Research Department
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FRBSF Weekly Letter

Are RPs Money?

Recent years have seen a speedup in the rate of financial innovation. Banks and other financial intermediaries, it appears, have created new types of liabilities to attract funds from a public that has become sensitive to the yields it receives on its liquid assets as market rates of interest have soared.

Recently, for example, banks have developed an important new source of funds in the form of repurchase agreements, or RPs. Yet at the same time, the traditional monetary aggregates have shown considerable weakness. The question naturally arises whether the two phenomena are related.

RPs are agreements on the part of banks to sell Treasury or Federal agency securities to their customers, coupled with an agreement to buy them back later (hence the term repurchase agreement) at a price which includes accumulated interest. According to one school of thought, the class of assets the public regards as money has grown to include RPs; in fact, the public has shifted some of its money holdings from traditional forms — primarily demand deposits — to RPs, which have the advantage that they pay explicit interest. According to another view, RPs are a manifestation of a pervasive and concentrated effort to economize on money holdings in an era of high interest rates, but are not unique in this respect and are not themselves money.

The first view argues for redefining the monetary aggregates to include RPs; the second argues for trying to adjust the demand function for the traditional aggregates to take account of the move to economize on cash balances. (The demand function relates the amount of currency plus deposits that households and businesses want to hold at given interest rates, incomes and prices.) Yet to date, the evidence is too sketchy to tell which explanation will prove the more useful in the sense of yielding a stable demand function for money — especially for the narrow M_1 measure.

Growth of RPs

RPs are one aspect of a much broader market for short-term funds, the Federal funds market. Initially, it was simply a market where member banks with surplus reserves lent the excess to banks who had a shortage of reserves. These loans took the form of transfers of Federal Reserve deposits — hence the name Federal funds market. In 1964 the market expanded considerably when the Federal Reserve allowed member banks to count as Federal funds the deposits which they borrowed from other banks (both member and non-member), even if such borrowing did not involve the transfer of balances at the Federal Reserve. Further expansion occurred after 1969, when another ruling allowed banks to borrow Federal funds from other parties, provided that such borrowings took the form of repurchase agreements against Treasury and Federal agency obligations. It should be noted, however, that such borrowings have been effectively limited to large firms and state-and-local governments, because of the size of transactions involved.

This 1969 ruling allowed banks to borrow from the public free of any reserve requirements, maturity restrictions or interest-rate ceilings. As a result, banks have been able to offer large demand-deposit holders an attractive alternative investment — a highly liquid and relatively risk-free asset with a very attractive rate of interest. According to a 1977 Federal Reserve survey, up to 90 percent of RPs with nonbank customers have maturities of less than 30 days, with 30 percent being overnight liabilities. Yields on these RPs run somewhat below the Federal funds rate, the difference apparently reflecting the collaterization requirements involved in such borrowing.

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Consequently, in some economists' eyes, RPs are such close substitutes for demand deposits that they should be added to the conventional monetary measures to provide a truer estimate of the stock of money. This contention has taken on added importance recently because of a puzzling slowdown in the monetary aggregates which, for M_1 at least, cannot be explained on the basis of observed historical relationships. To those who argue that RPs are money, there is no puzzle in the recent shortfall: money growth only appears to be slowing down because money is being incorrectly measured. If RP growth were included, they argue, the true rate of monetary expansion would turn out to be more robust than the conventional aggregates indicate.

Close money substitute?

Two main points of view can be distinguished in answer to the question, "Are RPs money?" One view considers RPs as a close money substitute, and the second considers RPs from a financial-innovation standpoint.

On the first point, contemporary theories of the demand for money are dominated by the concept of money as a medium of exchange, which argues for a narrow, transactions related definition. Up to now, the empirical counterpart of this definition has been M_1, which is made up strictly of means of payment — currency and demand deposits. However, a staff study of the Federal Reserve Board of Governors argues that there are other assets which can be converted into M_1 readily without risk of capital loss and at relatively little transactions cost, so that they too can be held for transactions purposes and therefore should be included in M_1. Thus this Board study argues for including automatic-transfer savings accounts in the definition of M_1, for example, even though technically such deposits are not a medium of exchange.

Another Board study has applied the same argument to RPs. The study argues that firms regard a large part of *overnight* RPs as available for transactions purposes, and therefore as equivalent to conventional demand-deposit balances. If this hypothesis is correct, the demand for M_1 plus transaction RPs should be more stable than the demand for each separately. In other words, adding transactions-related RPs to M_1 should reduce the size of the prediction errors produced by the money-demand function. This is exactly what the study found — the transactions component of RPs could explain 80 to 90 percent of the prediction error in the money-demand function.

