

A Payments Mechanism Without Fed  
Involvement and Fed Monetary Policy  
Without Required Reserves

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A Payments Mechanism Without Fed Involvement  
And Fed Monetary Policy Without Required Reserves<sup>1/</sup>

By Neil Wallace<sup>2/</sup>

In the current discussion of the so-called access-pricing-membership-reserves problem, one solution seems not to have received much attention: no access, no pricing, no membership, no reserves. To put it this way is slightly misleading, but only because one way to achieve this solution--and without legislation--is for the Fed to price all its services to members and nonmembers so as to cover costs. Since the Fed, then, would almost certainly be outbid for business by private sector organizations, and since membership is voluntary, the result is likely to be no Fed services, no members, and, hence, no required reserves. My task, though, is not to discuss how to achieve this solution; it is to discuss its merits. To put it boldly, such a solution--a world in which the Fed would have no more involvement with check clearing or EFTS than it has with telephone communication and under which the financial intermediation industry would have no more involvement with monetary policy than does the steel industry--is the one that economic theory suggests is best.

In such a world, the Fed's function is to provide and maintain a stock of fiat or inconvertible currency. This task and the rationale for it is described in section I. Section II discusses the view that required reserves contribute in some way to the carrying out of monetary policy. I conclude that this view is without foundation. Section III discusses the liquidity or safety of financial institutions in such a

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world, one in which there are no required reserves and, more important, in which currency is managed so that there is no lender of last resort. The last section, section IV, briefly describes how clearing, the sorting and settling of claims among financial institutions, might be accomplished without Fed involvement.

#### I. THE PROVISION AND MANAGEMENT OF FIAT CURRENCY

Fiat currency is nonredeemable currency: the issuer makes no promise to exchange the issued currency for anything. Federal Reserve notes are an example of fiat currency. Is it desirable to have such currency? And, if so, how should it be managed? It may come as a surprise, but we cannot deal with the access-pricing-membership-reserves problem without answering these questions.

There is a wide class of models--essentially, generalizations of Samuelson's "An Exact Consumption Loan Model of Interest with or without the Contrivance of Money," (Journal of Political Economy, 1958)--in which there is a role for an object that serves as nothing more than a store of value: the object is not an input into any production process in the ordinary sense nor does it appear as an object in people's preference functions; that is, it is not an end in itself. If, for the moment, we identify fiat money with such an object, an identification I will defend below, then these models allow us to answer the questions stated above.

To be precise, the following proposition can be shown to hold for a wide class of generalizations of Samuelson's model.

If the quantity of fiat currency is held fixed through time and there are no government restrictions that force fiat currency to be held, then there exists an equilibrium in which fiat currency has value if and only if the equilibrium that would occur in the absence of fiat money is not Pareto-optimal. Moreover, if the equilibrium with valued fiat currency exists, then it is Pareto-optimal.

In other words, if a fixed supply of fiat currency is made available, it may or may not end up having value. If it does end up having value (being held), then it accomplishes something: it makes possible the attainment of a better allocation of resources than would be possible in its absence. If there is no equilibrium in which it has value, then

it does not make possible the attainment of a better allocation of resources.

It is important to note that there is no presumption that the price level ought to be constant. If, for example, real growth is occurring that results in a rising value of this fixed stock of currency--a falling price level--then that is all for the best. Alternatively, if the economy is such that there are technological changes occurring that result in a steady loss in the value of this currency--a rising price level--then that, too, is all for the best.

Are we justified in identifying fiat currency with the store of value of such models? Put differently, is this the best available interpretation of fiat money? This identification would be hard to defend if we could point to other objects that could as well play the store-of-value role defined by these models. To play that role, an object must be in fixed supply (be nonproducible) and be potentially marketable. Some objects that have played the role of commodity monies exhibit these qualities to some extent. But casual observation suggests that an artificial object like well-managed fiat money can better approximate these qualities. This interpretation of fiat money would also be hard to defend if there were other models that better accounted for the role of fiat money. As yet, there are none.

To sum up, then, there are models that can account for a role for an object like fiat currency. These models suggest that proper management of fiat currency involves holding its quantity fixed through time.

## II. REQUIRED RESERVES AND MONETARY POLICY

A definition is in order: in an economy with fiat currency, a reserve requirement specifies that the currency be held in certain minimum quantities by individuals and firms engaged in particular activities. Traditionally, such requirements have been imposed on firms engaged in financial intermediation. But, in principle, such requirements could be imposed on any line of activity; for example, companies engaged in producing steel could be required to hold fiat currency (or its equivalent, deposits at the Federal Reserve) in an amount equal to

x percent of their debt or in an amount equal to y percent of annual sales.

