Research Department
Federal Reserve
Bank of
San Francisco

February 19, 1982

Weekly Letter
FRBSF

M-2 as a Monetary Target

In formulating policy, the Federal Reserve System considers more than one monetary aggregate. In particular, it pays close attention to M-1 (the former M-1B), which consists only of transactions money, and M-2, which adds to M-1 a number of other assets which are highly liquid but cannot be spent directly. This month, for example, the Fed announced several definitional changes, in an attempt to make M-2 a better measure of the growth of these highly liquid assets (see the February 12 *Weekly Letter*).

In 1981, M-2 growth exceeded the top of its 6-to-9 percent targeted growth range. In contrast, M-1B growth fell somewhat below the bottom of its targeted range of 3½ to 6 percent (after adjustment for NOW accounts and other "checkable" deposits). Some analysts have argued that the rapid growth of M-2 not only explains but also *justifies* M-1's below-target performance, in the sense that higher levels of M-2 can offset the output and inflation effects of lower levels of M-1. However, the validity of this argument depends on how monetary variables affect the real side of the economy.

Unique assets

In monetary theory, "money" is a unique and special asset, first, because it functions as the medium of exchange. As such, money is the most liquid asset available, so that an increase in the stock of money adds to the liquidity of the economy. At a given level of interest rates, such an increase in liquidity may raise the overall propensity to spend on goods and services. For example, a household faced with an unexpected decline in its income is less likely to delay a planned expenditure if its assets are in liquid rather than in illiquid form. Indeed, empirical evidence suggests that households' consumption outlays are positively related to their holdings of liquid assets. Similar considerations may apply to the spending behavior of businesses and of state and local governments. For these reasons, many economists believe that an increase in the money stock directly stimulates aggregate demand.

Second, "money" is unique in that it yields a zero, or at least fixed, rate of return. This characteristic is significant because, if the stock of money changes, the rates of return on *non-money* assets must adjust until the public is willing to hold the changed money supply. For example, if the stock of money *increases*, interest rates on non-money assets such as securities must fall, to induce the public to alter its portfolio in order to hold relatively more money and fewer non-money assets. This interest-rate decline will in turn exert an expansionary effect on the demand for goods and services. This provides a second reason for expecting an increase in the money stock to stimulate output, employment and prices.

However, if money were to yield a return which varied in response to changes in supply and demand, the effect of an increase in the money stock would be less easy to predict. In such a case, an addition to the stock of money would be likely to cause an *increase* in the rate of return on money as well as a *decrease* in the rate of return on other assets. Hence, although it would have a positive liquidity effect, the direction of its influence on the real economy would be ambiguous.

Changing nature of M-2

All of the assets included in M-1 possess both of the unique characteristics of money. Until recently, almost all of the components of M-2 also yielded fixed rates of return and were so highly liquid that, although not directly spendable, they functioned as a "temporary abode of purchasing power" (to adopt Milton Friedman's phrase). Hence, the above arguments about the stimulative effects of an increase in the money stock applied not only to M-1 but also to M-2. Today, however, several of the assets included in M-2 yield interest at a market-determined rate. This is

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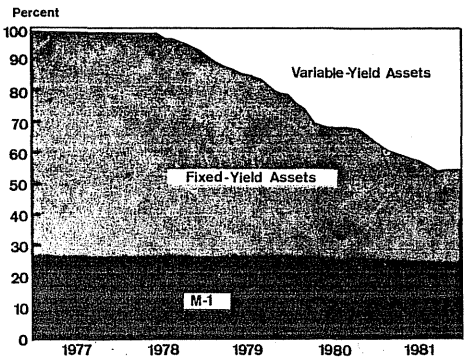


true, for example, of overnight repurchase agreements (RPs) and Eurodollars, of money-market mutual funds, and of the money-market and small-saver certificates issued by banks and other depository institutions. The share of these assets in M-2 has risen dramatically in recent years, so that they now account for almost half of the total. In addition, some M-2 components—such as the small-saver (30-month) certificates and the new All-Savers certificates and IRA accounts—not only yield a market rate of interest but also are not particularly liquid. Thus, the characteristics of the M-2 aggregate have changed dramatically, so that a substantial portion no longer possesses the unique features which separate money from other assets.