A New York Federal Reserve study obtained similar, though somewhat more ambiguous, findings. That study added total RPs, both bank and non-bank (security dealer), to the new M_1 measure proposed by the Board staff, and obtained a more stable demand function in doing so. However, it is impossible to disentangle the contribution of RPs to this stability, since other categories were included such as money-market mutual funds, state-and-local government savings deposits, and corporate savings deposits. Moreover, as the study emphasized, the RP series is incomplete — the bank RPs are for money-center banks only. Also, it fails to distinguish very short-term RPs, which have perhaps the strongest claim to be considered close substitutes for money, from other maturities.

Financial innovation?

An alternative approach interprets RPs as a

symptom of a shift in the demand for money, rather than a cause. This argument assumes that technological innovation in money management, spurred by recent high interest rates, has allowed firms to pare down the cash balances they hold for transactions purposes. The funds released have been invested in a variety of liquid assets, including RPs — but also including Treasury bills, commercial paper, large CDs, and Eurodollars. Moreover, the growth of RPs has not come entirely from excess cash balances; part of it has come at the expense of other liquid non-money assets.

For these reasons, some economists argue that singling out RPs to add to money is unlikely to produce a stable demand function for money. Adding other candidates for money substitutes — money-market funds, for example — is unlikely to work for the same reasons. These economists claim that a better explanation would be obtained from showing how the process of financial innovation has affected the demand for the conventional monetary aggregates. As support, they note that any redefinition of money is itself likely to become quickly obsolete if financial innovation continues its rapid pace. And further innovation is almost certain if reserve requirements are imposed on the categories included in the new definitions of money, since banks will then have an incentive to create still further new types of liabilities.

Different methodologies

The two different interpretations of the role of RPs represent different methodologies for coping with the impact of financial innovation on the demand for money. Both have the same aim — to derive an empirical demand function for money that is stable. The first interpretation argues that this is better accomplished by redefining money to include RPs; the second believes that it would be easier to account for the shift in the existing definition(s) of money.

Both of these approaches have been used before. Financial innovation is nothing new, and the debate over how it affects the demand for money is as old as monetary economics itself. Money was once — and for a long time — considered synonymous with currency. The increasing popularity of checking accounts in the 19th century sparked a long controversy over whether they were money, or whether their influence could be adequately accounted for by adjusting the velocity of currency — that is, its demand function. Ultimately, economists found it more useful, on empirical grounds, to include demand deposits in the definition of money.

The controversy over how to deal with the current apparent instability in the demand for money ultimately will be resolved in the same way. But the choice of an interim strategy for dealing with this greater uncertainty about the demand for money is much less obvious. The issue is less critical for M_2 than for M_1. The demand function for the broader aggregate apparently has changed much less than the M_1 demand function, according to studies made at the Federal Reserve Bank of San Francisco. This suggests that M_2 will be our most reliable monetary indicator for a while. Therefore, as an interim strategy, we may have to rely heavily on it until we can sort out what has been happening to M_1.

John Scadding

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 6/13/79	Change from 6/6/79	Change from year ago @ Dollar	Change from year ago @ Percent
Loans (gross, adjusted) and investments*	126,821	− 716	+ 15,970	+ 14.41
Loans (gross, adjusted) — total#	103,966	− 799	+ 14,802	+ 16.60
Commercial and industrial	30,214	− 82	+ 3,146	+ 11.62
Real estate	37,732	208	+ 8,112	+ 27.39
Loans to individuals	21,831	86	NA	NA
Securities loans	1,605	− 140	NA	NA
U.S. Treasury securities*	7,681	− 30	− 246	− 3.10
Other securities*	15,174	113	+ 1,414	+ 10.28
Demand deposits — total#	42,729	− 318	+ 2,274	+ 5.62
Demand deposits — adjusted	31,202	− 175	+ 1,622	+ 5.48
Savings deposits — total	29,901	− 31	− 449	− 1.48
Time deposits — total#	49,817	544	+ 4,071	+ 8.90
Individuals, part. & corp.	41,046	604	+ 5,065	+ 14.08
(Large negotiable CD's)	16,862	424	− 1,269	− 7.00

Weekly Averages of Daily Figures	Week ended 6/13/79	Week ended 6/6/79	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (−)	− 8	20	− 17
Borrowings	165	73	30
Net free reserves (+)/Net borrowed(−)	− 173	− 53	− 47
Federal Funds — Seven Large Banks			
Net interbank transactions [Purchases (+)/Sales (−)]	+ 739	+ 1,684	+ 159
Net, U.S. Securities dealer transactions [Loans (+)/Borrowings (−)]	+ 125	+ 407	+ 226

* Excludes trading account securities.

Includes items not shown separately.

@ Historical data are not strictly comparable due to changes in the reporting panel; however, adjustments have been applied to 1978 data to remove as much as possible the effects of the changes in coverage. In addition, for some items, historical data are not available due to definitional changes.

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