

## Discussion

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I held two expectations about this session: one proved correct, the second erroneous. First, I knew that FAA regulations would prevent Kane from bringing his Civil War cannon. Second, I anticipated that he would arrive here in his basketball shorts with TV monitor under one arm and Atari under the other, and prepared to caucus in the corner with the assembled members of the FOMC in order to help them improve their intermediate targeting.

Unsubstantiated rumor has it that Kane in fact does have his TV and Atari. Rumor also has it that his basketball shorts were lost, so his noble intention cannot be carried out. This is unfortunate, since **my** query, as discussant, to the experiment was obviously: "Frankly, don't you feel that Intellivision is more realistic?"

Kane's paper is organized into five sections:

1. A discussion of the process of intermediate targeting.
2. A review of the evolution of Federal Reserve intermediate targeting over the past 16 years.
3. An analysis of current and past Federal Reserve behavior in terms of the "regulatory dialectic."

and then two sections addressing current problems of monetary policy-making:

4. The short-term volatility of monetary growth rates.
5. The persistence of high nominal short-term interest rates in the face of recession and declining inflation rates.

I wish to focus my discussion on the third section of the paper and some extensions of that analysis. I choose to do so, because I agree that Kane has his definitions correct in Section I (and he has a comparative if not absolute advantage over me in video games); he has his history straight in Section II; he has **what** I view as the correct answer to the

volatility of money growth question, namely, current procedures are a deemphasis not abandonment of interest rate smoothing (see Tinsley, et al, 1981); and finally his conjectures about high short-term interest rates are plausible, but they remain just that: conjectures, not refutable hypothesis. This phenomenon is common to all the popular explanations of the short-term interest rate behavior of the past six months: all ultimately seek refuge in unobservable inflation expectations, volatility **and/or** default premiums or tax premiums. All of these undoubtedly contribute to the recent experience. However, without better measures than **I have** seen proposed, we cannot discriminate among the various "explanations" currently in vogue, nor can we explain fully why short-term interest rates fell so dramatically in October-November, 1981, only to rise unexpectedly in December 1981, and then persist at high levels.

I find the "regulatory dialectic" framework a potentially useful tool for the ex post analysis of economic policy, particularly as applied by a skilled and witty analyst like Ed Kane. The basic model postulates a utility maximizing regulatory bureaucracy which alters the implicit taxes (regulations) that it can legally impose on its profit maximizing or cost minimizing constituencies. Those constituencies, the regulated, in turn react within their constrained environment in such a way as to minimize the tax burden that they must bear. The unique aspect of this fairly straightforward theory of the regulated firm as applied to the financial sector of the conomy which is not adequately emphasized in Kane's paper is the ability of the regulated industry to react by adopting new production technologies (financial innovations) that in large measure allow them to evade (legally) the implicit taxation. This introduces the complication that the coefficients of Kane's economic constraints are not stationary.

It should be noted that if Kane is correct in his model, then he is asserting that it is inadequate to assert that policy analysis must be based on models that are grounded in preferences and production technology that are invariant to policy regime changes. [Lucas critique]. Kane is asserting that in some cases **even** such models are subject to the Lucas critique.

The strength of this analytic framework for the ex post analysis of historical policy events strikes me as its weakness in the ex ante analysis of prospective policy actions. To function as a theory capable of generating forecasts about future policy and policy regimes, the

framework requires: (1) an elaboration of the objective function of the regulatory bureaucracy; (2) an explicit statement of the short-run and long-run political and economic constraints against which the regulatory agency operates; and (3) an understanding of the process of innovation by the regulated firms. I am not surprised that Kane has little to say about implementing monetary targets in a changing financial environment. Efforts to model the objective function of the Federal Reserve have not proven particularly fruitful. Indeed from Kane's perspective, all efforts to which I am aware are **misspecified**, since they exclude the vector  $g_p$ . The short-run and long-run constraints on Fed behavior are not articulated (eg. what is meant by the "independence of the Fed" and in what if any sense are intermediate targets given to Congress constraints on Fed behavior). Finally, our standard theories of the firm postulate stationary production functions and seem never to come to grips with the problem of evolving production technologies in the face of changing relative prices.

Unfortunately as a general hypothesis, it is possible that the "regulatory dialectic" could be a dangerous analytic tool in the hands of a "crackpot" analyst, basically because it fails, a priori, to rule out any behavior. Consider the following hypothetical analysis of the 1965-82 inflation experience.

