



The Perils of Base Money

LELAND B. YEAGER

Auburn University, Ludwig Von Mises Distinguished Professor Emeritus of Economics, Auburn, Alabama, USA

Abstract. Insecure linkage of ordinary money to fractional reserves of a distinct base money can sometimes endanger the smooth working of modern monetary systems. This danger applies most obviously to the analogous insecure pegging of domestic to foreign currency. Worry would better focus, however, not on the size of reserve ratios but on the very existence of something distinct to which ordinary money is linked.

In the modern world money is a device for monitoring transactions, keeping records, calculating economic benefits and costs, and accomplishing multilateral clearing. Money enables people conveniently to use the entitlements acquired by delivering goods and services and securities to some trading partners to obtain others of these from other trading partners. The tickets and memoranda employed in these operations need not take the form of little disks of precious metal or even of certificates convertible into them or some other kind of ultimate base money.

It would be economically advantageous and feasible to make all money “inside money” (in the sense of Gurley and Shaw), with the value of the money unit determined and maintained otherwise than through convertibility into a distinct base money, which would have been abolished.

JEL classification: E4, E5.

Ordinary Money and Base Money

We may relate discussions of distinct monetary reform proposals more closely by focusing on one thing, base money, that two types of reform would handle in quite opposite ways. This focus enlists a fairly unfamiliar interpretation of what, after all, is the key function and nature of money. It also further illuminates the analogy between domestic bank runs and international currency crises.

Numerous economists have examined these speculative situations. In particular, one wing of the Austrian School worries about merely fractional reserves held against bank demand deposits (and banknotes, if any) and calls for 100-percent reserves (Hoppe, Hülsmann, and Block 1998, Huerta de Soto 1998a, 1998b, Hülsmann 1996a, 1996b, and numerous writings by Murray Rothbard and others that these authors cite).

This worry is partly justified. Insecure linkage of ordinary money to reserve or base money can indeed impede the smooth working of modern monetary systems. This is most obviously true of the analogous insecure pegging, in the international context, of domestic to foreign currency. Such linkages are exposed to cumulative crises of confidence. Worry might better focus, however, not on the size of reserve ratios but on the very existence of a distinct reserve or base money to which ordinary money is linked.

This distinction needs spelling out. In a broad sense money is generally accepted media of exchange, the stuff that routinely changes hands or changes ownership in transactions. Checking accounts (and banknotes, if any) count as belonging to this broad money supply.

Base money is a narrower concept. It does not include claims on private issuers. It is a more ultimate kind of money, the kind in which these others, if they exist, are denominated and into which they are normally convertible at a fixed rate of exchange. (Some Austrian economists call those other kinds of money not *money* but *substitutes* or *surrogates for* or *claims on* real money.)

Some Austrians, as mentioned later, conceive of money of such a prototypical or obvious kind as scarcely to require definition. If any such money exists, it is base money. The most obvious examples would be full-bodied coins—gold and silver coins worth their full face values even as bullion. Base money is plausibly if debatably defined to include government or central-bank money issued in excess of its metallic backing but still convertible into metal at a fixed rate. In a country that has gone off its metallic standard, where no more ultimate money exists than the inconvertible paper money (and deposits, if any) issued by the government or central bank, and where any privately issued notes and deposits are denominated in and convertible into it, this official money is base money. In the United States nowadays the “monetary base”, the “ultimate” money into which bank deposits are convertible, consists of currency issued by the Federal Reserve banks, deposits held by commercial banks in the Federal Reserve banks, and coins issued by the Treasury.

Money as a Clearing Device

Definitions of money should attend to its functions. Fundamentally a monetary system decentralizes the multilateral clearing of transactions (Schumpeter 1970). As Robert Kuenne (1958) expresses the same point, money is a cost-effective substitute for centralized clearing. Clearing, whether centralized or decentralized, makes multilateral transactions possible. It enables a person or firm to use claims earned by delivering goods or services to some trading partners to pay for goods and services obtained from others. This interpretation does not deny money’s functions as medium of exchange and unit of account; it probes them more deeply. Their many aspects include serving economic calculation by letting entrepreneurs estimate benefits and costs of activities in comparable units. Money broadens people’s choices about how and when they consume the incomes they earn; it helps them keep their options open and cope with uncertainty. It facilitates saving and investment, the operation of financial institutions and markets, and the transfer of resources freed from current consumption into the construction and accumulation of capital goods. Decentralization of clearing through the use of money even serves personal privacy.

