

**Comments on "Monetary Policy Rules
and Financial Stability" by Bennett T. McCallum**

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Professor Bennett McCallum presents simulation results from a model in which the monetary authority endeavors to smooth interest rates in the short run, while simultaneously fixing its sights on its long-run price stability objective. Achievement of these goals is a consequence of following the McCallum rule to keep the monetary base on a path consistent with stabilizing nominal GDP growth.

In most respects, I like Ben's approach. It is similar in spirit to a proposal I made to the FOMC a few years ago. Both of us recognize the problem of focusing monetary policy too narrowly on interest rates rather than monetary aggregates and price stability. The danger is that the long-run growth in the monetary base or some narrow monetary aggregate will be determined by a series of short-run actions to stabilize interest rates. I proposed that the Fed constrain itself to achieve its long-run objectives by keeping the quarterly growth rate of the monetary base within some specified range. Policymakers would be free to pursue other short-run policy objectives, such as smoothing the federal funds rate, so long as they did not violate the quarterly growth rate bands. As with Ben's approach, under my proposal reserves injected within the quarter to stabilize interest rates in the face of financial market disturbances would be withdrawn if they compromised the Fed's longer-run objective.

My personal sympathy with Ben's approach notwithstanding, several questions occurred to me as I read the paper. First, I noticed that Ben's measure of weekly variation in the

federal funds rate was two and one-half times as large in his simulations as in actual experience. This increased level of volatility is nearly identical to the increase in the variability of the federal funds rate that was observed during the period when the Fed was targeting non-borrowed reserves in the early 1980s compared with the period since. A frequent criticism of non-borrowed reserve targeting was that it resulted in too much interest rate volatility. Consequently, I am not sure Ben's simulations would be generally accepted as interest rate smoothing.

I also cannot help but wonder whether the relationships among interest rates, the monetary base and total spending, upon which Ben's simulation results depend, would have been different had the Federal Reserve implemented monetary policy in a manner consistent with both Ben's and my views.

Finally, I wonder whether the relationships would change during financial crises. For example, if some event suddenly changed the public's perception of the soundness of the banking system, the risk premiums that one bank would charge another on loans would rise. Such changes would likely alter the relationships among interest rates, the monetary base and nominal GDP precisely when one would like to rely on them the most.

Having stated my general sympathy with the approach that Ben has taken and having raised a few concerns, I would like to address the remainder of my remarks to the somewhat broader

question that Ben's paper raises: can a central bank fulfill its role as lender of last resort without the option of lending directly to individual banks? Ben answers yes to this question, arguing that the remaining gap in the argument for eliminating the discount window is whether interest rate smoothing can be practiced without undermining the Fed's longer-run policy objectives.

I doubt that the Fed can deal adequately with all disturbances to the banking system through open market operations alone. It could if information were costless. But that is just not the case. The distinction between insolvency and illiquidity is often judgmental, and judgments can be clouded — especially during financial crises. As a policymaker, I am uncomfortable relying on the assumption that market participants will always make a correct instant diagnosis of insolvency versus illiquidity. Consequently, I am not certain that the market should be relied upon to always supply reserves to illiquid but solvent institutions.

Having an open discount window with a penalty discount rate seems like a relatively efficient way to insure that liquidity will be allocated to such institutions. A penalty discount rate would give banks incentive to repay their loans from the central bank as soon as they had dealt with their liquidity problem. I might also point out that there is nothing inconsistent with interest rate smoothing through open market operations and maintaining the discount window to lend

directly to illiquid but solvent banks at a penalty discount rate.

Besides this information problem, I think there are incentive problems in coordinating the allocation of reserves in a financial crisis. The history of banking in the United States indicates the need for some central authority to allocate reserves in a financial crisis. Prior to the establishment of the Federal Reserve, banks acted cooperatively in allocating reserves through clearinghouses. These clearinghouses were especially useful in supplying individual banks with liquidity during financial crises.

