequent examination of the intermediate target gives policymakers a head start in making appropriate adjustments to offset or capitalize on such developments.

In essence, an intermediate target substitutes for a wider array of financial and nonfinancial measures that reflect and influence aggregate economic activity. Concentrating primarily on a single target variable limits the scope of information that is fed directly into the policy process. However, it obviates the problem of weighing possibly contradictory individual pieces of evidence in order to arrive at appropriate short-term policy adjustments.[1]

The attributes of a good intermediate target fall naturally from the discussion about its use. An intermediate target must bear a close and predictable relationship to the measures of nonfinancial economic activity that the central bank seeks to influence, and it must be easily and promptly measurable. In addition, the central bank must be able to control the selected financial measure, for it makes little sense for the Federal Reserve to target a variable over which it exerts minimal control (see Box A).

Emphasis on monetary targets grew with resolve to slow inflation gradually

The current use of monetary intermediate targets reflects the widely held view that inflation is a monetary phenomenon—that is, in the long run, inflation rates are dictated by the rate of growth of the money stock. A corollary of this view is that central bank actions to reduce the rate of money growth are a prerequisite to restoring price stability. In addition, many believe that short-term movements in nominal income can be predicted from the behavior of the money stock.

In theory, a given rate of increase in the money stock that is sustained for more than a few months produces a predictable rate of increase in nominal GNP (gross national product, or national output, valued at current prices). Experience has indicated that the rate of inflation changes slowly. Thus, large quarter-to-quarter changes in nominal GNP growth usually reflect large swings in the growth of real output. Inflation has been near or above 10 percent in recent years, so a substantial reduction in money growth will ultimately be needed to restore price stability. To avoid the severe recession that most agree would follow an abrupt reduction in money growth, the Federal Reserve has pursued a policy of gradually reducing money growth, which, it is hoped, will produce a gradual reduction in nominal GNP growth and inflation.

Implementing such a gradual elimination of inflation is rendered difficult by the fact that there is no one grouping of financial assets that measures the stock of money to everyone's satisfaction. The growth rates of the various monetary aggregates have, on occasion, diverged significantly and unexpectedly in recent years, giving confusing and sometimes contradictory signals about the degree of monetary restraint being exercised. Were prices more flexible or monetary policy not so powerful, imprecise estimates of the stock of money in circulation might be adequate. But persistent errors in measuring money can have significant consequences, so identification of the best monetary aggregate to serve as an intermediate target is a matter of great importance.

A narrow monetary aggregate is superior in most respects . . .

From a theoretical standpoint, the monetary measure that should track nominal income most closely is that which measures the stock of balances used

1. The wisdom of using intermediate targets is not universally accepted. For alternative points of view, see, for example, Benjamin M. Friedman, "The Inefficiency of Short-Run Monetary Targets for Monetary Policy," *Brookings Papers on Economic Activity*, 1977, no. 2, and J. H. Kalchbrenner and P. A. Tinsley, "On the Use of Optimal Control in the Design of Monetary Policy," Special Studies Papers, no. 76 (Washington, D.C.: Board of Governors of the Federal Reserve System, Division of Research and Statistics, July 1975).

NEW AND OLD MONETARY AGGREGATE DEFINITIONS

(Billions of dollars, seasonally adjusted except as noted)

New monetary aggregates and components	Amount, July 1981
M1-A	
Currency	$ 120.8
Demand deposits[1]	236.4
Travelers checks	4.1
M1-B	
M1-A	361.3
Other checkable deposits[3]	68.8
M2	
M1-B	430.1
Overnight repurchase agreements (net) issued by commercial banks[4]	32.3
Overnight Eurodollars issued by Caribbean branches of member banks to U.S. nonbank customers[1]	6.9
Money market mutual fund shares[4]	134.3
Savings deposits at all depository institutions	349.1
Small-denomination time deposits at all depository institutions	811.3
M2 consolidation component[5]	-3.9
M3	
M2	1,760.1
Large-denomination time deposits at all depository institutions	290.3
Term repurchase agreements[1]	
Issued by commercial banks	30.6
Issued by savings and loan associations	13.0
L	
M3	2,094.0
Term Eurodollars (net) issued to U.S. nonbank customers[1]	58.7
U.S. savings bonds	69.3
Short-term Treasury securities	160.7
Bankers acceptances	39.0
Commercial paper	99.6
	2,521.3

Old monetary aggregates and components	Amount July 1981
M1	
Currency	$ 120.8
Demand deposits[2]	252.7
M2	
M1	373.5
Savings deposits at commercial banks	164.7
Small-denomination time deposits at commercial banks	325.9
M3	
M2	864.1
Savings and small-denomination time deposits at thrift institutions	669.8
	1,533.9
M4	
M2	864.1
Large-denomination time deposits at all depository institutions	290.3
	1,154.4
M5	
M3	1,533.9
Large-denomination time deposits at all depository institutions	290.3
	1,824.2

1. Demand deposits at all commercial banks other than those due to domestic banks and the U.S. Government, less cash items in the process of collection and Federal Reserve float, less demand deposits of foreign commercial banks and official institutions.
2. Demand deposits at all commercial banks other than those due to domestic commercial banks and the U.S. Government, less cash items in the process of collection and Federal Reserve float, plus foreign demand balances at Federal Reserve banks.
3. Negotiable order of withdrawal (NOW) and automatic transfer service (ATS) balances at banks and thrift institutions, credit union share draft balances, and demand deposits at mutual savings banks.
4. Not seasonally adjusted.
5. Consists of an estimate of demand deposits included in M1-B that are held by thrift institutions for use in servicing their savings and small time deposit liabilities included in the new M2.