Additions to the stocks of these interest-bearing components of M-2 generally are associated with increases in their own-rates of return. For example, high rates of return in 1981 induced households to switch their liquid assets into money-market funds on a massive scale. Because of this, the effect of increases in these components on the demand for goods and services is not as clear-cut as it used to be.

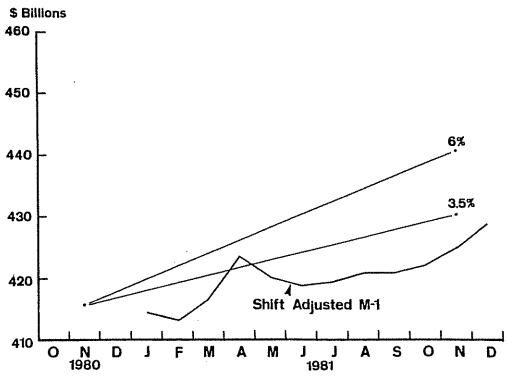
On the one hand, an increase in the stock of these interest-bearing liquid assets frequently represents the *response* of the public and of depository institutions to rising interest rates, rather than the direct result of an expansionary action by the monetary authorities. Hence, such an increase does not necessarily imply that wealth-holders' portfolios are out of equilibrium, and hence will not necessarily lead either to a decline in interest rates on other assets or to a rise in the demand for goods and services. Rather, an accelerated rate of M-2 growth may be an indication of a restrictive monetary policy, which is pushing up market yields and inducing the public to rearrange its asset portfolios, rather than an indication of an expansionary policy.

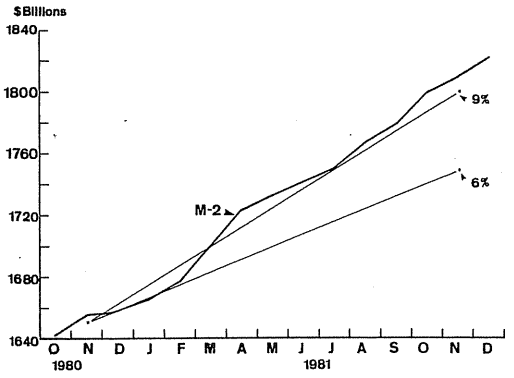
On the other hand, the increase in the quantities of these "near-money" assets probably does mean that the economy is more liquid than it would be in their absence. Without these instruments, high market interest rates produced by restrictive monetary policies would provoke shifts of funds into less-liquid marketable securities, such as Treasury bills and commercial paper. Hence the increased availability of near-money assets yielding market rates of interest probably means that the propensity to spend is higher than it would otherwise be. Because of this "liquidity effect," the restrictive impact on spending of higher interest rates may be reduced.

Intermediation and policy

This point may be explained in another way by noting that the issuers of "near-moneys" perform a financial-intermediation role which is similar to that performed by issuers of transaction accounts. Hence if restrictive Federal Reserve actions reduce the issuance of transaction accounts—and the financial intermediation which accompanies it—the economic impact may be mitigated by an offsetting increase in the amount of intermediation services provided by the issuers of non-transaction liquid assets. On the other hand, this offset is not complete, since interest rates *do* rise at the same time.

This is not a new insight. It was recognized several years ago by Nobel Laureate James Tobin, who in turned based his analysis of financial intermediation on the earlier work of John Gurley and Edward Shaw. Until recently, however, binding deposit-rate ceilings limited the ability of issuers of near-money assets to supply more financial intermediation when monetary policy was tight. As a result, rising market interest rates produced a decline, rather than an increase, in the amount of intermediation they could provide. But several recent developments—the gradual elimination of Regulation Q, and the emergence of new instruments and institutions not subject to regulation—are changing the manner in which the economy responds to restrictive monetary policy. Specifically, we must expect policies which slow the growth rate of the low-interest-





bearing transaction balances included in M-1 both to stimulate the public's demand for other liquid assets and to induce depository institutions to supply interest-bearing instruments which meet that demand.