The imaginary alternative of what Kuenne (1958) calls “open stockpiles” would be unworkable—allowing each person to contribute his own goods and services to the economy’s general flow of production and to withdraw what he wanted from the general flow as he saw fit. Transactions must be monitored somehow. Without clearing or some substitute, each person would have to pay for goods or services acquired from each trading partner by supplying that same partner with goods or services of equal value. Even if trading partners allowed each other short-term credit, the bilateralism of transactions would be restrictive and inefficient.

Multilateral transactions could conceivably be accomplished without money by a centralized system of monitoring and recording. The central authority could keep track of the value of each delivery and each receipt of goods and services by each transactor and see to it that no one acquired goods and services worth more than his deliveries (with obvious qualifications about gifts, loans, and the like). Actually, all this monitoring of transactions, gathering, transmitting, and processing of detailed information (including information about relative values), and keeping of records would be tremendously awkward and costly; and the Big Brother aspect would be ominous.

Decentralized clearing through the use of money (or, as Kuenne calls it, this decentralized *substitute* for literal clearing) is cheaper and more efficient. Schumpeter calls money a “receipt voucher” for productive contributions and a “claim ticket” on goods to be received in return (1917–18/1956:154–155 and *passim*). In effect, these vouchers/tickets are records of contributions and of resulting entitlements.¹ They are records of credit granted and received, for to deliver goods and services before receiving full compensation in other goods and services is to extend credit.² In a modern monetary system, Schumpeter’s vouchers/tickets largely take the form of checking accounts and currency. Nothing in the central logic of money as a clearing device requires that they be claims to definite amounts of some specific kind of money distinct from and more ultimate than themselves.

Conceivably, then, a decentralized system of multilateral exchange could operate with mere book entries and paper notes without their being fully or even partially backed by actual reserves of some commodity that defines the unit of valuation and pricing. “Money is a record-keeping device; hence, monetary policy should be designed so that record-keeping is performed in the most efficient way possible” (Kocherlakota 1998:10).³ Perhaps the smooth working of the system does require a commodity basis after all. That is a question to be investigated, however, with economic analysis. It is not to be forestalled or settled on grounds of supposed first principles of law and morality.

The Unit of Account

Reference to the *value* of goods and services delivered and withdrawn reminds us of the need for some unit of pricing, some unit of account. Conceivably the administrator of a centralized clearing system, performing some of the functions of the mythical Walrasian auctioneer, could keep track of values and prices in terms of some abstract unit. Only the mere *ratios* of these “accounting prices” (as Patinkin called them 1956, 1965) would be meaningful, not their absolute level. More plausibly, the administrator might give a determinate value to the unit of account by arbitrarily choosing some ordinary good or service as *numéraire*, which would not otherwise perform any distinctively monetary role.

In a *decentralized* system, if “receipt vouchers” and “claim tickets” are to serve as instruments of clearing, they must of course exist (even if only as bank accounts), be held in definite quantities, and change hands in transactions at some definite value. Money thus has a quantitative aspect, and one more definite or clear-cut than a centralized nonmonetary clearing system would necessarily require. In systems such as we are familiar with nowadays, however, the methods of determining the value of money threaten to clash with money’s essence as a clearing device (Schumpeter 1970; a later section develops this point).

In a decentralized system, two broad ways are available of giving determinate size to the unit in which the voucher-tickets are denominated—two ways of making the general level of prices determinate. (The opposite of determinacy would leave the price level and quantity of money unanchored, adrift, with a rise or fall more likely to reinforce than restrain itself.) One approach defines the unit as a specific amount of some commodity or specific basket of commodities and keeps media of exchange denominated in that unit actually *worth* the stipulated commodity amount through two-way convertibility. The commodity's *natural* scarcity value, as it might be called, communicates itself to the money unit.⁴ A variant of this approach, the foreign-exchange standard, makes the domestic currency unit interchangeable at a fixed exchange rate with a particular amount of some foreign currency. The second way to determinacy defines the unit of account simply as one unit of what circulates as the medium of exchange while lacking any significant commodity value of its own. This irredeemable circulating medium must be given an artificial scarcity value through adequate control of its quantity in relation to the demand to hold purchasing power in cash balances of it. These two approaches correspond to what Leijonhufvud (1987:47) calls the convertibility principle of a commodity standard and the quantity principle of a fiat standard.

