

CURRENT ISSUES IN MONETARY CONTROL*

Statement by

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I am very pleased to be here this morning to discuss issues of monetary control and of the Federal Reserve's new definitions of the monetary aggregates. These are not the big, sexy issues of monetary policy regarding our overall monetary management for purposes of reducing inflation and maintaining a fully-employed economy. However, without proper attention to monetary control these big issues will never be resolved satisfactorily. I am, therefore, delighted that this Committee, which has taken the lead in investigating these mundane issues, is taking them up again in the current set of hearings.

I will begin by outlining briefly the importance of monetary control issues, both for the long run and for the short run. I will then discuss in some detail monetary control problems and the steps the Federal Reserve and the Congress should take to improve the accuracy of control. Finally, I shall discuss issues of measurement of monetary magnitudes.

Importance of Monetary Control Control of the money stock over the long run is a necessary and sufficient condition to control the rate of inflation. If we print too much money, then its value will fall, if not immediately then surely eventually. That the price level is a direct function of the quantity of money is one of the oldest propositions in economics. Indeed, in these days of faulty business cycle forecasts I would remind you that the quantity theory proposition is also one of the more reliable propositions in economics. In short, if we do not control the money stock we will not be successful in controlling inflation.

The proposition that the price level is a function of the level of the money stock, or that the rate of inflation is a function of the rate of growth of the money stock, is correct as a long-run matter. However, it is clearly the case that the rate of inflation

on a quarter-by-quarter and year-by-year basis is very loosely related to variations in money growth rates quarter-by-quarter or year-by-year. If money growth averages three percent per year for a decade, it matters relatively little whether that three percent average arises from an absolutely rock steady three percent growth per year or as an average of fluctuating money growth—say, zero percent in even years and six percent in odd years. This observation has frequently been used by the Federal Reserve and by many economists to justify a lack of concern over short-run money growth.

Indeed, in some business cycle theories variations in short-run money growth can, in principle, provide an important element of stabilizing policy. When the economy is weak money growth should be higher and when the economy is booming money growth should be lower. But I should emphasize the importance of the qualifying phrase "in principle". For countercyclical monetary policy to be successful it is obviously necessary that the variations in money growth be well-timed with respect to the needs of the economy. Although there is a lively debate among business cycle theorists over whether fluctuations in money growth can in principle be stabilizing, after the experience of the last fifteen years no one can believe that fluctuations in money growth have been stabilizing in fact. Moreover, the experience of the last fifteen years is not an aberration. Careful examination of the record from the earliest days of the Federal Reserve System suggests that there has never been a period in which monetary policy has been systematically stabilizing.

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From long experience with attempts at countercyclical monetary policy in the United States and in other countries it is clear that, given the current state of knowledge, the potential gains are small and the risks are great of attempting deliberate countercyclical fluctuations in money growth. By a failure to control the money stock more carefully over the short run the Federal Reserve has lost control over the money stock over the longer run. Instead of fluctuating money growth averaging three percent over a decade, we have seen the six percent years followed by additional six percent and even eight and ten percent years. It has been all too easy to put off monetary discipline to the future—to say that this year is an especially inconvenient time to reverse last year's money surge. Time and again we have put off our money stock diet until tomorrow; we have taken too many one last drinks attempting to satisfy our apparently insatiable thirst to print more money.

It is self-evident that if we are to have stable and low money growth in the long run we must find a way either of preventing short-run money growth fluctuations from occurring in the first place or of insuring that they will in fact be offset by fluctuations in the opposite direction in succeeding periods. We have simply failed at this latter course; we should now eliminate the short-run fluctuations and do so by paying much more careful attention to close money stock control on a month-by-month basis.

There is a special advantage to tight short-run control of the money stock today. If today's inheritance were one of fifteen years of stable long-run money growth and experience with prompt Federal Reserve action to reverse unwanted changes in money growth, then money surges today would be met with a ho-hum shrug. But that is not our inheritance in 1980. With good reason, surges in the money stock today generate fears that the Federal Reserve is losing control or caving in. I personally believe that the Federal Reserve is currently doing a fine job and is very much on the right track. But my optimism is tempered with realism. In addition, I can well understand the extreme skepticism with which current Federal Reserve policy is treated in the market-place. The Federal Reserve's inner commitment is not enough; it must earn the confidence of the markets by solid and sustained performance.