The offsetting effects on slower M-1 growth of a more rapid growth of other liquid assets frequently is explained in terms of a shift in the demand for transactions money. In this view, policies which slow M-1 growth, and hence raise interest rates, tend also to induce financial innovations which cause a downward shift in the demand for M-1. The consequence is a reduction in the impact of the policy on interest rates and aggregate demand. This mode of argument reflects the emphasis placed by monetary theorists on the asset "money," and especially on money in its role as the medium of exchange.

However, essentially the same point may be made by pointing out that the issuers of transaction money (banks) are also suppliers of intermediation services. When restrictive policies reduce banks' ability to issue checking accounts, they simultaneously decrease the supply of intermediation services, which in turn raises interest rates. However, if banks respond to this situation by issuing other, non-transaction, liabilities, and if other institutions come into existence to supply intermediation services through the issue of new financial instruments, there is less effect on the supply of financial intermediation. As a result, the effect on interest rates and on aggregate demand is less than it otherwise would be.

Policy implications

The above discussion suggests that M-2 is unlikely to be a good indicator of the thrust of Federal Reserve policy. This is because the components of M-2 which yield a market-determined rate of return affect the real economy in a different way than do the components (including M-1) which yield a fixed rate. Unfortunately, the relation of M-1 to the principal macroeconomic variables—output, prices and interest rates—also has been subject to a good deal of uncertainty as a result of the recent spate of financial innovations (see our January 1 *Weekly Letter*). Interestingly, the *empirical* relation between M-2 and national income has been quite stable through this period, leading some commentators to argue that the broader aggregate might be a better indicator *in practice* despite the theoretical objections raised against it above.

The weakness of this argument is that it ignores the dramatic changes taking place in the composition of M-2. The stability in the *average* velocity of the aggregate conceals the sharp changes occurring in the velocity of its components and, in particular, the shift of funds from fixed- to variable-yield instruments. As a result, the past empirical regularity may be a less reliable guide to the future than economic theory.

If Federal Reserve policy reduces the supply of fixed-rate assets, the effect is unambiguously restrictive—since interest rates rise, the economy becomes less liquid, and the supply of financial intermediation declines. On the other hand, such a policy may tend to increase the amount of variable-interest-rate liabilities which are issued by intermediaries. This in turn supplies additional liquidity and more financial-intermediation services, and partially offsets the effects of the policy on aggregate demand. As a result, the growth of the combined fixed- and variable-rate components may convey little information regarding the economic impact of policy.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 2/3/82	Change from 1/27/82	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	157,235	638	10,048	6.8
Loans (gross, adjusted) — total#	136,003	688	11,411	9.2
Commercial and industrial	41,937	371	4,937	13.3
Real estate	56,090	98	5,215	10.3
Loans to individuals	23,646	– 61	– 26	– 0.1
Securities loans	1,989	77	607	43.9
U.S. Treasury securities*	6,181	14	– 695	– 10.1
Other securities*	15,051	– 64	– 647	– 4.1
Demand deposits — total#	40,879	2,407	– 1,969	– 4.6
Demand deposits — adjusted	27,349	– 111	– 2,472	– 8.3
Savings deposits — total	30,690	479	1,307	4.4
Time deposits — total#	90,757	– 88	14,108	18.4
Individuals, part. & corp.	81,665	– 165	14,530	21.6
(Large negotiable CD's)	36,435	– 121	6,539	21.9

Weekly Averages of Daily Figures	Week ended 2/3/82	Week ended 1/27/82	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (–)	414	69	114
Borrowings	237	171	46
Net free reserves (+)/Net borrowed(–)	177	– 102	68

* Excludes trading account securities.

Includes items not shown separately.

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