The two combine in what might be called a hybrid system. It operates if a distinction holds, as it does in modern systems of fiat money, between an ultimate or base money and all other media of exchange. Privately issued deposit money maintains a determinate value through being denominated in and convertible into the fiat base money, which enjoys a scarcity value thanks to government or central-bank management of its quantity. In the United States, dollars of bank-account money enjoy a determinate value thanks to convertibility into fiat notes and deposits issued in limited quantity by the Federal Reserve System. The historical gold standard, as in the United States before 1933, was also a hybrid of sorts: notes and deposits were based on gold, which, though to some extent a directly useful commodity, got its value largely from a *monetary* demand for it confronting a naturally restricted supply.

In a hybrid system, we can analyze determination of the money unit's real size or purchasing power by conceiving of quantities supplied and demanded either as quantities of total money or as quantities specifically of base money; the two approaches reconcile. Either approach invokes the factors entering into determination of the money multiplier of the money-and-banking textbooks. The quantity theory of money is relevant to both approaches, although under an international monetary standard, the quantity theory applies to the system as a whole and not separately to each individual member country, especially not to a small one, where the local quantity of money adjusts to the internationally determined price level.

Each of the "pure" ways of giving the money unit a definite size, as well as today's hybrid approach, has problems of its own. In analyzing these problems and possible remedies, we should remember money's fundamental role as a clearing device. "Money is not a commodity—not even when it happens to consist of a valuable material." Monetary theory scored a great advance, said Schumpeter, in understanding why money has a value independent in principle of the value of any money material. "Once it is understood that money is nothing but a technical aid for effecting economic transactions—a game chip without

significance in itself—every other standpoint loses its foundation.” “In the last analysis, only commodities are exchanged against commodities in the economy; money is always only an intermediate link without independent significance” [Schumpeter 1956:160, 161, 165, 171 (1917–18)].

Any impediment to people’s multilateral exchanges of their own goods and services for the specialized outputs of other people discourages production for exchange, discourages purchases of labor and other inputs, and so impedes the creation of real incomes that could support demands for the outputs of other producers. Money’s great services imply great scope for damage when the “game chip” or “intermediate link” malfunctions. A rather tame policy question follows: how best to protect and enhance money’s functions as instrument of multilateral transactions.

Misconceptions

Money’s history supports misconceptions, nevertheless, about its role in the modern world. Money evolved from directly useful commodities that proved convenient as intermediaries in indirect barter (Menger 1871/1950, chapter VIII and Appendix J, Menger 1892, Menger 1892/1909/1970). To suppose, however, that the essence of a developed institution must remain specified by its genesis or earliest form is to commit the “genetic fallacy” (cf. Cohen and Nagel 1934:388–390; Fischer 1970:155–157). An example is to suppose, on historical grounds, that money is fundamentally or most properly a commodity valuable in itself, like gold or silver, and that if paper notes and bank deposits have taken over its functions, these substitutes should at least be redeemable in real money. As Schumpeter observed (1970:226), the monetary form of clearing has misled economic actors and researchers alike. They drift into thinking of commodity money as more essential than the process it serves. They exaggerate the supposed necessity of some ultimate true money and think of fractional-reserve banking as a method of questionably economizing on it. They worry about the great structures of “credit” or “claims” pyramided onto a small gold stock (when gold is the base money).

These intuitions do apply to some institutions if not to money quite generally. They find expression in writings of some Austrians, as in Jesús Huerta de Soto’s big new book (1998, partially summarized in his 1998 article). It is an impressive work of scholarship, synthesizing and criticizing legal and economic writings in numerous languages. It is probably the most thorough treatment in print of Austrian theories of banking and the business cycle.

