Research Department
Federal Reserve
Bank of
San Francisco

February 12, 1982

Weekly Letter

New Measure of M-2

In this era of financial innovation, the Federal Reserve needs to monitor various monetary yardsticks to ensure that such yardsticks measure what they are supposed to measure. To this end, the Fed made several changes recently in the broad M-2 and M-3 aggregates to help provide a more consistent and meaningful measure of the stock of assets that are held for their ease of conversion into transaction balances. The changes, on balance, involved only about $16 billion out of an M-2 measure that approaches $2 trillion in size —nevertheless, they represented an important step in the Fed's continuing effort to improve the measurement of money.

The M-2 aggregate basically includes currency, transaction (checkable) deposits, and other consumer-type balances—including money-market fund shares, travellers cheques, and small denomination (less than $100,000) time certificates at depository institutions. (M-2 also includes a moderate amount of large denomination overnight RPs and Eurodollars.) To retain this basic consumer orientation, the Fed last week removed from M-2 the money-market fund shares held only by institutions, but added retail repurchase agreements (RPs) to the small denomination-time deposit component of M-2. This article reviews the reasoning behind those actions, and raises some general issues regarding the measurement of money.

Retail RPs

Retail RPs are securities sales—with agreement to repurchase—in denominations of less than $100,000 with maturities of less than 90 days. Although they have been in existence for a number of years, retail RPs did not begin growing to any significant extent until late spring 1981, when a number of depository institutions began to offer them in competition with money market funds and later in connection with their promotion of the new tax-exempt All-Savers Certificates. Thus, between December 1980 and September 1981, retail RPs jumped from $1.2 billion to $13.3 billion. Indeed, outstandings declined only slightly below that level during the final quarter of 1981, even though banks no longer sold retail RPs as a means of bringing in All-Savers money.

Until last week, retail RPs were included in the broader M-3 aggregate, along with term RPs in denominations of $100,000 or more. The Fed then decided to make a shift, primarily because retail RPs, unlike large term RPs, tend to be close substitutes for several of the components of M-2—such as passbook savings, small-denomination time certificates and money-market funds. In fact, in offering retail RPs, many banks and S&Ls have generally set minimum investment requirements and yields that are akin to those of money-market funds.

If the change had been in effect during 1981, M-2 growth for the year would have been more rapid, particularly during the summer months when retail RP growth was greatest (see chart). The M-2 monthly growth rates (with and without RPs) diverged significantly in July, August and September, but then converged again in the following months. As households adjusted their portfolios in response to heavier promotion of retail RPs, they may have shifted funds out of M-2 (passbook savings, money-market funds, etc.), and thus restrained growth of M-2. With the completion of the initial adjustment, however, the retail-RP impact became minimal, even though at times households continued to purchase retail RPs at a fairly rapid pace.

Institutional MMFs

While shifting retail RPs from M-3 only to M-2, the Federal Reserve last week made an opposite shift for shares of money-market funds that cater to institutional investors. These funds, unlike general-purpose (household) funds, require substantial minimum initial investments, ranging as high as

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$250,000. These funds are attractive to institutional investors for a variety of reasons—all related primarily to their attractiveness as investments, rather than to their attractiveness as cash-management tools. Thus, because they are substitutes for large certificates of deposit and large term RPs, they appear to fit better into the broader M-3 aggregate than into the M-2 measure.

Institution-only MMFs permit small- to medium-sized firms to invest in a diversified portfolio of money-market instruments, without the large investment that they would need if they were to invest directly in a diversified portfolio. Second, because of their large size, MMFs can realize economies of scale in overhead costs that small- and medium-sized institutions cannot obtain on their own. Third, institution-only MMFs offer shareholders an asset-valuation method that holds the individual share value constant over fairly wide fluctuations in interest rates. (In other words, these funds attract shareholders that want to avoid capital losses in an accounting sense.) Finally, with money-fund managers actively managing the average maturity of their portfolios according to their interest-rate expectations, MMF yields can frequently exceed the yields obtainable through direct investment, particularly during periods of falling rates.

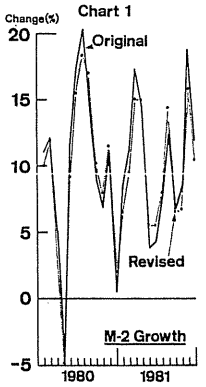
Institutional investors, unlike households, have other cash-management tools available to them (e.g., overnight repurchase agreements), so that they tend to view MMFs primarily as alternatives to direct money-market investments. As a result, the monthly growth rates of institution-only MMFs in recent years have tended to reflect changes in the spread between MMF yields and yields on money-market instruments. With the inclusion of these funds in M-2, M-2 growth likewise has shown a somewhat inappropriate sensitivity to money-market yields, given the nature of M-2 as a more liquid measure than M-3. Since 1979, the growth of the two M-2 measures—with and without institutional MMFs—has at times diverged significantly (see chart). Furthermore, the periods when the two growth rates have differed the most have also been the periods when the spread between money-fund yields and other money-market rates has widened substantially (in an absolute sense). With the exclusion of institution-only MMFs, M-2 growth would have been lower in every year since 1979 and would have been less volatile as well.

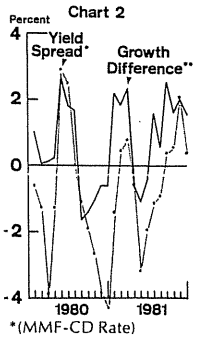
The growth in general-purpose funds, by contrast, does not display the same sensitivity to changes in yield spreads (see chart). Their growth instead appears to be more closely correlated with the overall *level* of interest rates, so that in this respect they behave like the six-month money-market certificates and 30-month small-savers certificates. Hence, it seems appropriate to keep general-purpose funds in M-2, while excluding institution-only money funds.