I have discussed the issue of monetary control with respect to the Federal Reserve's responsibilities but let me hasten to add that the Federal Reserve needs consistent and sustained support from the Administration and the Congress. More often than not, the Administration and the Congress have

badgered the Fed to do the wrong thing instead of badgering the Fed to stop doing the wrong thing.

One of my favorite examples of harmful pressure on the Fed occurred in October 1977. As reported in the *Wall Street Journal* the next day, on October 20, 1977 the White House posted a "Notice to the Press" that criticized Federal Reserve policy. The thrust of that notice was that the Fed's efforts to restrict money growth were forcing up interest rates which would damage the economy. Near the end of the *Wall Street Journal* report is the following paragraph:

After cautioning about the dangers of further tightening, the statement declared: "Rapid growth of the money supply is a matter of concern when it occurs in the context of very rapid economic expansion, high employment and a worsening outlook for inflation. Those are not the circumstances we face presently." The word "not" was underlined.

The entire article from which the above paragraph is extracted makes for very sobering reading indeed after the inflationary experience of the last two years.

Technical Problems in Monetary Control Let me now turn to technical issues of monetary control. Initially, let us assume that we want to control one of the currently defined monetary aggregates, either M-1 or M-2.

The basic structure of the monetary control problem is institutionally rather complicated but intellectually rather simple. Federal Reserve open market operations—the purchase and sale of government securities by the Fed—control the monetary base, which is defined as the sum of currency in circulation and bank reserves. When the Federal Reserve buys government securities, it pays for them by writing a check on itself, which directly increases the reserves of the banking system. Conversely, when the Federal Reserve sells government securities it receives checks in payment and clears those checks by subtracting them from bank reserve balances on deposit at Federal Reserve Banks. With exceptions to be discussed below, through Federal Reserve open market operations the monetary base can be controlled to the penny.

This basic fact is extremely important. The Federal Reserve is under no obligations of any contractual or technical kind to engage in open market operations. If the Fed stops buying government securities, then the monetary base will stop growing. It may or may not be wise for the Federal Reserve to stop the growth of the monetary base in its tracks. But let there be no misunderstanding; although the Federal Reserve and many economists frequently say

that the Fed "has no choice" concerning increases in the monetary base, those views refer to policy and not to any technical impediments whatsoever.

While Federal Reserve control of its open market operations, and therefore of the monetary base, is the single most important element in monetary control, it is nevertheless true that the relationship of the money stock to the monetary base is not perfectly predictable. There are a number of reasons why this relationship is somewhat loose, and I will outline the major considerations below.

First, the monetary base has two components—member bank reserves on deposit at Federal Reserve Banks and currency in the hands of the public. Currency is one of the components of the money stock. Reserves, however, are not a direct component of the money stock but rather support the deposits that are a component of the money stock. The importance of the currency/deposit ratio will be discussed later; at this point let us consider why the relationship of deposits to reserves is not perfectly stable and predictable.

Commercial banks that are member banks are required to hold reserves in specified percentages of various classifications of deposits. These required reserve ratios differ substantially from one bank to another. As of this writing, required reserves against demand deposits of more than \$400 million are 16.5 percent, while the requirement for deposits of less than \$2 million is only 7.5 percent. If a depositor writes a \$100 check on an account in a very large bank and that check is deposited in a very small bank, then in the first instance there is no change in deposits for the two banks together; the large bank's deposits decline and the small bank's deposits increase by the same amount. However, the large bank had been holding 16.5 percent required reserves, or \$16.50, against that \$100 deposit whereas the small bank must hold only 7.5 percent, or \$7.50, against that deposit. Thus, even though there is no change initially in total deposits, the transfer of deposits releases reserves of \$9.00 and leaves the banking system with surplus reserves which may be used to support deposit expansion.

Differential reserve requirements on different size banks destabilize the average reserve requirement for the banking system as a whole. As deposits are shifted from one bank to another a given total of reserves in the banking system can support a larger or smaller total of deposits. The needed reform is simple and obvious. All banks (and other financial institutions) should be subject to the same flat reserve requirement on their deposits independent of

bank size. The current bill on Federal Reserve membership and reserve requirements will move far in this direction although, because of a lower requirement on the first \$25 million of transactions type deposits, not quite all the way to absolutely uniform requirements.†

Another reason for the instability in the reserve/deposit ratio in the aggregate is that reserve requirements are assessed against many bank liabilities that

† Editor's note: The reference here is to the Depository Institutions Deregulation and Monetary Control Act of 1980 which was passed on March 31 and which establishes, effective September 1, reserve requirements of 3 percent on the first \$25 million of transactions deposits and 12 percent on amounts in excess of that figure.