Huerta de Soto starts by taking the concept of money for granted, as a primitive concept too obvious to require definition, especially before the emergence of banks.⁵ When banks do emerge, people deposit some or most of their money in them, where it is relatively safe from theft and accidental destruction. Banks facilitate transactions by conveniently transferring ownership of deposited money between payers and payees. Tacitly or not so tacitly, then, Huerta de Soto takes it for granted that money, in a proper system, is a valuable commodity or, equivalently, consists of warehouse receipts for a commodity held in storage. Noncommodity moneys (or money *substitutes*) are fundamentally devices for in effect facilitating the circulation of warehoused commodity money and should not be allowed to go beyond that purpose. Hence the insistence on 100-percent reserves.

Unfortunately, on this view, banks have tended to go beyond their proper functions. They have found it ordinarily safe to lend most of their depositors' money out at interest. The borrowers, or people to whom they have made payments, possess the money borrowed from the banks, while the original depositors continue regarding the full amount of their deposits as money. Even worse, banks drift into making loans in the form of banknotes newly printed or "deposit" accounts newly written into existence. In the view of Huerta de Soto and several other Austrian economists (notably Hoppe, Hülsmann, and Block 1998), this issue of multiple titles to the same underlying property is fraudulent. Even if banks and their customers fully understand and agree to what is going on, this practice of fractional instead of 100-percent reserves is still fraudulent in pretending that several people can own the same real money at once; and issuing the multiple titles inflicts harm on third parties. They suffer purchasing-power losses on their money holdings,⁶ and they suffer from the malinvestments and wastes of resources described by the Austrian theory of the business cycle.

Nowadays, the idea that banks have fraudulently multiplied claims on warehoused true money must seem peculiar to most bank depositors. With the possible exception of some retail merchants, they know that they have acquired most of their bank balances by depositing checks or transfers received, not by entrusting actual cash to the banks, whether for safekeeping or for convenience in transactions. They should be able to understand that banks are administrators of a payments system of decentralized record-keeping (as well as financial intermediaries) rather than custodians of base money put in their care.

Preoccupation with reserve ratios is relevant only to a system of our current type. What would the system be like if no proper money as conceived of by some Austrians—no base money distinct from banknotes and bank accounts—existed in the first place to be deposited in banks? (I wonder how those Austrians regard bank accounts denominated in the new euro during 1999 through 2001, before any euro notes and coins even come into circulation.)

The Impracticality of 100-Percent Reserves

Before explaining how a system free of base money might work, I'll review doubts about enforcing 100-percent reserves. Not only cannot banks earn interest by lending out any of the money deposited with them; they incur storage and other operating expenses, which they must pass on to their customers. Banks and their depositors (and also potential borrowers) see gains from wriggling around this requirement. By doing so, they can in effect reap seigniorage and share it among themselves, while any of them still maintaining 100-percent reserves would be practicing self-denial for the benefit of free riders. (Their situation is analogous to that of a single country under an international gold standard deliberating whether to impose 100-percent reserves on itself alone.)

History shows that incentives to evade a 100-percent-reserve requirement are powerful; and numerous financial innovations testify to the ingenuity available to respond to them, including checkable money-market mutual funds and asset-management accounts. Checkable equity mutual funds are readily conceivable.⁷ Domestic residents might be enabled to use checking accounts at, as well as obtain loans from, fractional-reserve banks located abroad.

The collaboration of domestic banks might help make checks drawn on such accounts acceptable. Who knows what other money substitutes and money-economizing devices the future might bring? Efforts to monitor and stamp out all institutions and practices that would have the effect of fractional-reserve transactions accounts, including efforts to keep the law abreast of innovations, would require a hyperactive and practically totalitarian state and would probably prove futile after all. “Ought implies can,” as the philosophers say; or more exactly, “ought presupposes can.” Nothing impossible can be morally obligatory.