Required reserves are viewed by some as essential to the conduct of monetary policy. Thus, in a recent address at a meeting of the New York State Bankers' Association, Paul Volcker, President of the Federal Reserve Bank of New York said:

Our prime responsibility--and it is a responsibility in which you also have a clear interest--is the effective conduct of monetary policy. The principal instrument for determining the supply of money and credit conditions is control of the reserve base. That base is related to the total of member bank deposits through the so-called reserve multiplier, and that multiplier--its size and its stability--is essentially determined by the level of reserve requirements. In effect, member bank reserves provide us with a necessary lever, and reserve requirements are the fulcrum against which we work. (American Banker, January 27, 1977, p. 6.)

Several valid claims can be made for reserve requirements:

(1) they tend to enhance the demand for fiat currency; (2) they serve to limit the activity against which they are levied; and (3) they tend to enhance and, perhaps, make more stable the value of a given stock of fiat currency.

The first claim is easy to understand. Indeed, much of the government intervention into borrowing and lending activities in this country and other countries can be explained as attempts to enhance the demand for government debt--both noninterest bearing (fiat currency) and interest bearing.<sup>3/</sup> But such efforts are not easily justified. Not surprisingly, such controls tend to be more onerous the greater the use being made of taxation through money creation or taxation by inflation.

The second claim is also easy to understand. The levying of a percentage reserve requirement against the issuing of a certain kind of liability--demand deposits, savings accounts at commercial banks--sets a maximum to the amount of such a liability for a given stock of fiat currency.

As for the third claim, I agree that the value of a given stock of fiat currency, or, put differently, its transaction or income

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<sup>3/</sup> See D. A. Nichols, "Some Principles of Inflationary Finance," Journal of Political Economy, 1974.

velocity can be affected greatly by the kinds of payments technologies available: payments by check, by credit card, and so on. But does that constitute ground for trying to control such forms of borrowing and lending and communicating among firms and individuals? Some economists and central bankers think so and have advocated broadened central bank powers on precisely this ground. (The Radcliffe Report in Great Britain discussed "trade credit" and its effect on velocity of currency at some length.) The weakness in this view is that no economic model supports the implicit assumption that government (monetary) policy ought to be directed toward maintaining the value of fiat currency.

In summary, then, while the above claims are valid, they direct attention to the wrong objects. The models in which one can account for the presence of valued fiat money do not suggest that controls ought to be imposed so as to maintain its value. As for the notion that government (monetary) policy ought to be directed to fixing the quantity of some strange hodge-podge like one of the M's, M1 or M2 or M7, it goes without saying that no coherent argument along such lines has ever been given. And that is not surprising. Could any theory attach analytical significance to the sum of fiat currency and demand deposits (net of reserves), a mixture of fiat money and nonfiat money, or of outside money and inside money? That sum can have no more analytical significance than the sum of fiat currency and the short-term debt of auto manufacturers.

### III. THE LIQUIDITY AND SAFETY OF FINANCIAL INSTITUTIONS

Under the proposed solution, banks would not be required to hold reserves and the Federal Reserve would not be a lender of last resort. Would not the resulting financial system be unstable? After all, is not a fractional reserve banking system inherently unstable and, in a sense, more unstable the smaller are reserves?

There is something to the view implicit in this question, but it is seriously incomplete in its acceptance of the notion that there is something natural about fractional reserve banking. Most instances of what we know of as fractional reserve banking have come into existence with the active participation of government; the motive often being to

enhance the demand for government interest-bearing debt. In the U.S. it was state governments during the pre-Civil War "free banking" era, the federal government at other times. Moreover, most banking panics can be explained in terms of the public finding out that its assets--held in the form of liabilities of "banks"--were not safe even though "backed" by holdings of government securities. The worst of all worlds would seem to be one in which there is uncertainty about whether and in what sense there is government backing of the liabilities of financial institutions. If fiat currency is managed as here suggested, there is no such uncertainty: it is known that the monetary authority does not stand behind financial intermediaries.

But what would a laissez-faire banking system look like? First, it is possible that fewer liabilities would be convertible on demand into fiat currency. (Would S&L shares be convertible on demand were it not for a government insurance scheme and other presumed government backing of the industry?) Second, I suspect that there would be 100 percent fiat money-backed depository institutions, or, put differently, that banks would compete, among other ways, by being safe. After all, would not successful financial institutions in a laissez-faire world have to reveal as much about their investment strategies as do mutual funds? And, if so, then would there not be depository institutions that offer safety, which for demand debt means 100 percent reserves?