Table I

RESERVE REQUIREMENTS: FEDERAL RESERVE BULLETIN, JANUARY 1965

RESERVE REQUIREMENTS OF MEMBER BANKS (Per cent of deposits)

Effective date ¹	Net demand deposits ²			Time deposits	
	Central reserve city banks ³	Reserve city banks	Country banks	Central reserve and reserve city banks	Country banks
In effect Dec. 31, 1948..	26	22	16	7½	7½
1949—May 1, 5.....	24	21	15	7	7
June 30, July 1.....	23½	20	14	6	6
Aug. 1, 11.....	23½	19½	13	5	5
Aug. 16, 18.....	23	19	12		
Aug. 25.....	22½	18½			
Sept. 1.....	22	18			
1951—Jan. 11, 16.....	23	19	13	6	6
Jan. 25, Feb. 1.....	24	20	14		
1953—July 1, 9.....	22	19	13		
1954—June 16, 24.....	21			5	5
July 29, Aug. 1.....	20	18	12		
1958—Feb. 27, Mar. 1.....	19½	17½	11½		
Mar. 20, Apr. 1.....	19	17	11		
Apr. 17.....	18½				
Apr. 24.....	18	16½			
1960—Sept. 1.....	17½		12		
Nov. 24.....					
Dec. 1.....	16½				
1962—Oct. 25, Nov. 1.....				4	4
In effect Jan. 1, 1965.....		16½	12	4	4
Present legal requirement:					
Minimum.....	10	7	3	3	3
Maximum.....	22	14	6	6	6

¹ When two dates are shown, first-of-month or midmonth dates record changes at country banks, and other dates (usually Thurs.) record changes at central reserve or reserve city banks.

² Demand deposits subject to reserve requirements are gross demand deposits minus cash items in process of collection and demand balances due from domestic banks.

³ Authority of the Board of Governors to classify or reclassify cities as central reserve cities was terminated effective July 28, 1962.

NOTE.—All required reserves were held on deposit with F.R. Banks, June 21, 1917 until late 1959. Since then, member banks have also been allowed to count vault cash as reserves, as follows: Country banks—in excess of 4 and 2½ per cent of net demand deposits effective Dec. 1, 1959 and Aug. 25, 1960, respectively. Central reserve city and reserve city banks—in excess of 2 and 1 per cent effective Dec. 3, 1959, and Sept. 1, 1960, respectively. Effective Nov. 24, 1960, all vault cash.

do not appear in the definitions of the money stock. For example, when bank liabilities in the form of certain managed liabilities increase, banks must hold additional reserves to satisfy their reserve requirement against those liabilities. With less reserves available to support demand deposits, assuming the total supply of reserves is unchanged, growth in managed liabilities will force a reduction in total deposits.

In recent years the Federal Reserve has continually moved in the direction of more complicated reserve requirements and so the problem of instability in the reserve/deposit ratio has been exacerbated. Table I and Table II show the reserve requirement schedules

reported in the *Federal Reserve Bulletins* for January 1965 and January 1980. Table I is small and reports all reserve requirement changes between December 31, 1948 and January 1, 1965. Table II is large, has extensive fine print in footnotes, and can only report reserve requirements in effect on one date, December 31, 1979, and the date when those requirements took effect.

Comparing the two reserve requirement tables it is clear that reserve requirements have been used for all sorts of purposes other than money control. Indeed, it is fair to say that monetary control issues have rarely even been considered when the Federal Reserve has changed the reserve requirement structure.