1. The Fed, as a bureaucratic institution, is concerned with the size of its constituency; the regulated banking industry. My evidence in support of this hypothesis is the continual concern over the "membership question" **during the** whole history of the system.
2. One argument of the Fed's objective function is to preserve or maximize size of the industry under its control thereby, indirectly preserve its primacy among financial regulatory agencies.
3. The Fed observed its constituency declining in importance during the 50s and early 60s because of the rapid growth of nonbank financial intermediaries, particularly **S&L** associations.
4. The Fed realized that **S&L's**, because of legal constraints that could not be quickly changed, were highly vulnerable to secularly rising cost of funds.
5. Conclusion: The Fed engineered the 65-80 inflation as a "solution" to the **S&L problem** which would preserve its primacy among regulatory agencies.

Let me hasten to say that I do not believe this application of the

"regulatory dialectic" analysis; the point is that there is no way to refute the deduced conclusion.

What if anything can be ventured as an answer to the question of implementing monetary policy in a changing financial environment. First, is intermediate targeting dead? I think we can be quite confident that the answer to this question is, No. Intermediate targeting has been the practice of the Fed at least since the 1920s, though historically the preference of the bureaucracy was for targeting on money market conditions not monetary aggregates. Some sort of intermediate targeting is probably required for the institution to continue to operate in a world of "diffuse uncertainty."

Second, if intermediate targeting will continue, will targeting of monetary aggregates continue, or will we see a return to previous regimes of targeting interest rates on even **nonquantitative** targets such as "tightness" or "ease" of the money market (Maisel, 1973)? Kane's Table 3 suggests that there are few if any groups outside the Administration that are pleased with the evolution of the economy since October 1979. This could be read as a forecast of a quick demise of monetary targeting if the Administration were to withdraw its support, as Kane concludes (p. 17). Such a forecast assumes that the alternatives to targeting monetary aggregates impose less severe political and economic constraints on the Fed than does the present regime. I see that as unlikely. A return to nonquantitative intermediate targeting does not appear consistent with the preservation **and/or** improvement of the credibility of the institution. It was abandoned originally because there was no **effective** accountability in the policy implementation process.

Similarly, a return to targeting interest rates seems outside of the feasible set. Even under the present policy regime, the Fed is harassed for "**setting**" interest rates. Targeting interest rates would fall victim to setting low interest **rates; ultimately** this would lead to a replication of the 1966-79 experience, which would totally destroy the Fed as a creditable policy making institution. In short, retreat to the past is not a viable alternative.

Can the Fed restore its credibility by pursuing its current policy of intermediate targeting of monetary aggregates? Success along these lines requires the persistence of stable relationships between (1) the Federal Reserve's policy instruments and the intermediate targets and (2) the intermediate target and the alternate policy goals.

The experience of the past five years suggests that we can be

optimistic on the first of these two issues, in spite of the "undoing" effect of the reaction of the regulated sector to the regulatory regime. It is important to distinguish two types of reactions by the regulated institutions. The first is the reaction within a fixed regulatory environment (financial innovation or changes in the production technology). Estimates of the various components of the relationship between policy instruments and intermediate targets (Johannes and Rasche, 1979, 1981) suggest that this innovative process proceeds in a gradual fashion which should cause no major forecasting problems to the policymakers. The second' reaction is that which occurs when there is a major change in the regulatory structure (implicit taxes), such as the introduction of ATS accounts in November 1978 or the legalization of NOW accounts nationwide in January 1981. Reaction to such discrete changes in the regulatory constraints can be sharp and swift when the constraints have been binding. However, experience in the two cases cited suggests that the transition period is very short. The reaction to ATS accounts was over in two to three months based on our models; the reaction to NOW accounts was over in four months, judging from both our models and the Board's staff estimates of "shift adjustments." Transition periods of such short duration should not impinge on longer run monetary control. This conclusion is reinforced by evidence from both our models and the monthly money market of the Board's staff that the changes that have occurred in such transition regimes are of the nature of changes in the constants, not the slopes of various statistical relationships estimated from historical data.

How optimistic should we be about the persistence of a stable relationship between the intermediate target and the ultimate policy goals? Alternatively, we might phrase the question: how stable will the demand for money function be? A prerequisite for answering this question is a definition of money. At this point I shall assume a transactions measure of money is the appropriate measure (i.e. the present  $M$ , measure) and postpone comments on alternative measures.