SOURCE: Board of Governors, Federal Reserve System.

for transactions. The narrowly defined monetary aggregate, M1, tries to comprise such transaction balances; it includes currency plus checkable deposits held by the private, nonbanking sector. Throughout its experience with monetary intermediate targets, the Federal Reserve has directed most of its attention to M1.

Central to the focus on a transactions-oriented aggregate is the assumption that assets are included if and only if they are used for making payments. Little substitutability is assumed between transaction balances and the other assets that complete the public's portfolio. Implied, therefore, is a fairly stable relationship between the narrow aggregate and nominal income. The historical stability that M1 income velocity—the ratio of nominal GNP to M1—exhibited as a function of a few economic variables through the 1960's contributed to the rise in emphasis on monetary aggregates during the 1970's.

The Federal Reserve's ability to exert satisfactory control over the level of and variation in the stock of transaction balances also strengthens the case for focusing on M1. The Federal Reserve is able to control an aggregate more precisely when flows into and out of its various components do not result in vastly different levels of required reserves. Because reserve requirements are highest and most uniform on transaction balances, M1 is more easily managed than broader money measures (see Box A). Finally, the case for emphasizing a narrowly defined aggregate is bolstered by the practical consideration that data on transaction balances are more readily available to the Federal Reserve than data on less liquid assets.

. . . but changes in the financial system have hurt its performance

Unfortunately, the rise in inflation in the 1970's weakened the relationship between M1 and nominal GNP. The cause for the deterioration apparently lies in the effect of inflation on the desirability of holding wealth in deposits subject to fixed interest rate ceilings. When market interest rates were low and stable, most households and many firms turned, with little consideration of the alternatives, to their local depository institutions for their liquid assets. As market interest rates became more variable and higher on average, people increasingly placed their funds in liquid assets that were outside depository institutions and, therefore, not subject to interest rate ceilings. Households invested in U.S. Treasury bills and money market mutual funds, while large firms entered the Eurodollar market as well.

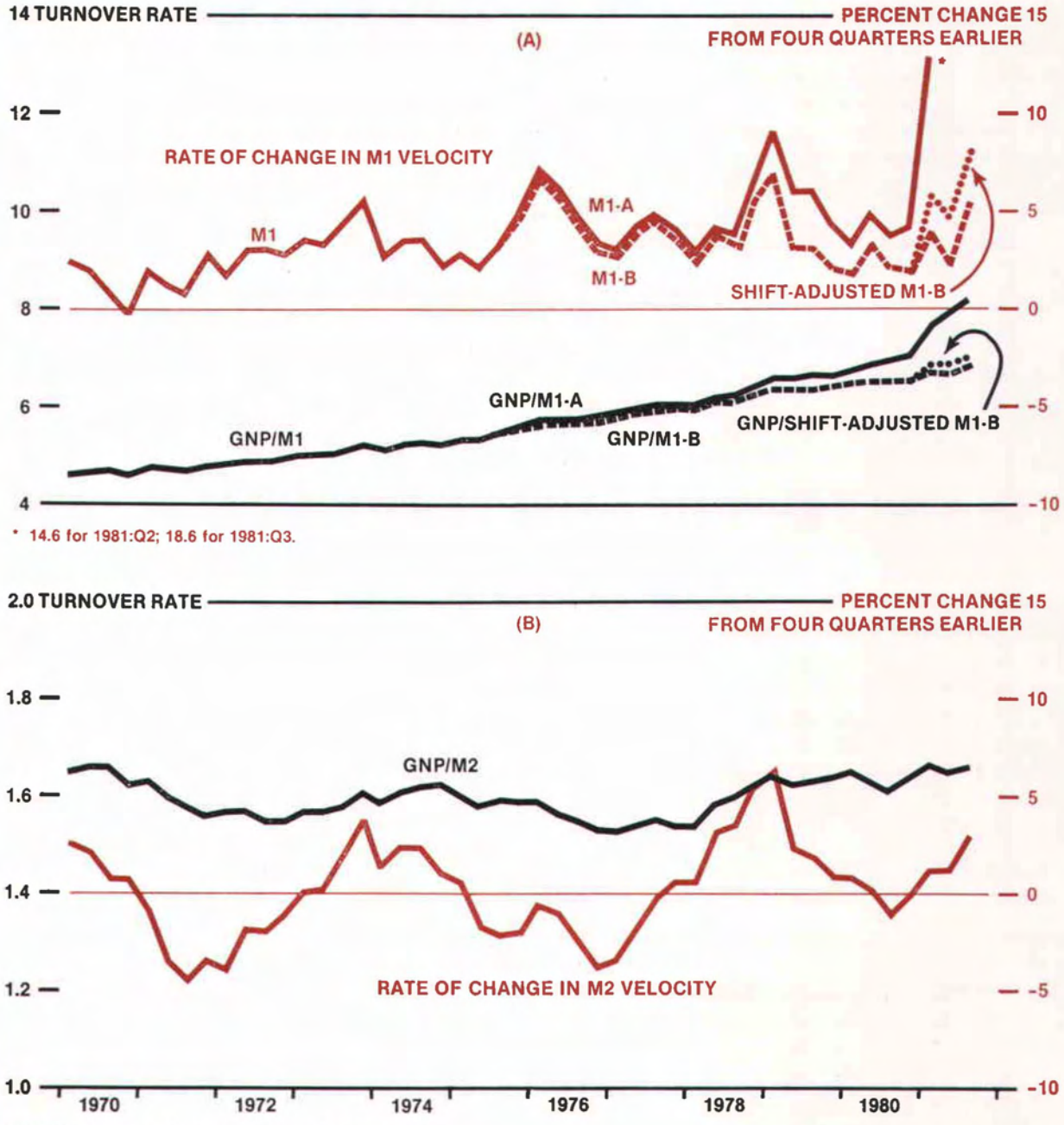
These developments contributed to changes in regulations allowing depository institutions to offer new services and types of deposits paying interest rates that fluctuated with market rates. Congressional action allowed payment of interest on transaction balances through the authorization of negotiable order of withdrawal (NOW) accounts, and banks issued overnight repurchase agreements to firms with temporarily large cash balances that formerly would have been likely to rest in a demand account.[2]

