

## *Joshua Feinman*

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# Commentary

I SYMPATHIZE WITH THE DIFFICULTIES that the authors have had in trying to explain and model the financial innovation intermediation that has been occurring in recent years, and the ways that these changes have affected the relationships between monetary aggregates and GDP. In fact, I grappled with some of these issues myself when I was at the Board of Governors. I certainly appreciate the difficulties and potential pitfalls.

At the Board, I had it a bit easier than these authors, since I was mainly working on modeling M2. These authors have taken it a step further by constructing and modeling a new aggregate, M2+, that really goes in a very different direction and takes us in ways that the traditional monetary aggregates have not had to deal with.

A starting point for discussing the behavior of any monetary aggregate—M2, M3 or M2+, or any other—has to be the changes that have occurred in our financial system in recent years. Particularly important have been the shifts in the patterns of financial intermediation and the efforts by both borrowers and lenders to adopt a more cautious approach to leverage. The most important change in financial intermediation has been the relative shrinkage of the depository sector. At the same time, perhaps the most important financial innovation has been the proliferation of information about the accessibility and liquidity of mutual funds.

Both of these changes reflect the effects of a dramatic shrinkage of the government subsidy to the depository system in recent years. This

shrinkage has manifested itself in a variety of ways, including higher deposit insurance premiums, more stringent capital standards, and tighter supervision, regulation and examination. All this has resulted in a smaller amount of depository intermediation in the economy and a smaller share of the economy's overall credit being recorded on the books of depositories. In addition, we have seen a smaller share of that smaller amount of depository credit being funded through deposits, in part because of increases in deposit insurance premiums.

The pie charts shown by Cheryl Edwards and Sean Collins illustrate the decreasing importance of deposits as a share of total household assets. This is obviously just the flip side of the depository shrinkage. The banking system has been less aggressive in pursuing deposits in recent years, and households have reacted by reducing their deposits accordingly. The larger upshot of this, of course, has been major shifts in the relationships between broad monetary aggregates—composed primarily of the liabilities of the depository sector—and GDP. This has resulted in the recent record-high GDP velocities of the broad monetary aggregates.

I believe this explains the major part of what has been happening. Although the steepening yield curve has certainly played a role, I never thought that was the key thing. Even though I've used yield curve spreads myself in modeling, I've always had problems with it on theoretical grounds. First, you have the theoretical problems arising from the expectations view of the yield curve.

Saying people simply pick the highest point on the yield curve flies in the face of economic theory. But even more to the point, I think there's nothing per se that prevents banks, if they want to, from going out the yield curve and pursuing longer-term CDs more aggressively. If you didn't have the shrinkage in the banking system going on—which I think has been the fundamental thing—banks could and probably would have been more aggressive in pursuing longer-dated CDs with more aggressive pricing.

The bottom line is, in my opinion, the shrinkage of depository sector. This has been accompanied by increases in the direct-placement credit market and by the growth of new financial intermediaries. Obviously, the most visible new intermediary has been the mutual fund industry that we are discussing. That is why, at a very simple level, it is extremely appealing to want to create an aggregate that adds in these mutual funds to M2. The charts in the paper by Athanasios Orphanides and his colleagues show clearly that we have had outflows from M2 and its components while we have had strong inflows into these mutual funds; from the surface it looks appealing to build a new aggregate including these mutual funds.

Building a broad monetary aggregate that internalizes substitution among alternative assets also was the intent of the Federal Reserve Board staff when they defined the current M2 in 1980. At that time, the substitution was from M1 to, primarily, small CDs and money market mutual funds (MMMFs). Including the close alternatives to M1 meant that the new broader aggregate was much less sensitive to market interest rates. This is for two reasons. First, the rates paid on the deposits included in the non-M1 component of the new M2 aggregate tended to adjust much more quickly to changes in market rates than did rates paid on M1. This sharply reduced the incentive to substitute away from M2, into assets not included in M2, when market rates changed. Second, the broader aggregate captured internally the substitution from liquid deposits into small time deposits when market rates increased and vice versa.

When we look at the charts shown today, it is very tempting to say that a new, broader aggregate could capture some part of the substitution away from small time deposits and MMMFs and into bond and equity mutual funds. Even so, having stated that, I think the articles

suggest—and I agree—that we must be skeptical about the usefulness of an aggregate that adds these stock and bond funds to M2. To avoid getting into a tremendous amount of detail, I would just highlight a couple of points. Obviously, the capital gains issues that both Athanasios Orphanides and Cheryl Edwards mentioned is critical. It's hard to know what might be the correct answer. It's somewhat arbitrary to exclude capital gains completely. If you exclude them initially, however, you must decide when to include them in the aggregate. At what point do the capital gains start looking to households just like regular money? That's a problem. On the other hand, when you include capital gains as they do, you bring up another whole set of other problems. The monetary aggregate is going to be extremely responsive to moves in the stock market, for example. Could you ever target such an aggregate? Scenarios under this which could lead to some pretty silly policy responses are not too hard to concoct.

I believe that if you ever consider going operationally to such an aggregate, you would almost have to begin with a Q4 base period and try to differentiate over the course of the year what is contributing to that growth, separating how much is coming from capital gains, how much is coming from net inflows, and so on. I don't know if you can do that in a timely enough way for policy analysis, however. Once you start following the components of an aggregate rather than the aggregate itself, I'm not sure that you gain a lot by defining the aggregate in the first place. That's an obvious problem, but really the main reason we're here.

The second problem is one with the modeling exercise: Are there good, timely measures of the expected returns on these stock and bond mutual funds? These are the returns that belong in a money-demand equation. If you try to form these returns ex post in a backward-looking manner, you have a lot of theoretical problems in trying to justify it. If you try to look ahead, you have to specify the processes generating the data and how much people know about them. I know I'm not saying anything new here, but I want to highlight what I think is obviously a big problem.

Finally, I would say that (as Athanasios pointed out) M2+ doesn't really seem to have been a better indicator of GDP than M2, except perhaps during the last couple of years. We just don't have a very long history, and we know

things are obviously still evolving. There may not, in fact, be stable demand function for M2+ that we can estimate. It doesn't seem to have any history of being a better indicator of GDP. It's more variable than M2, or at least not any less variable. Finally, the kinds of institutional changes that have affected the traditional relationships between M2 and nominal GDP are continuing. These changes even today are affecting the development of M2+. Their strength likely makes any kind of historical data not terribly useful for looking ahead.

We should keep in mind that when things settle down—when the depository sector completes its shrinkage and stabilizes—the velocities of our current aggregates, particularly M2, might stabilize again, albeit at a permanently higher level. In addition, the short-run relationships between M2

and its opportunity cost that we relied on in the past might well re-emerge. In fact, unnoticed by many analysts, M2 velocity and its opportunity cost have increased in a roughly parallel way since early 1992, suggesting that this pattern might already be emerging. Unfortunately, at this point the jury is clearly still out and we really can't answer that question definitively.

The evidence that I've seen presented suggests that there is no other monetary indicator that is going to provide monetary policy with a long-term nominal anchor the way we thought M2 did prior to 1990. In the absence of such an anchor, it seems to me that monetary policy will continue to be made basically as it has been for some time now, without a monetary aggregate, by adjusting the nominal federal funds rate in response to activity in the real economy.