Life-insurance companies serve as Huerta de Soto’s favorite example of true financial intermediaries. Yet even they, he regrets, have taken part in disguising what are in effect demand deposits as something else (1998a:461–462). He recognizes that a reform would have to attend to and penalize disguises of various kinds (pp. 464, 577n., and *passim*). To the objection that it would be impossible to stamp out all equivalents of fractional-reserve banking, he replies with analogies. Sophisticated poisons make some murders very difficult to detect and punish; still, the law must do the best it can (pp. 597–598 and footnote). Eliminating a central bank and allowing only private banks to operate on fractional reserves would be like moving from a situation in which the government commits murder and other crimes as it pleases to the privatization of crime, which might be an improvement but still would be far from ideal (p. 555n.) Surely these are feeble replies. (The reader scarcely needs help in thinking of differences between murder and financial innovation.)

Precarious Pegging onto Base Money

If imposing 100-percent reserves of base money is neither a feasible nor a fundamental reform, attention should focus instead on the very existence of base money distinct from other kinds and on the pegging of the latter to the former at a fixed rate. These existing arrangements are exposed to the possibility of a crisis of confidence and flight to safety and liquidity. Paradoxically, that flight tends to shrink the volume of liquidity, specifically, of money other than base money. In a disorderly scramble for the ultimate liquid asset, everyone fears being too late in demanding redemption. The difficulties of some banks and enterprises infect others. Not just banks and their depositors but also other creditors recall loans, tighten new credit, and unload securities.

The multiple roles of base money aggravate these difficulties. It is simultaneously medium of account (the stuff that defines the unit of account and in which, in effect, everything else is priced), reserve medium, medium of redemption, and medium of interbank settlement. In their celebrated article on bank runs (1983), Diamond and Dybvig evidently take it for granted that convertibility of deposits in the real world means convertibility into fixed-price base money held in fractional reserves.⁸ Contagion of unease among depositors (and note-holders) of a shaky individual bank is readily understandable, but a full account of *interbank* contagion brings in the scramble for a base-money redemption medium whose supply and demand are not equilibrated by market forces because, instead of having a flexible price, it itself defines the pricing unit. Imbalances between its supply and demand sometimes touch off interest-rate jumps and credit squeezes (and other difficulties described by Dowd 1991).

Not only within a single country but also and most conspicuously on the international scene, difficulties arise from the existence of different kinds of money insecurely pegged together at fixed exchange rates. In a country linking its own currency to foreign currency at a fixed or managed rate, its international reserves, being held in only fractional amounts relative to domestic currency that might seek conversion into foreign exchange,⁹ are analogous to domestic base money. Precautionary or speculative capital movements occurring as some currencies appear safer and others riskier than others at their official but insecure exchange rates bear an analogy with domestic bank runs. The familiar problem arises of clash between the requirements of internal and external balance. Rumors and speculative attention focus on “big players” in the markets, notably on governments and central banks and the International Monetary Fund.

Andrés Velasco and Roberto Chang (1998) introduce the concept of international *illiquidity* to explain the mutual reinforcement of crises of confidence in the domestic banking system and the exchange-rate peg. In particular, defending the domestic peg (as one might call it) by standing ready to create domestic base money further imperils the international peg; and the prospect of collapse of the international peg motivates a flight out of domestic bank deposits into foreign currency. Velasco and Chang also mention how earlier confidence in the exchange-rate peg has sometimes encouraged foreign borrowing that turned out to help make the situation precarious (as in Asia and Latin America in the 1990s).

Freely floating exchange rates might seem to be the remedy for such difficulties; but that resort has problems of its own, except, perhaps, for countries whose domestic arrangements define their currency units in a sound and secure manner.

So far I may seem to have been echoing the worries of the 100-percent-reserve Austrians. However, I do not want to exaggerate. I do not maintain that the problems reviewed are both serious and chronic. Domestic liquidity crises, at least, are not everyday experiences. Competition makes individual banks behave prudently enough to avoid them ordinarily. It is instructive to imagine a privatized fractional-reserve gold standard, with only private banks issuing money. That system would quite probably be less subject to sudden abandonment or sudden devaluation of the money unit and thus less subject to crises of confidence than a governmental gold standard (Selgin 1988, Selgin and White 1996). (Still, such a system would have the disadvantage of a distinct base money and the probable disadvantage of a unit defined by gold in particular.)