Many of the new financial instruments were difficult to incorporate into the existing array of monetary aggregates using the classification system of the 1970's (specified in the table). Throughout that period the type of institution issuing an asset and the regulations pertaining to the rate of interest on the asset determined whether and how the asset would be included in the aggregates. Clearly, at least some portion of the new accounts were used as transaction balances. But all were excluded from M1 because interest was earned or the issuing institution was not a commercial bank. To the extent that the quantity of transaction balances in the country was underestimated, the relationship between M1 and nominal income was impaired.

The change in the established velocity patterns implied that the linkage between growth in the money stock and nominal income or prices was less sure. Consequently, the process of determining appropriate adjustments in a narrow monetary aggregate intermediate target became less certain too. The accumulation of such problems, reflecting not only the arbitrariness of establishing fixed asset categories for the aggregates but also special complications due to the continual evolution of the financial system, caused the Federal Reserve to consider more closely the behavior of the broader aggregates and to announce in 1980 a new classification system for the aggregates.

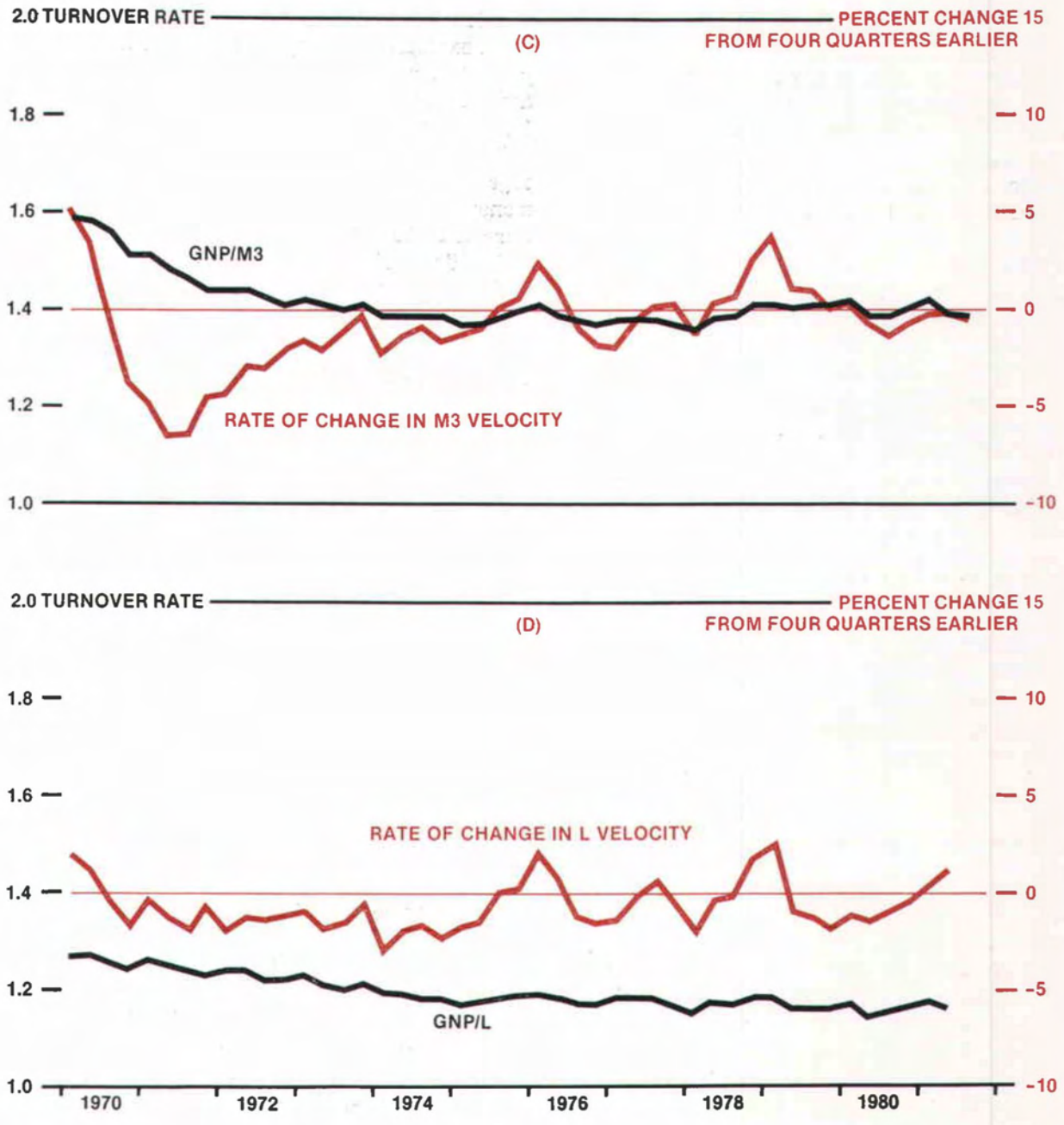
2. Repurchase agreements involve the sale of securities, usually Treasury bills, subject to the agreement of the seller to buy back the securities at the same price plus interest after an agreed-on period.