While this might be observed under laissez-faire, it will not be observed, absent regulation, if large classes of financial institution liabilities are insured at a premium that does not depend on the riskiness of an institution's portfolio. With such an FDIC-type scheme in effect, institutions do not compete with safety. Indeed, they have a profit incentive to take on as risky portfolios as regulations allow. Thus, if there is to be such insurance, sufficiently stringent regulations must accompany it, regulations that make it unnecessary for the central bank to come to the aid of the insurer. And reserve requirements could be part of such regulations. But their role is not to facilitate in some vague way the operation of monetary policy. Their role is the obvious one of limiting the insurer's exposure.

#### IV. THE CLEARING PROBLEM

The aspect of the payments mechanism that I wish to discuss is "clearing." A proto-type example will explain what is meant by this. In the course of providing payments services, each of a large number-- $n$ , say--of financial institutions (banks) acquires claims on some or all of the other  $n-1$  banks. Several economic models and experience suggest that reconciliation of these claims is best accomplished by using a medium of exchange--for example, currency or claims on currency--to reduce  $n(n-1)$  claims to  $n$  net claims. The clearing problem, then, involves finding an efficient form for these net claims and an efficient way of producing them. Moreover, the essential qualitative nature of this problem seems not to be different according to whether the basic claims take the form of paper checks or so-called "electrons."

Clearing could be accomplished by having each bank communicate with each other bank, settlement being made, say, by shipment of currency. Such a mechanism would seem to be costly in terms of the amount of currency that banks would have to have on hand and, more important, costly in terms of the number of direct communications required. It is not surprising, then, that we have always observed clearing accomplished through a hierarchy of "clearinghouses," where at the apex is a single-national clearinghouse whose customers are regional clearinghouses, and so on. The specific structure of the efficient hierarchy or network depends on transport and communication costs, computing costs, and on how much "netting" can be accomplished by "local clearinghouses."

Two features of such an arrangement deserve comment. First, there is a single network. Each customer, whether one of the  $n$  banks or one of the clearinghouses, is served by one clearinghouse. There is, then, an element of monopoly in this structure. Second, each clearinghouse operates under conditions of declining average cost. This is implicit in the argument implying that a network is efficient; if the fixed costs of direct communication were unimportant, then the network of clearinghouses would not be efficient relative to pairwise clearing between all pairs of banks.

Absent Federal Reserve involvement, one suspects that this network would consist of a hierarchy of voluntary associations, the ultimate membership being the  $n$  banks. The advantages of a network of

voluntary associations versus one with Federal Reserve involvement would seem to be the same as the usually asserted advantages of private enterprise versus government enterprise. The members of the voluntary association would reap the benefits of operating efficiently and of solving as best they could the difficult pricing problem posed by declining average costs. The only disadvantage of the voluntary association is that it potentially offers a mechanism for collusion at the expense of those who purchase payments mechanism services from the banks.

#### CONCLUSION

While beginning with the access-pricing problem, I have been led to a discussion of the entire monetary system. But this is inevitable. The access-pricing problem is tied up with membership. And membership is a concern--for all anyone has said--only because required reserves are asserted to be important. But the role of required reserves cannot be taken up except by way of a discussion of the entire monetary system. The position advocated here--essentially that central banking be divorced from banking--may seem radical. But it is far from new. The view that "money" ought to be separated from private borrowing and lending is a traditional "Chicago School" view. And, James Tobin, among others, has long argued that depository institutions are simply one kind of financial intermediary.<sup>4/</sup> If this is so, then why pick out one particular form of private debt--demand deposits, say--and view it in so special a way as is implied by levying reserve requirements and by attaching special significance to the sum of this form of debt and fiat currency?

What is somewhat new in what I have said is the particular interpretation of fiat money that I have adopted and that I have taken seriously: I have identified fiat currency with the store of value in a particular class of economic models. But there is not much choice. Monetary theory is in its infancy, and this class of models is the only one in hand that permits us to analyze the role of fiat currency and how

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<sup>4/</sup>See, for example, James Tobin, "Commercial Banks as Creators of 'Money'," in Banking and Monetary Studies, ed. by Deane Carson. (Irwin: Homewood, 1963.)

best to manage it.<sup>5/</sup> Should we, instead, analyze these problems without a model? Experience tells us where that leads: down the sequence from M1 to M2, etc. Is there a largest subscript?

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<sup>5/</sup>In "Microeconomic Theories of Macroeconomic Phenomena and Their Implications for Monetary Policy" (Studies in Monetary Economics 3, Federal Reserve Bank of Minneapolis, 1976), I defended the following prescription: manage fiat currency to make the price level as predictable as possible. As noted there, in simple models--those in which decision periods for the monetary authority and contracting periods for the public necessarily coincide--this is accomplished by any deterministic rule, including one that simply fixes the stock of currency. I did suggest that in more complicated models--models that explain the term (maturity) of private contracts and, more generally, the kinds of markets that emerge under different circumstances--this equivalence might not hold and that an active policy might be best. I am now less confident about the last part of that suggestion.