Table II

RESERVE REQUIREMENTS: FEDERAL RESERVE BULLETIN, JANUARY 1980

1.15 MEMBER BANK RESERVE REQUIREMENTS¹

Percent of deposits

Type of deposit, and deposit interval in millions of dollars	Requirements in effect December 31, 1979		Previous requirements	
	Percent	Effective date	Percent	Effective date
<i>Net demand²</i>				
0-2.....	7	12/30/76	7½	2/13/75
2-10.....	9½	12/30/76	10	2/13/75
10-100.....	11¾	12/30/76	12	2/13/75
100-400.....	12¾	12/30/76	13	2/13/75
Over 400.....	16¼	12/30/76	16½	2/13/75
<i>Time and savings^{2,3,4}</i>				
<i>Savings.....</i>	3	3/16/67	3½	3/2/67
<i>Time⁵</i>				
0-5, by maturity				
30-179 days.....	3	3/16/67	3½	3/2/67
180 days to 4 years.....	2½	1/8/76	3	3/16/67
4 years or more.....	1	10/30/75	3	3/16/67
Over 5, by maturity				
30-179 days.....	6	12/12/74	5	10/1/70
180 days to 4 years.....	2½	1/8/76	3	12/12/74
4 years or more.....	1	10/30/75	3	12/12/74
Legal limits				
	Minimum		Maximum	
<i>Net demand</i>				
Reserve city banks.....	10		22	
Other banks.....	7		14	
Time.....	3		10	
Borrowings from foreign banks.....	0		22	

1. For changes in reserve requirements beginning 1963, see Board's *Annual Statistical Digest, 1971-1975* and for prior changes, see Board's *Annual Report* for 1976, table 13.

2. (a) Requirement schedules are graduated, and each deposit interval applies to that part of the deposits of each bank. Demand deposits subject to reserve requirements are gross demand deposits minus cash items in process of collection and demand balances due from domestic banks.

(b) The Federal Reserve Act specifies different ranges of requirements for reserve city banks and for other banks. Reserve cities are designated under a criterion adopted effective Nov. 9, 1972, by which a bank having net demand deposits of more than \$400 million is considered to have the character of business of a reserve city bank. The presence of the head office of such a bank constitutes designation of that place as a reserve city. Cities in which there are Federal Reserve Banks or branches are also reserve cities. Any banks having net demand deposits of \$400 million or less are considered to have the character of business of banks outside of reserve cities and are permitted to maintain reserves at ratios set for banks not in reserve cities. For details, see the Board's Regulation D.

(c) Effective Aug. 24, 1978, the Regulation M reserve requirements on net branches due from domestic banks to their foreign branches and on deposits that foreign branches lend to U.S. residents were reduced to zero from 4 percent and 1 percent, respectively. The Regulation D reserve requirement on borrowings from unrelated banks abroad was also reduced to zero from 4 percent.

(d) Effective with the reserve computation period (beginning Nov. 16, 1978, domestic deposits of Edge corporations are subject to the same reserve requirements as deposits of member banks.

3. Negotiable order of withdrawal (NOW) accounts and time deposits such as Christmas and vacation club accounts are subject to the same requirements as savings deposits.

4. The average reserve requirement on savings and other time deposits must be at least 3 percent, the minimum specified by law.

5. Effective Nov. 2, 1978, a supplementary reserve requirement of 2 percent was imposed on large time deposits of \$100,000 or more, obligations of affiliates, and ineligible acceptances.

Effective with the reserve maintenance period beginning Oct. 25, 1979, a marginal reserve requirement of 8 percent was added to managed liabilities in excess of a base amount. Managed liabilities are defined as large time deposits, Eurodollar borrowings, repurchase agreements against U.S. government and federal agency securities, federal funds borrowings from nonmember institutions, and certain other obligations. In general, the base for the marginal reserve requirement is \$100 million or the average amount of the managed liabilities held by a member bank, Edge corporation, or family of U.S. branches and agencies of a foreign bank for the two statement weeks ending Sept. 26, 1979.

NOTE. Required reserves must be held in the form of deposits with Federal Reserve Banks or vault cash.

A typical recent example is the addition on March 14 of reserve requirements on increases in consumer revolving credit and money market mutual fund shares. If the Congress wants to discourage growth in these items, then it should do so by an explicit tax rather than by a hidden tax in the form of a reserve requirement that will make monetary control, and therefore inflation control, more difficult. It is precisely because the Federal Reserve and the Administration have been willing to use devices of this type that our reserve requirements system is a mess. There ought to be a law against it.

A relatively minor, but unnecessary, factor of the same type is the existence of reserve requirements against U. S. Treasury deposits in commercial banks ("tax and loan" accounts), which are not included in any of the various M's. As these Treasury deposits rise and fall, total required reserves rise and fall, changing the ratio of total reserves to deposits that are included in the various M's. Reserve requirements against Treasury deposits in commercial banks should be eliminated.