Stable income velocities can mask considerable cyclical variation



* 14.6 for 1981:Q2; 18.6 for 1981:Q3.

SOURCE: Board of Governors, Federal Reserve System.


2.0 TURNOVER RATE
(C)
PERCENT CHANGE 15
FROM FOUR QUARTERS EARLIER
1.8
1.6
1.4
1.2
1.0
10
5
0
-5
-10
GNP/M3
RATE OF CHANGE IN M3 VELOCITY
2.0 TURNOVER RATE
(D)
PERCENT CHANGE 15
FROM FOUR QUARTERS EARLIER
RATE OF CHANGE IN L VELOCITY
GNP/L
1970
1972
1974
1976
1978
1980

Box B

Relating Financial Aggregates to GNP

One way to approach the relationship between a financial aggregate and aggregate economic activity is simply to examine the ratio of nominal GNP to the financial aggregate—in other words, its income velocity. The black lines in the chart show the recent history of velocity for several aggregates. Velocity of most of the aggregates displays stability.

This long-term stability of the level of velocity is impressive, but it can mask considerable cyclical variation. The colored lines in the chart show percentage changes in velocity over successive four-quarter periods. The rates of change of the velocity measures do exhibit substantial cyclical variation, especially recently.

Regression analysis may be used to conduct a more rigorous examination of the relationship between a financial aggregate and GNP. One common exercise is to regress current GNP growth rates on current and past growth rates of the financial variable. Because this procedure violates some standard assumptions underlying regression analysis, the results must be considered with a healthy dose of skepticism. But such regression equations do provide a useful summary of the relationship under study.

An example of this type of analysis appears in the November 1981 issue of *Voice of the Federal Reserve Bank of Dallas*. In "The Large Monetary Aggregates as Intermediate Policy Targets," Lawler reports the results of regressing GNP growth on current and lagged money growth using data from the third quarter of 1960 through the fourth quarter of 1980. His results indicate that M1-B has explained more of the variation in GNP growth over the entire period than M2, M3, or L. L has done an appreciably better job than either M2 or M3, which have explained GNP growth about equally well. In recent years, from the first quarter of 1974 through the fourth quarter of 1980, M1-B has continued to track GNP growth more successfully than have the other aggregates. M1-B, M3, and L all have explained GNP growth to a greater extent in recent years than over the past two decades. The results also indicate, however, that M2 has lost some of its explanatory power in recent years.

Monetary aggregates were redefined in 1980

The purpose in defining new aggregates was to establish criteria by which the Federal Reserve could systematically incorporate new financial instruments into the appropriate aggregates. It was hoped that this would help maintain historical consistency in the aggregates and mitigate the effects of financial innovation on their velocities. Under the new system, assets are combined solely on the basis of how closely they substitute for transaction balances. New instruments are incorporated into the aggregates accordingly. Neither the institution issuing the asset nor the interest rate associated with the asset matters, except to the extent that such factors influence the public's regard for the instrument vis-a-vis transaction balances. Thus, M1 now includes deposits at thrift institutions as well as commercial banks, and many of these deposits pay interest.

This approach can also be demonstrated by a closer examination of M2. Now included in M2 are liquid assets, such as overnight repurchase agreements and Eurodollar deposits that banks arrange for their corporate customers plus money market mutual fund shares offered by nonbanks. That holdings of these instruments are counted in M2 but not in M1 reflects the presumption that the overwhelming majority of such holdings are not transaction balances in the traditional sense, as are currency and checking accounts. At the same time, their inclusion in M2 does indicate that they

are regarded as closer substitutes for transaction balances than are large time deposits, Government securities, or commercial paper.

After the aggregates were redefined, their velocity was expected to become somewhat more stable. But velocity fluctuations have not diminished. The chart illustrates continued instability in most velocity measures, including those for M1-A and M1-B. Whether more stable velocities will eventually materialize is yet to be seen, but many observers are not hopeful. Questions have arisen about the transaction nature of some instruments, notably NOW accounts, overnight repurchase agreements, Eurodollars, and money market mutual funds. Thus far, the Federal Reserve has attempted adjusting for some of the uncertainty; for example, an adjusted version of M1-B was constructed in 1981, the first year NOW accounts became available nationwide.[3] However, the transaction characteristics of overnight repurchase agreements, Eurodollars, and money market funds remain open to debate.

Alternative monetary aggregates unlikely to make better intermediate targets

Difficulties in interpreting the behavior of M1 and its velocity have also led the Federal Reserve to announce both quarterly and annual target rates of growth for M1-B and a broader aggregate, M2. M2 comprises a wider variety of liquid assets, so its path responds less markedly to shifts among liquid assets, such as transfers from demand deposit accounts to money market funds. Typically, the Federal Reserve bases policy actions on the M1 target and considers the M2 target secondarily, although at times M2 has been given equal weight. The main justification for employing two targets this way is that when the Federal Reserve suspects the quality of information provided by M1 has temporarily deteriorated, the additional information offered by M2 may be helpful. A flexible stance on meeting the actual target set for any individual aggregate is a vital aspect of this approach.

Yet, placing greater emphasis on a broader aggregate does not allow the Federal Reserve to circumvent many of the theoretical and practical difficulties that have emerged while targeting a narrow aggregate. The broader aggregates are just as susceptible, for the most part, to portfolio adjustments and innovations as is a transactions-oriented aggregate. The chart indicates that velocities of the broad aggregates have also become less stable in the last few years. Moreover, statistical regression analysis has failed to point to emergence of the superiority of a broad aggregate in tracking movements in nominal GNP (See Box B).[4] Broader aggregates have not been more insulated than other aggregates from the changes wrought by inflation and regulation in the past decade.