Another reason for the rarity of domestic liquidity crises is that ways to forestall or palliate them are available and have been used. One is government deposit insurance, which, however, causes familiar problems of its own. Another is a central bank equipped to act as lender of last resort. (On the intuition that coping with or forestalling crises requires a central bank, see Goodfriend 1991, esp. p. 15.) If the lender of last resort is to *create* what might otherwise become the object of a panicky scramble, then that base money must be something that it *can* create, something other than gold and silver alone (and other than foreign currencies). To limit the possibility of abuses, central-bank money was traditionally kept convertible at a fixed price into gold or silver or foreign money. But then the (fractional) reserves of the central bank, and the national currency itself, may become exposed to runs, as under the Bretton Woods system. The central-bank approach leads,

furthermore, to government domination of the monetary system and eventually to purely fiat base money and the danger of inflationary irresponsibility or, less commonly, of deflationary blunders.

Further Disadvantages of Base Money

Today's base money is a ghost of the commodity money that evolved from commodities found useful in indirect barter. A modern monetary system, however, represents further evolution into a device for the clearing of multilateral transactions through decentralized monitoring and record-keeping. Why should we continue to expose this clearing mechanism to the defects of its primitive residue?

Under current arrangements, the operation of the payments and credit systems is intimately mixed up with determining the size of the unit of account, which is to say, the purchasing power of the dollar and the general level of prices. This linkage is so familiar to us that we absorb it into our intuitions about money and banking in general. It seldom occurs to us to ask whether it is necessary and whether it might not have perverse consequences.

The coexistence of base and other money complicates the determination and operation of what Joseph Schumpeter called "the critical figure" of any monetary system, as explained just below. If the base money is a commodity, its supply and demand and value can change in ways harmful to the economy's smooth macroeconomic performance. If base money is fiat money, the quantities of it and total money must be centrally regulated, whether directly or through interest-rate manipulations. The monetary authority must take account of the complexities associated with the money multiplier of the textbooks.

Any method of giving determinacy to the value of the money unit—recall an earlier section—requires that a "critical figure" be imposed on the monetary system in a way that is distinct from the ordinary working of markets (Schumpeter 1970:217–224, 258, and *passim*, and p. xxii in the editor's introduction). This figure might be the quantity of some commodity defined to constitute the unit of account or the size of the money supply, somehow defined. "The critical figure must be set and be either changed or held constant by a process distinct from the interplay of supply and demand that keeps pushing the individual prices of ordinary goods and services toward market-clearing levels." It does not spontaneously come under continuous pressures toward equilibrating the supply of and demand for money. Economic activity must accommodate itself to the critical figure, and it cannot do so purely and instantly through price adjustments. If the critical figure—whether the weight of a gold-standard unit or the number of units of fiat money in existence—is set or changed or held unchanged inappropriately, no automatic process resets it to serve the smooth continuation of the clearing process. Suppose that all prices and nominal debts and claims suddenly doubled. Since the real terms of exchange stay the same, it might seem that exchange and production could go on as before. They *could* conceivably do so in a centralized system of pure clearing. If, however, payments are made by transfers of money existing in some definite amount, then that unchanged nominal amount has become inadequate at the increased prices. Some quantities of commodities become unsalable; the economy feels a "jerk from the checkrein" of money (Schumpeter 1970:224, 227–228, 258, 261; Shah and Yeager 1994 give a fuller

discussion). A similar “jerk” occurs if the real demand for money rapidly increases (perhaps because of real economic growth or strengthened liquidity preference) and if neither the critical figure nor the general level of prices and wages can adjust rapidly enough in an accommodating way. (This interpretation of how money facilitates but at times can impede the economywide clearing process is consistent with the monetarist theory of business fluctuations.)

Inflations and deflations and the attendant disruptions of economic calculation and coordination have been mainly phenomena of base money and its manner of injection and withdrawal. Sometimes, as history illustrates, resisting the inflationary erosion of the monetary unit requires the monetary authority to tighten up on supplies of money and credit, thereby impairing transactions and in turn impairing production. Often the inflationary situations appearing to require such policy actions have resulted, after lags, from earlier laxness in regulating quantities of base and total money.