Another factor that has reduced the stability of the ratio of reserves to deposits is the system of lagged reserve accounting introduced in 1968. Tight monetary control requires that there be a predictable relation between the reserves the Federal Reserve creates or destroys and the deposits banks create or destroy. Under our present system of lagged reserve accounting, reserve requirements for a given statement week are based on banks' deposits two weeks earlier. Looked at the other way around, bank deposit creation in a given week will not change a bank's required reserves at all in that week but only with a lag of two weeks.

Because there is a zero reserve requirement contemporaneously, this relation between reserve creation one week and deposit creation that same week is more variable than used to be the case. Moreover, bank deposit creation in one week may lead the Federal Reserve to simply ratify the deposit creation by supplying the required reserves two weeks later. After all, no matter how stingy the Federal Reserve is in supplying reserves this week there is absolutely nothing the banks can do this week about the level of their deposits two weeks ago. Since the banks can not do anything about their deposits of two weeks ago, there is a natural tendency for the Federal Reserve to avoid putting banks through a wringer that can not today change what happened in the past, and so to simply underwrite banks' deposit creation with minimum fuss.

The solution to the lagged reserve accounting prob-

lem is simple; the Federal Reserve should move promptly to a contemporaneous reserve accounting system. It should admit that moving from contemporaneous accounting to lagged accounting in 1968 was a mistake.

Let me now look quickly at the currency issue. When individuals cash checks at banks, they withdraw currency from banks and in the first instance there is simple exchange of deposits for currency with no change in the total of currency in circulation plus deposits. However, since currency in the vaults of the banks—vault cash—is one of the components of bank reserve balances used for meeting legal reserve requirements, banks will find that they have a reserve shortage when currency flows out of banks into general hand-to-hand circulation. Unless the currency drain is offset by Federal Reserve open market operations, banks will be forced to contract deposits further. A currency drain out of the banking system tends to depress the money stock; a currency flow into the banking system tends to expand the money stock.

The Federal Reserve attempts to avoid this instability by open market operations offsetting currency flows. However, the required amount of open market operations is always subject to uncertainty because flows into and out of vault cash can occur without the Federal Reserve discovering the fact until the data are reported with a lag of about a week. That lag is not very important in practice; however, the problem can be eliminated completely by a simple change in Federal Reserve regulations. The reserve regulations should be altered so that vault cash in the banks would not count as one of the components of bank reserves but rather would be treated as a deduction from gross demand deposits in calculating net demand deposits subject to reserve requirements. This treatment would be the same as the one that presently applies for bank cash items in the process of collection—checks held by banks that are drawn on other banks and are in the process of being collected.

The discussion so far has assumed that the Federal Reserve can control the size of the monetary base—the sum of bank reserves and currency in circulation—to the penny if it chooses to do so. In fact, that assumption is not quite correct.

To begin with, it must be emphasized that although the Federal Reserve has always had the technical means to control the monetary base extremely accurately, until last October 6 it has never chosen to do so. Especially in recent years the Fed has chosen instead to peg the Federal funds rate—the interest

rate banks charge when they lend reserve balances to each other. Whenever the Federal funds rate tended to rise above the Fed's target the Fed would supply reserves to check the increase; whenever the funds rate tended to fall below the Fed's target the Fed would absorb reserves to check the fall.

The pegging of the Federal funds rate was ended in substantial degree last October. The Federal Reserve widened the range of Federal funds rate fluctuations that it would tolerate without intervening in the market. However, the Fed has not adopted the policy of permitting the funds rate to fluctuate with market forces without any intervention whatsoever. I would be more confident that the October 6 reforms were permanent if the Federal Reserve would abandon its intervention policy altogether and control its open market operations without reference to the Federal funds rate.

There are two technical impediments to precise Federal Reserve control of the monetary base. The first arises from so called "operating factors". The most important of these is Federal Reserve float. In the process of clearing checks, the Federal Reserve on the average adds reserves to banks' reserve accounts before the checks are cleared and subtracted from other banks' reserve accounts, thus injecting extra reserves into the banking system. There would be no problem if float were constant, but in fact float fluctuates in a rather random and unpredictable fashion. For example, whenever a major winter snow storm disrupts operations at O'Hare Airport checks are cleared more slowly and float balloons. Perhaps the Federal Reserve could predict fluctuations in float more accurately if it were to add several meteorologists to its staff; on the other hand, perhaps not. The only practical way for the Fed to reduce the fluctuations and the average size of float is to invest additional resources in computers and personnel to speed check clearing.