Proposals to target broad credit measures or the monetary base have also surfaced in response to the difficulties associated with targeting M1. The monetary base is usually promoted on the grounds that the Federal Reserve can exercise more control over the base than over the other monetary aggregates. The traditional argument against the adoption of a monetary base target refers to the weakness of the relationship between the monetary base and aggregate economic activity. That this argument still seems valid has precluded widespread acceptance of a monetary base target.[5]

Doubts about the Federal Reserve's ability to exercise sufficient control over broad credit measures have inhibited many from supporting a target for a broad credit measure. Bank credit targets likely could be attained by manipulating the cost and availability of reserves to the banking system, although widely differing reserve requirements on various assets would complicate the task. But in a highly integrated financial system, bank credit would not exhibit a predictable relationship with economic activity unless authorities were willing, able, and legally free to compensate for shifts to credit sources outside the banking system.

3. Because some of the funds flowing into interest-bearing checking accounts are not so much transaction balances as substitutes for savings balances, the Federal Reserve subtracts a portion of these funds from M1-B and calls the new aggregate "shift-adjusted" M1-B.

4. A study recently conducted at the Federal Reserve Bank of Dallas reaffirms this conclusion. See Patrick J. Lawler, "The Large Monetary Aggregates as Intermediate Policy Targets," *Voice of the Federal Reserve Bank of Dallas*, November 1981.

5. For a detailed discussion, see Carl M. Gambs, "Federal Reserve Intermediate Targets: Money or the Monetary Base?" *Economic Review*, Federal Reserve Bank of Kansas City, January 1980.

Conclusion

The fluid nature of financial technology and organization has generated structural changes in the financial environment that have diluted the information provided by the monetary aggregates and their income velocities. The response of the Federal Reserve has been multifaceted. A new method of classifying financial assets and defining monetary aggregates was instituted in 1980 so that financial innovations can systematically be incorporated into the array of monetary aggregates. The new method is expected to result in more stable income velocities over time and thus provide a more consistent flow of information about economic conditions.

The Federal Reserve has also set a quarterly target for a broad aggregate, in addition to its target for the transactions-oriented M1. This move essentially represents a hedge against the possibility that movements in M1 are misleading.

Finally, the Federal Reserve has adopted a rather liberal position on meeting the target for a particular aggregate over relatively short periods. At times, substantial deviations of the monetary aggregates from their short-run targets have been permitted. However, over the annual periods that constitute the horizon of the longer-run ranges announced to Congress twice a year, the Federal Reserve has attempted to attain its money growth objectives, except when economic conditions have departed sufficiently from those expected at the time the ranges were originally chosen to justify an overshoot or undershoot of money growth from target.

"Fed Quotes"

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

"It will come as no surprise to you that I believe that dealing with inflation must be the crucial ingredient in any successful economic program. With varying degrees of success, efforts have been mounted against inflation in the past. But the hard fact is those efforts were not pressed strongly enough, or long enough, to turn the tide. The result is that the problem over time has gotten worse—and along with higher inflation, our general economic performance has deteriorated.

"Now we have a new opportunity. We can begin to see some encouraging signs of progress against inflation. But I am well aware that the battle is far from won. Winning that battle will require maintaining control on the expansion of money and credit, bringing growth in the monetary aggregates down to amounts compatible with price stability."

"Let me not leave any lingering question in your minds. The Federal Reserve has no intention of backing away from its commitment to reduce inflation by restraining and disciplining the process of money creation. We intend to see it through."

Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System (At the Annual Convention of the American Bankers Association, San Francisco, California, October 7, 1981)

"In this sophisticated academic setting, I don't want to imply that there is any simple correlation, year by year, between deficits and inflation, or between deficits and interest rates. The significance of a federal deficit in any given year depends upon the general state of the economy and a number of more particular factors, including our potential for saving and competing demands for credit. In a period of high actual or potential saving, falling demand for business and residential investment, and low interest rates, there may be little risk of the sale of securities by the Treasury 'crowding out' investment. Temporary losses of revenue as a result of sluggish economic activity need not provoke offsetting action, even though the deficit is affected. But in today's world, where we have repeatedly seen competing demands for credit clashing in the market, and with a chronically low pattern of savings in the United States, it is critically important that we do move toward restoring balance and a surplus in the budget as the economy grows. Our deficit is not simply cyclical but structural. And so long as the structural deficit is so large, we make the goal of sustainable low interest rates and growth in the private economy much more difficult."

Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System (Caperton Lecture, Owens Graduate School of Management, Vanderbilt University, Nashville, Tennessee, October 15, 1981)

Member Bank Income Grew at Record Rate in 1980 in the Eleventh District

By Mary G. Grandstaff

Net income of member banks in the Eleventh Federal Reserve District continued to increase in 1980, and the 24-percent increase in after-tax net income was the largest of the past five years. Net income rose to $867 million last year, compared with $419 million in 1976.

Both operating income and operating expenses grew at rapid rates in 1980, but the gains were markedly below the record increases of the prior year. The slowdown, however, was greater for operating expenses than for operating income. As a result, income before taxes and adjustments for net securities gains or losses and for extraordinary items rose 29 percent in 1980, or considerably more than a year earlier.

The increase in net income at District member banks last year was primarily due to higher interest margins. Interest rates on loans and investments rose appreciably, and the major portion of the growth in assets reflected an increase in loans to businesses—the asset category on which banks normally realize their highest net return. The cost of funds also rose appreciably, as inflation and high interest rates lured customers away from deposits with fixed ceiling rates to higher-yielding deposits.