IRA/Keogh Deposits

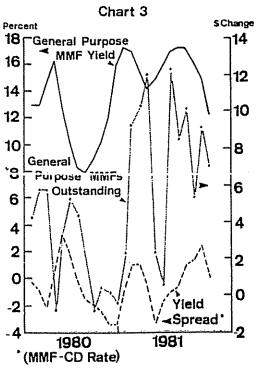
The new Individual Retirement Accounts (IRAs) and the similar Keogh accounts represent another recent institutional change that may affect the behavior of the monetary aggregates, as the public adjusts its portfolio to achieve its desired holdings of these new accounts. Because these funds are held primarily in consumer-type time deposits, they are presently included, for the most part, in the small-denomination time-deposit component of M-2. However, in view of the tax-law changes that expanded eligibility for these accounts, as well as the decision of the Depository Institutions Deregulation Committee (DIDC) to allow depositories to offer such accounts without interest-rate ceilings, IRA and Keogh accounts are likely to grow rapidly as depositors shift funds from other long-term investments and/or increase their savings rate to take advantage of the tax benefits they offer.

These changes in the behavior of IRA and Keogh deposits may well mean that the various components of M-2 will no longer be similar in nature. First, since substantial penalties are involved in spending the funds designated as IRA/Keogh contributions prior to





*(MMF-CD Rate)
**Difference in M-2 growth with and without Institution-only MMFs



retirement age (59½), these deposits are likely to be very long-term in nature, rather than substitutes for such M-2 components as money-market and small-saver certificates. Second, since depositories now offer IRA/Keogh accounts at market rates—and with expanded eligibility—those accounts compete closely with products offered by non-depository institutions (such as life-insurance and securities firms) which are not included in M-2. But the limited experience with such accounts after the recent changes has made it difficult to gauge their impact on the behavior of the aggregates.

Implications of changes

Altogether, the inclusion of retail RPs and the exclusion of institution-only MMFs has probably improved M-2 as a measure of the stock of near-monies. The summer upsurge in retail RPs would have led to faster M-2 growth than what was actually observed. On the other hand, the removal of institution-only MMFs would have reduced the year-over-year growth rate of M-2. M-2 growth would also have displayed somewhat less sensitivity to rates on financial instruments that are included in the broader aggregates. Overall, however, the impact of these two changes would have been small in 1981, reducing M-2 growth from 10.4 percent to 9.9 percent (December-December).

There remains a broader question about the approach used in changing the definitions of the monetary aggregates. Specifically, if the definitions of the aggregates have become outmoded as a result of recent financial innovations, is it enough to make minor incremental adjustments—the approach now used—or is a thorough reevaluation of the basic definitions necessary as well?

Those favoring an incremental approach would argue that the changes in financial instruments are neither so far-reaching nor so rapid as to call into question the basic integrity of the concepts underlying the monetary aggregates. In other words, we can still distinguish, on the basis of their characteristics, between those financial instruments that are used primarily for transaction purposes and those that are not. Hence, minor definitional adjustments are possible (and advisable) without a change in the basic meaning of each aggregate.

Others might argue, however, that incremental adjustments to the aggregates cannot adequately capture the fundamental changes that are occurring in the way the public chooses to hold wealth and handle transactions. Deposit-sweeping arrangements, loophole accounts, and even retail RPs are blurring the distinctions between M-1 types and M-2 types of assets. The principle underlying the redefined aggregates is substitutability—like assets are combined at each level of aggregation. The narrower aggregates should comprise only those assets that are closest substitutes as pure transaction balances. Thus, the narrow M-1 measure includes demand deposits and NOW accounts, which share many of the same liquidity characteristics—but excludes money-market funds, which do not have exactly the same characteristics. Yet some portion of the public is clearly using money-market funds as transaction accounts, through deposit-sweeping arrangements or otherwise. *Ad hoc* adjustments to the present aggregates which add or remove a particular asset category cannot capture this phenomenon very well.

The necessity of a thorough reevaluation of the aggregates is, to a certain extent, an empirical question. Before considering such a major undertaking, analysts should have evidence of significant growth in deposit-sweeping arrangements and other alternatives to traditional transaction instruments. Yet ironically, the number of suggested *ad hoc* adjustments might provide evidence in itself of the need for a major reevaluation.

Barbara Bennett

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 1/27/82	Change from 1/20/82	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	156,597	149	9,473	6.4
Loans (gross, adjusted) — total#	135,315	36	10,764	8.6
Commercial and industrial	41,566	108	4,576	12.4
Real estate	55,992	80	5,206	10.3
Loans to individuals	23,707	− 5	− 55	− 0.2
Securities loans	1,912	− 126	425	28.6
U.S. Treasury securities*	6,167	136	− 633	− 9.3
Other securities*	15,115	− 23	− 637	− 4.0
Demand deposits — total#	38,472	−1,926	− 1,629	− 4.1
Demand deposits — adjusted	27,460	− 582	− 1,609	− 5.5
Savings deposits — total	30,211	− 543	1,208	4.2
Time deposits — total#	90,845	793	14,051	18.3
Individuals, part. & corp.	81,830	796	14,690	21.9
(Large negotiable CD's)	36,556	603	6,266	20.7

Weekly Averages of Daily Figures	Week ended 1/27/82	Week ended 1/20/82	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (−)	69	83	17
Borrowings	171	21	237
Net free reserves (+)/Net borrowed(−)	− 102	62	− 220

* Excludes trading account securities.
\# Includes items not shown separately.

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