Another volatile operating factor involves changes in U. S. Treasury deposits at Federal Reserve Banks. When checks are drawn on these accounts funds are transferred to member bank reserve accounts, increasing bank reserves and the monetary base. Conversely, when tax receipts and the proceeds from sales of U. S. Government securities are deposited in U. S. Treasury accounts at Federal Reserve Banks, member bank reserve accounts decline. The Federal Reserve and U. S. Treasury have worked together for many years to forecast changes in Treasury deposits at Federal Reserve Banks, so that open market operations can offset these changes. To my knowledge there are no further steps available to reduce

the disturbances to the monetary base caused by Treasury operations.

The second important technical impediment to precise Federal Reserve control over the monetary base is the operation of the Fed discount window. Member banks can borrow at their own initiative from the Federal Reserve, and these borrowings create additional reserves. Member bank borrowing through the discount window fluctuates a great deal and these fluctuations are largely unpredictable. Banks can create deposits first and then borrow the reserves necessary to meet the reserve requirements against those deposits later. Or banks can let deposits run off and use the reserves released from reserve requirements to pay off borrowings at the discount window rather than to make new loans that will bring deposits back to their original level.

To some extent, the Federal Reserve can control the amount of borrowing through administrative means. However, the only really reliable method of controlling bank borrowing is to insure that the banks do not have an incentive to do so. The discount window should be closed, except for borrowing in a genuine liquidity crisis or other emergency applying to one or more banks. The vast bulk of borrowing through the discount window has always been for an entirely different purpose—that of short-run reserve adjustment by member banks. The window works rather like the overdraft loan feature of my checking account, except that much of the time the discount rate is below market rates of interest and so banks are *subsidized* when they borrow at the discount window to avoid their reserve balances falling below required levels. It is easy for me and easy for a bank to avoid an overdraft; all we need do is keep a margin of extra funds in our accounts and monitor the accounts carefully to keep track of our balances.

Banks do not want to hold excess balances earning zero interest; neither do I. But that is no reason for an agency of the Federal Government to lend to me at a subsidy rate so that I can avoid an overdraft while keeping my excess balances near zero. For some time I have recommended a different mechanism. Banks should be permitted to carry over a reserve deficiency to the next statement week, but with the penalty that in the next week extra reserves must be held equal to 110 percent of the deficiency. Thus, if a bank has a deficiency, it would in effect borrow from its next week's reserves rather than from the discount window, and so no additional reserves would flow into the banking system to raise the monetary base. Similarly, to be symmetrical and ease banks' reserve management problems, the Fed

should permit a 90 percent carryover of excess reserves.

Even on emergency borrowings the discount rate should be kept continuously above market rates of interest so that banks have an incentive to borrow in the market place rather than to find an excuse to have an emergency so they can borrow from the Federal Reserve at a subsidy rate. If a bank needing funds borrows in the market place, then it must borrow reserves from some other bank and such borrowing does not change the total amount of reserves in existence.

The Federal Reserve should not rely on discretionary changes in the discount rate to keep it above market rates of interest, but rather should tie the discount rate to market rates of interest in an automatic fashion. My recommendation is that the discount rate charged in a particular week should always be a percentage point above the average three-month Treasury bill rate in the prior week.

The reform of tying the discount rate to market rates of interest, however, is always subject to the problem of untying. I would like to see the Congress write a discount rate formula into the Federal Reserve Act subject to change only in emergency circumstances. The Congress has not provided the Federal Reserve with unlimited authority to change reserve requirements and it should not provide unlimited authority for discount rate changes either.

One final element of the monetary control process needs to be examined—the matter of data availability. The relation between the monetary base and the money stock can be made substantially more stable and predictable, but it will never be precisely predictable. For this reason, it is of great importance that the Federal Reserve have accurate and timely data on the assets that are included in the various definitions of the nation's money stock. The Federal Reserve should be granted broad authority by the Congress to collect the monetary data it needs. One of the biggest gaps in the past was timely data on deposits in nonmember banks. That situation has improved substantially in recent years but there are other gaps in the data base. If the Congress is concerned about inflation then it must be concerned about the amount of money in circulation. And if it is concerned about the amount of money in circulation, then it must provide the Federal Reserve with the power to collect the data necessary to measure that magnitude.