Growth in operating income moderated

Total operating income at District member banks rose sharply in 1980 for the third consecutive year. However, the 31-percent increase last year to $8.9 billion was somewhat less than the record growth a year earlier. Interest and fees on loans rose almost 33 percent in 1980 and accounted for about three-fourths of the $2.1 billion increase in total operating income. Interest and dividends on securities rose more than in the prior year. Nevertheless, income from securities still rose only slightly more than half as rapidly as income from loans and accounted for just 8 percent of the 1980 increase in total operating income.

The increase in income from loans reflected both a larger volume of loans outstanding and record yields on the loans. Total loans at all member banks rose 15 percent in 1980, or slightly less than a year earlier, while the average net yield, before adjustment for losses, was 188 basis points higher than in 1979.

Loans outstanding at District member banks rose slightly less rapidly in 1980 mainly because growth in consumer loans and real estate loans abated sharply. Consumer loans increased only 4 percent,

INCOME AND EXPENSES OF MEMBER BANKS

Eleventh Federal Reserve District

(Millions of dollars)

Item	1980	1979	1978	1977	1976
OPERATING INCOME					
Interest and fees on loans[1]	$6,499	$4,899	$3,432	$2,731	$2,341
Interest and dividends on securities	1,113	942	828	756	687
Service charges on deposit accounts	171	134	100	86	74
All other operating income	1,105	792	584	222	192
Total operating income	8,887	6,767	4,944	3,794	3,294
OPERATING EXPENSES					
Salaries and employee benefits	958	808	691	587	518
Interest on time and savings deposits	3,554	2,558	1,742	1,580	1,406
All other operating expenses	3,200	2,489	1,725	997	860
Total operating expenses	7,712	5,856	4,158	3,163	2,783
Income before income taxes, securities gains or losses, and extraordinary items	1,175	911	785	631	511
Applicable income taxes	285	200	185	139	100
Net securities gains or losses (–) after taxes	-25	-13	-6	4	6
Extraordinary items after taxes	2	1	3	3	2
Net income	867	699	597	499	419

1. Does not include interest from Federal funds sold and securities purchased under agreements to resell; such income has been included in "All other operating income."
NOTE: Details may not add to totals because of rounding.

compared with 17 percent a year earlier; real estate loans expanded 19 percent, compared with 29 percent in the prior year. Business loans, however, increased slightly more than in the previous year.

The average yield on loans rose to 14.40 percent at District member banks in 1980, as interest rates fluctuated widely but averaged record highs for the year. The bank prime lending rate, for example, ranged from 11.00 to 21.50 percent during the year and averaged 15.27 percent. That was 260 basis points higher than the year-earlier average.

The increase in earnings on securities in 1980 was in response to moderately higher holdings of these assets and a rise in the average rate of return on those holdings. The higher rate of return partially reflected substantial shifts in the maturities of securities portfolios. Holdings of short-term issues (for which interest rates were markedly higher) rose appreciably, while the volume of longer-term issues declined. At the end of 1980, 43 percent of all securities except municipals had maturities of one year or less, considerably more than the comparable 27 percent at the end of 1979.

District member banks increased their total interest earned relative to total assets in 1980 to 10.80 percent, up from 9.41 percent a year earlier. They also experienced slightly higher relative earnings from noninterest categories of income. As a result of these improvements, total operating income last year amounted to 11.56 percent of total assets, up from 10.12 percent a year earlier.

Growth in operating expenses slowed considerably

Total operating expenses at District member banks also rose sharply in 1980 for the third consecutive year. Nevertheless, the 32-percent increase last year to $7.7 billion was considerably less than the record growth a year earlier. Interest paid on time and savings deposits and borrowed funds advanced 39 percent in 1980 and accounted for about 70 percent of the almost $1.9 billion increase in total operating expenses. Salaries and employee benefits rose slightly more than a year earlier but accounted for only 8 percent of the increase in total operating expenses. Although accounting for just 3 percent of the increase in total expenses, provision for possible loan losses grew 32 percent and was the most rapidly rising noninterest expense item for District member banks last year.

Cost of funds is the major expense item for commercial banks. In 1980, interest expenses on

SELECTED MEMBER BANK INCOME AND EXPENSE ITEMS AS PERCENTAGE OF AVERAGE ASSETS

Eleventh Federal Reserve District

Item	1980	1979	1978	1977	1976
Gross interest earned	10.80	9.41	7.84	6.83	6.64
Gross interest expense	6.08	5.04	3.81	3.68	3.08
Net interest margin	4.72	4.37	4.04	3.15	3.56
Service charges on deposit accounts	.22	.20	.17	.17	.16
Other noninterest income	.54	.51	.51	.46	.42
Noninterest expense	3.96	3.72	3.36	2.54	3.03
Total operating income	11.56	10.12	8.52	7.46	7.23
Total operating expenses	10.04	8.73	7.17	6.22	6.11
Applicable income taxes	.37	.30	.32	.27	.22
Net income	1.13	1.05	1.03	.98	.92
Average assets (Millions of dollars)[1]	$76,848	$66,875	$58,007	$50,873	$45,578

1. Based on total assets as of the beginning, middle, and end of each year.
NOTE: Details may not add to totals because of rounding.

deposits and borrowings at District member banks totaled almost $4.7 billion. That represented about 61 percent of total operating expenses—a proportion that has grown steadily in the past three years in response to inflation, high interest rates, and regulatory changes.

The increase in interest paid on deposits in 1980 was due to higher market interest rates in general and customer shifting of funds among the various deposit types. Total deposits at District member banks rose just slightly more in 1980 than a year earlier. However, a larger rise in interest-free demand deposits accounted for the difference, as the dollar volume of savings deposits declined moderately and time deposits grew slightly less than a year earlier.