Throughout the past decade the question has arisen: has the demand for money function shifted? Using the specifications proposed by Goldfeld (1976), as our standard, the answer to this question is affirmative, though the shifts have been fewer than frequently alleged. Furthermore, while the money regressions run to investigate this subject have not produced a definitive answer as to why the shifts have occurred, the accumulated research, in my judgment, tells us a lot

about the timing and character of the historical shifts, and hence rules out a lot of alleged causes. The work by Hafer and Hein (1982), has gone a long way toward pinning down the shifty Goldfeld specification. They have demonstrated, I think quite conclusively, that the shifts which occurred in the 1970s were relatively few in number, and were constant shifts not slope changes. It seems to me that the revealed nature of the shifts rules out the evolution of Repos or money market mutual funds as major factors in causing instability of the M, money demand equation, since these close substitutes for transactions deposits have continued to grow throughout the latter part of the decade when there is no evidence of continuing shifts in the money demand function. The evidence does not appear to rule out for example, discrete innovations in cash management techniques. Again, if such changes are large, but occur infrequently and with very short transition periods, then the relationship between a transactions measure of money and the ultimate policy goals should be sufficiently stable to make progress toward long-run objectives feasible under monetary aggregate targeting.

My conclusion from all of this is that monetary aggregate targeting is the best hope for the restoration of the Fed's tarnished credibility and the achievement of an acceptable long run economic policy and hence is the procedure that a utility maximizing bureaucracy will continue to employ. I would not conclude that monetary aggregate targeting in its present implementation will necessarily persist, nor should it necessarily persist. I think a good case can be made that the current targeting procedure does not **provide** a good sighting on the ultimate goal, independent of the the issue of controlability of the monetary aggregate or stability of the money demand function. The current approach to monetary targeting focuses on an objective at a specific point in time, in particular the average value of the measured money stock in the fourth quarter of each calendar year. This has two shortcomings. First, the behavior of the aggregates in the first nine months of the year does not count directly in the target; it, of course, counts'indirectly in that it determines how large an adjustment would have to be made in the fourth quarter to get in the target range. This builds in an excuse for inertia in returning to targets paths. Second. and more serious, is that at presently formulated and presented the end of year target is only loosely related to the "ultimate goal" of getting the long-run rate of monetary growth down to non-inflationary levels.

During the late 1970s we experienced "base draft" with a vengeance, and in spite of the "open mouth" policy of former Fed chairmen, no measurable progress was made toward the stated ultimate goal. Perhaps monetary targeting should be reformulated in terms of objectives for average annual growth rate from some fixed point in time ( $t_0$ ) to some specified future date. I will admit to not having thought through all of the deficiencies of such a measure, but there are at least two advantages. As  $(t-t_0)$  gets larger, this measure is the long-run monetary growth measure that the Fed has agreed is a matter for its concern. Also, by focusing on such a measure, the week-to-week or month-to-month variability induced by the noise in the money control process is greatly reduced from the variability of week-to-week or month-to-month growth that appears to have sensitized financial markets in the recent past.

An explicit association of the current year-to-year target growth rates with the longer-run goal can be easily established. If we view the fourth-quarter to fourth-quarter growth ranges as essentially November-to-November growth ranges, and if we set  $t_0$  for present purposes as November 1979, then it is easy to examine the implication of the fourth-quarter over fourth-quarter targets for the long-run cumulative growth rate. The cumulative annual average growth rate of  $M_1$  from November 1979 through November 1981 is 6.09 percent. Obviously, realized annual growth over this period greater than 6.09 percent will result in an increase in the cumulative growth of  $M_1$  at the end of 1982 over that achieved at the end of 1981, and negative progress on the long-run objective. The Fed's monetary policy objectives for fourth-quarter 1982 over fourth-quarter 1981 (February 1982) were for growth of  $M_1$  in a range of 2.5 to 5.5 percent. This range implies a target reduction of the cumulative  $M_1$  growth from November 1979 by 21 to 123 basis points over the period November 1981 through November 1982.

What can be said about the question that in a world of continuing and continuous financial innovation it is impossible to measure money and hence it is irrelevant to target a particular aggregate, such as  $M_1$ . This appears to me to be a reincarnation of the position associated with the Radcliffe Committee and Gurley-Shaw with respect to financial intermediates. Money market funds, Repos, etc., are not perfect substitutes for transactions accounts, though they may be extremely close substitutes. Just as the growth of nonbank financial intermediates relative to

commercial banks did not render monetary policy impotent, it is unlikely that the new wave of close "money substitutes" will render monetary policy impotent. Indeed, to the extent that the use of such substitutes continues to grow at the expense of  $M_1$  transactions deposits, I would expect it to induce an increase in the trend growth of  $M_1$  velocity. There is no evidence that this has occurred to date (Tatom, 1982). However, such an implication would seem to warrant continued concern on the part of the Fed for getting long-run monetary growth (measured as transactions deposits) down from its high levels of the late 1970s.

## References

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