The above list of recommended reforms in the Federal Reserve's monetary control mechanism may fairly be described as a laundry list. The fact of the

matter is that improved monetary control is a matter of a large number of individually small reforms. I have worked on this topic for some period of time, beginning with a paper in 1972¹ that provided an extensive analysis, including empirical estimates, of self-inflicted regulatory impediments to accurate money stock control. The Federal Reserve Board and staff have never been very interested in the subject, and have never conducted a comprehensive study of the issues involved. The individual topics have been treated, if at all, on a piece meal basis and reform has generally been rejected on the grounds that the individual matter is too small to be worth doing in the light of other compelling considerations. This attitude of unconcern reflects, I believe, a general attitude of unconcern over the Federal Reserve's most basic and most important function—that of controlling the quantity of money. In recent years the Fed has greatly improved its data and the conceptual basis of its monetary measures; it ought to put at least as much effort into reforming its own reserve regulations and monetary control procedures.

Money Stock Measurement The Federal Reserve has recently announced new definitions of its monetary aggregates. I believe that it has done an excellent job in this matter. There were many difficult issues involved and many judgment calls had to be made.

Part of the Fed's problem in the redefinition project was a data problem. A number of newly invented assets and changed market practices had to be investigated with a view as to whether these new assets should or should not be included in the new concepts of money. In a number of cases the data available were substantially weaker than desirable for the purpose of making these decisions. In some cases assets that on a conceptual basis ought to be included in a redefined money stock could not be included because of the absence of data. For example, there is a strong case for including travelers checks outstanding in one of the monetary aggregates, but historical data on the amounts outstanding do not exist and there seems little likelihood of obtaining authority to collect such data.

My only quarrel with the Fed's new money stock definition is that the M-1A concept makes no sense. The M-1A measure is essentially the old M-1—that is, M-1 without any corrections for the new types of checking accounts that created the need for

¹ William Poole and Charles Lieberman, "Improving Monetary Control," in Arthur M. Okun and George L. Perry, eds., *Brookings Papers on Economic Activity*, 1972:2, 293-335.

redefinition of M-1 in the first place. I recommend that the Fed drop the M-1A concept and that the House and Senate Banking Committees ask the Fed not to present money growth targets for M-1A.

The major redefinition issue is not the job the Fed did—except for the M-1A concept it did an excellent job—but the likelihood that the new definitions will soon be obsolete. At today's interest rates the prohibition of interest on demand deposits and Regulation Q interest ceilings are producing very extensive efforts at avoidance and serious distortions in our monetary data. For example, the M-1B measure includes NOW accounts, an obviously necessary revision in the definition of M-1. However, some years ago there was considerable ambiguity as to whether NOW accounts were really substituting for demand deposits, or whether the check withdrawal feature was simply a cheaper and more convenient way of withdrawing funds from a savings account. The problem was a direct result of the prohibition of interest on demand deposits; were it not for that prohibition, NOW accounts would never have been invented. Similarly, money market mutual fund shares have been added into the new M-2. Here again, there is substantial ambiguity about the proper treatment of money market fund shares. The problem would never have existed were it not for Regulation Q ceilings on time deposits. The entire money market mutual fund industry would not exist without that one regulation.

The market will continue to invent and innovate to get around existing regulations of the types I have mentioned above. These forces are not to be regretted; they reflect the very same profit-seeking and innovative behavior that is responsible for computers, jet aircraft, and the entire range of technological advance that has produced our high standard of living. But financial innovations motivated by regulatory avoidance will pose continuing difficulties for interpretation of monetary data. Reform of monetary control might make possible much more accurate control of, say, M-1B as currently defined but we will always be in danger of controlling a magnitude that has become increasingly out-moded because of financial market innovations.

To appreciate what interest rate controls have done it is worth noting that the menu of financial assets available in 1965 was very similar to that available in 1920, or in 1880 for that matter. Technical change per se has had relatively little effect on the basic structure of the financial system. The costs of clearing checks have been reduced, and the speed of clearing increased, but today a check still looks and works about the way it did 100 years ago. But since 1965 we have seen NOW accounts, POW accounts, ATS accounts, money market mutual funds, loophole certificates, and so forth. Interest ceilings are inefficient and distorting in their own right but one of their biggest costs is the monetary confusion they have caused and will continue to cause. The ceilings should be ended promptly and that is a matter for the Congress and not for the Federal Reserve.