Deposits with fixed-rate ceilings, which were maintained well below market interest rates in 1980, declined as a proportion of total deposits. However, large negotiable time certificates of deposit (which had no interest ceilings) and six-month money market certificates (which banks were permitted to offer throughout the year at rates that were at least equal to the discount rate on six-month U.S. Treasury bills) were especially attractive to depositors. The six-month money market certificates rose about $3 billion in 1980.

Banks also were permitted to offer a 2½-year variable-ceiling certificate, in small denominations, throughout the year. Its rate was lower than rates for large certificates of deposit and the six-month money market certificates but well above rates available for deposits with fixed ceilings. The instrument was quite attractive to customers with more limited savings. As a result of the deposit shifts and higher market rates in general, the average interest rate on time and savings deposits rose to 10.6 percent in 1980 from 8.5 percent in the prior year.

While the added interest costs due to the realignment of deposits were high, banks had little opportunity for cheaper funds elsewhere. The average Federal funds rate was higher than the average rates banks paid on both money market and large negotiable certificates of deposit in 1980; Eurodollar rates were slightly higher still. And even the discount rate on borrowings from the Federal Reserve System (which banks could use only sparingly) was almost as high.

The amount of funds District member banks acquired in the Federal funds market and from other nondeposit sources rose about 17 percent in 1980, just over two-thirds as much as in the prior year. Total interest costs on these funds, however, advanced 37 percent, as the average interest rate paid on them rose to 14.26 percent from 12.17 percent a year earlier.

Net income up sharply

District member banks, on balance, had substantially higher pretax income in 1980, primarily because they were able to increase their net interest margin in spite of the high and volatile interest

rates. The net interest margin relative to total assets increased to 4.72 percent last year from 4.37 percent a year earlier. Noninterest expense also rose moderately faster, but the rise was partially offset by slightly faster growth in noninterest income.

With the higher level of net earnings in 1980, income taxes for District member banks increased appreciably. Applicable income taxes as a proportion of total assets grew to 0.37 percent from 0.30 percent a year earlier. Securities losses rose sharply to offset almost 3 percent of pretax profits. Net income (income after taxes, securities gains or losses, and extraordinary items) amounted to 1.13 percent of total assets, up from 1.05 percent in the prior year.

Cash dividends paid declined 6 percent in 1980, as dividends paid relative to net profits dropped to about 25 percent, down from 33 percent a year earlier. Largely as a result of the higher rate of retained earnings last year, equity capital grew at a moderately faster rate than a year earlier and slightly faster than total assets in 1980.

Outlook is challenging

The Depository Institutions Deregulation and Monetary Control Act of 1980 will abolish all Regulation Q interest rate ceilings by the middle 1980's. Phasing out these ceilings will sharply increase the competition for funds among banks, thrifts, and other nonbank institutions. The act also authorized banks to pay interest on transaction accounts effective December 31, 1980, which is adding further to their cost of funds.

Interest rates are likely to remain high and volatile until inflation is controlled. Savers will continue to demand a high rate of return on funds as they remain keenly aware of alternatives offered by nonbank competitors. Banks will have to pay the higher interest rates or lose customers. With the variability in interest rates likely to be greater, variable rate instruments should account for an increasingly larger share of bank funds, and banks will have to manage their assets closely to offset the higher charges.

Regulatory Briefs and Announcements

Board Amends Regulation Q, Deregulation Committee Clarifies Recent Rules

The Federal Reserve Board has recently issued a technical amendment to Regulation Q (Interest on Deposits). Also, the Depository Institutions Deregulation Committee has announced decisions on the new IRA/Keogh account and has adopted a technical amendment about rates for 26-week money market certificates (MMCs).

The technical amendment to Regulation Q pertains to the definition of "international banking facility time deposit" (or "IBF time deposit"). Questions had been raised as to whether an international banking facility might issue overnight liabilities to other banking entities in the form of a deposit rather than a borrowing without regard to interest rate limitations. To clarify that international banking facilities may issue overnight deposits to such entities, the Board has amended Regulation Q so that its definition of international banking facility (IBF) time deposit parallels the definition in Regulation D (Reserve Requirements of Depository Institutions).

The recent actions of the Deregulation Committee are summarized as follows:

- **New IRA/Keogh category.** The committee has decided not to permit waiver of early-withdrawal penalties for the transfer of existing IRA/Keogh accounts to the new IRA/Keogh deposit instrument. However, the committee reaffirmed that the new account category will have a maturity of $1^1/_2$ years or more and no interest rate restrictions. Moreover, at the option of the depository institutions, additions may be permitted without extending the original maturity of the deposit. There is no federally required minimum denomination.
- **Interest rates for 26-week MMCs.** For clarification the committee has adopted a technical amendment providing that depository institutions may not round any interest rate to the next higher rate in connection with paying interest on 26-week money market certificates. The amendment also states that interest may not be compounded on MMCs during the term of the deposit and that the optional ceiling rate is determined on the basis of the average of the four rates (auction average on a discount basis) for U.S. Treasury bills with maturities of 26 weeks established and announced at the four auctions held immediately prior to the date of the MMC deposit. The optional ceiling rate is not to be based on an average of the four most recent MMC ceiling rates.

Board Proposes Amendments to OTC Stock Requirements

The Federal Reserve Board has proposed amendments to some of the requirements that over-the-counter (OTC) stocks must meet, and continue to meet, to be included on its List of OTC Margin Stocks.

The Board's proposal would eliminate the current requirement that an issuer be organized under the laws of the United States or a state. Stocks of foreign issuers that are traded on the OTC market would thereby be made eligible for margin credit if they meet the other criteria for listing. The proposed amendments would also eliminate certain criteria now in use and reduce some financial criteria to more closely resemble requirements of major exchanges.