Banks recognized a conflict between their interests as individual banks and the interests of the banks as a group. In a financial crisis, the incentive of an individual bank would be to hold on to its reserves and to increase its reserve ratio. If it loaned reserves to an illiquid bank, it would risk becoming illiquid itself. Nevertheless, the group recognized that the failure of a member might trigger runs on all members. The banks in various communities attempted to deal with these conflicting incentives by allocating reserves through their clearinghouses. This history illustrates the necessity for a central authority to allocate reserves in a financial crisis. The Federal Reserve was formed to do this job of the clearinghouses, but more efficiently.

The operation of organizations that settle transactions among financial institutions creates special reasons for

central banks to keep the option to lend to individual banks. These settlement organizations, some of which have been created by exchanges for the trading of securities, have been designed to minimize transactions costs and, to some extent, risk. In the United States, CHIPS is important for settlement of the dollar side of foreign exchange transactions.

It is in the interest of each member of a settlement organization that others have the reserves necessary at the end of the day to settle their positions with the settlement organizations. If one member cannot meet its settlement obligations, unwinding the transactions involving the defaulting member can make other members short of the necessary reserves. An "unwind" of all transactions for the day would disrupt the business of their customers and possibly increase solvency risk of some members of the settlement organization.

Although CHIPS members have incentive for CHIPS to settle each day, they may be reluctant to lend reserves to the member that defaults, depending on the reasons for the default. As in the historical example of clearinghouses prior to the formation of the Federal Reserve System, some central authority is necessary to reconcile this difference of incentives of individual members and the membership of the settlement organizations as a group.

In the United States, banks have looked to the Federal Reserve as that central authority for allocating reserves to

illiquid banks. It is important that settlement organizations settle the transactions among their members to avoid disruptions of financial systems. In a financial crisis, it should be a high priority of a central bank to facilitate the settlement of transactions through the major settlement organizations. Response of the Federal Reserve to the sharp decline of stock prices in 1987 illustrates this priority. In dealing with this potential financial crisis, the Federal Reserve sought to assure that the clearing organizations in stocks and derivatives continued functioning in their roles of settling transactions.

I believe that access to the discount window facilitates the operation of such settlement organizations. For example, suppose the settlement of CHIPS were threatened because a bank did not have enough reserves to cover its transactions. Suppose further that there were rumors that the bank was insolvent. Injecting additional reserves into the banking system through open market operations would not alter the reluctance of other banks to lend to this bank. Consequently, it would not necessarily increase the chances for settlement of CHIPS without at least a partial unwinding of transactions. If the Fed does not provide credit through the discount window to illiquid banks to avoid such problems, the settlement organizations would have to design other mechanisms to deal with such liquidity crises.

Of course, if a central bank makes credit available to facilitate the settlement of transactions, collectively banks will not assume this responsibility. Moreover, if banks know that the central bank is committed to providing individual banks with the reserves necessary to facilitate settlement, then members of settlement organizations will assume that there is no risk of default by other members. In recent years, central banks have set standards for the operations of settlement organizations designed to deal with this moral hazard problem. The following are the major types of standards:

- Mechanisms for limiting the risk exposures between members, such as bilateral credit limits between each pair of members.
- Collateral requirements, such as a pledge of enough collateral with the settlement organization to cover default by any one member.
- Loss sharing arrangements in the event of default by a member.

Such standards expose members of settlement organizations to risk of losses if a member defaults on its payments, even if the central bank provides the reserves to facilitate settlement. This arrangement gives members of settlement organizations an incentive to extend credit lines only to those counterparts they consider to be in sound condition. Moreover, central banks of major developed nations have been

working to develop and enforce standards for the operation of international settlement organizations. Setting and enforcing standards for settlement organizations is, in my opinion, one of the important forms of cooperation among central banks, a topic that Charles Goodhart discusses.

In conclusion, I largely share Ben's view that limiting variation in the monetary base and nominal spending would make a contribution to the goal of long term price stability. In such an environment there might be more financial stability than what we've observed historically. Nonetheless, I remain unconvinced that there is not a significant role for central bank lending to individual institutions for liquidity reasons, particularly in those unpredicted crisis circumstances when, absent such lending, the payments system is threatened.