Interested persons are invited to submit comments on the proposed amendments to the Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, D.C. 20551, to be received no later than January 29, 1982. Comments should refer to Docket No. R-0372.

Fee Schedules Adopted for Federal Reserve Cash Transportation Services

The Board of Governors of the Federal Reserve System has approved the 1982 fee schedules for Federal Reserve cash transportation services and adopted a policy for access to nonpriced Federal Reserve cash processing services.

The fees become effective January 28, 1982. The fee schedules were determined by applying a markup of 16 percent to the System's administrative costs in providing coin and currency transportation services.

Questions relating to the fee schedules and access policy may be directed to Donald L. Jackson, Head Office, Federal Reserve Bank of Dallas, (214) 651-6445; William L. Wilson, El Paso Branch, (915) 544-4730, Ext. 202; C. O. Holt, Houston Branch, (713) 659-4433, Ext. 44; or Thomas C. Cole, San Antonio Branch, (512) 224-2141, Ext. 401.

Examination Council Announces Actions on Accrual Reporting and Accounting Procedures

The Federal Financial Institutions Examination Council has announced that all banks supervised by the Federal bank regulators will be required to file their reports of income and condition on an accrual basis. The council has also recommended to the Federal bank regulatory agencies that they adopt guidelines requiring all federally supervised banks to maintain their internal accounts on an accrual basis.

Both the new accrual reporting requirement and the recommended accounting guidelines would be implemented in two stages. For banks with assets of more than $10 million, the new procedures would become effective beginning with transactions and balance sheet positions in 1983; for smaller banks the procedures would become effective for 1985 transactions and balance sheet positions.

New Member Banks

Lakeway National Bank, Austin, 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 November 2, 1981, 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: Ross P. Bennett, Chairman of the Board; George H. Fulford, Jr., President; and Joseph Daniel Dillegas, Vice President and Cashier.

East El Paso National Bank, El Paso, Texas, a newly organized institution located in the territory served by the El Paso Branch of the Federal Reserve Bank of Dallas, opened for business November 2, 1981, 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: Jack F. Blackhall, President; Bruce Beatty, Vice President and Cashier; and Henry Martinez, Vice President.

Lost Pines National Bank, Smithville, 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 November 4, 1981, 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: John Selman, Chairman of the Board; Lillian Howard, Secretary of the Board; Barry W. Weaver, President; and Deborah Jordan, Cashier.

Clear Lake National Bank, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business November 9, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of $1,150,000 and surplus of $1,150,000. The officers are: James S. Newcomb, Chairman of the Board and President, and Sharon B. McCann, Cashier and Secretary of the Board.

Now Available

Recently issued Federal Reserve circulars, speeches, statements to Congress, publications, etc., may be obtained by contacting the Department of Communications, Financial and Community Affairs, Federal Reserve Bank of Dallas, Station K, Dallas, Texas 75222, unless indicated otherwise. Requests for circulars should specify the circular numbers.

Circulars

Regulation Z—Truth in Lending: Proposed Amendment. 10 pp. Circular No. 81-211 (November 3, 1981).

Mutilated Currency. 2 pp. Circular No. 81-214 (November 10, 1981).

Regulation K—International Banking Operations (Proposed Rulemaking Relating to Investment Advisory and Management Services). 3 pp. Circular No. 81-218 (November 17, 1981).

Amendment to Regulation Q [Interest on Deposits]: Depository Institutions Deregulation Committee Rules. 24 pp. Circular No. 81-219 (November 19, 1981).

Regulation Y—Bank Holding Companies and Change in Bank Control Act (Proposed Rulemaking Relating to Nonbanking Activities). 3 pp. Circular No. 81-220 (November 19, 1981).

Depository Institutions Deregulation Committee: Technical Amendment to Final Rule. 4 pp. Circular No. 81-221 (November 23, 1981).

Regulation T [Credit by Brokers and Dealers]: Proposed Amendment. 4 pp. Circular No. 81-222 (November 23, 1981).

Pricing Schedule for Cash Transportation. 14 pp. Circular No. 81-223 (November 24, 1981).

Federal Financial Institutions Examination Council: Recommended Definition of Bank Capital. 6 pp. Circular No. 81-224 (November 25, 1981).

Federal Financial Institutions Examination Council: Accrual Reporting Requirement. 3 pp. Circular No. 81-225 (November 25, 1981).

Speeches and Statements

Statement by **Henry C. Wallich** before the **Subcommittee on Trade** of the Ways and Means Committee, U.S. House of Representatives. 9 pp. November 3, 1981.

Remarks by **Henry C. Wallich ("U.S. Monetary Policy: A Convergence of Views")** before the **Ausschuss fuer Geldtheorie und Geldpolitik** of the Gesellschaft fuer Wirtschafts- und Sozialwissenschaften Verein fuer Socialpolitik, Frankfurt, Germany. 19 pp. November 7, 1981.

Remarks by **Paul A. Volcker** at the **University of Nebraska–Lincoln,** The E. J. Faulkner Lecture Series, Lincoln, Nebraska. 14 pp. November 11, 1981.

Remarks by **Henry C. Wallich ("Gold and the Dollar")** at the **Seventh International Working Conference** sponsored by FOREX Research and The International Herald Tribune, Paris, France. 13 pp., including summary. November 23, 1981.

Pamphlets, Brochures, and Reports

Role of . . . Economic Activity and Markets. Published by the Federal Reserve Bank of St. Louis. (A pamphlet relating how the nation's economic activity is coordinated in producing the goods and services the country demands) 32 pp. 1981.