Mixing up determination of the size of the money unit with regulation of the quantity of money accords poorly with money’s essential clearing function. Imbalances between actual and demanded quantities of base and total money impede transactions or erode the value of the unit or both. The two-stage aspect of our current money system poses complications, since suitable regulation of the quantity of total money—even if that quantity could be satisfactorily defined—requires attention both to the quantity of base money and to the changeable money multiplier of the textbooks. The gold standard as it existed in history shares these absurdities with a system centered on fiat base money, if only in lesser degree, because the value of gold is itself largely “artificial,” determined largely by the monetary demand for it. Its supply, too, is subject to macroeconomically inappropriate changes.

Advantages of Abolishing Base Money

Things would be different if the quantity of money changed merely by way of accommodating changed demands for media of exchange at the existing purchasing power of the money unit. If the value of the unit could be determined otherwise than through interaction of supply of and demand for base or total money, it would be perverse to persist with the current method.

If there were no base money, furthermore, there could be no flight into it. Flight into liquidity, if it meant flight from the monetary liabilities of some institutions, would necessarily be flight into the monetary liabilities of (or investments in) other issuers. No special lender of last resort capable of creating base money would be necessary.

A system free of base money—one of purely “inside” money in the terminology of Gurley and Shaw (1960)—would facilitate conveying productive resources freed by savers from current consumption into the projects of business investors and other borrowers. Specifically, it would enhance the function of money itself as an instrument of financial intermediation. Someone building up his cash balance (otherwise than through liquidating other portfolio assets) is performing saving; someone maintaining a cash balance is to that extent avoiding dissaving and is continuing to abstain from current consumption. With regard to the saving involved—the nonconsumption of income—it does not matter

whether the object of accumulation is stocks or bonds or other investment assets or is money itself.

It is true that money is a most liquid asset; Austrians like to call it the epitome of a present good, as distinct from future goods.¹⁰ Its holder could quickly cease abstaining from consumption and could spend his money, and at its full nominal value (whereas he could liquidate other assets only with some delay and with some uncertainty about the proceeds). Even though the money-holder *could* quickly terminate his abstention from consumption, to the extent that he continues to hold his money, he is indeed freeing resources from consumption purposes, much as if he were holding other savings instruments; and if he devotes some income to increasing his cash balance, he is performing new saving. If the total demand for real cash balances increases, perhaps because of real economic growth, why shouldn't the money and banking system perform financial intermediation, making possible the transfer of unconsumed resources to firms, for example, that will use them for real investment? (For elaboration, see my 1997 book, pp. 253–279.)

The monetary system could best operate that way under a system of free banking without any base money. True enough, a sufficiently clever central bank could manage its supply of base money to accomplish the same intermediation of resources. And an increased demand for real cash balances could be met in still another way. Even if the nominal quantity of base and total money were fixed, the real quantity could grow through price-level deflation. Its dependence on adequate downward flexibility of prices (and perhaps wages) is one potential disadvantage of that method. Another disadvantage is that growth in the purchasing power of existing nominal cash balances (so far as this money is not matched by private debt) is an increase in wealth from the private point of view without being any real accumulation from the social point of view. That apparent increase in wealth nevertheless exerts a real-balance or Pigou effect tending to increase the propensity to consume and reduce the propensity to save. That is the basis of the argument of Maurice Allais (1947, I, approximately pp. 300–370, and II, approximately pp. 540–590) and James Tobin (1965) that the availability of money as a portfolio asset supplied otherwise than as an instrument of financial intermediation (in the manner described above) tends to deter saving and real investment.

Huerta de Soto and the other 100-percent-reserve Austrians seem unaware of this potential role of money itself as a vehicle of saving and instrument of financial intermediation. Yet as long as bank depositors, even holders of demand deposits, continue holding this money, they are freeing resources from current consumption; and a smoothly working system, rid of the danger of flights into a distinct base money, would help convey these freed resources into investment projects. Deposit-holders could receive interest or dividends deriving from the productive use of those resources.

A competitive return on money would have another advantage. Milton Friedman (1969) worried that the opportunity cost of holding ordinary non-interest-bearing cash balances, namely forgone interest on other assets, causes waste of human and other resources in tight cash-balance management. Such economizing on cash is wasteful because providing additional real balances would be socially almost costless if only holders were willing to hold them. They *would* be willing to hold them if a reformed system reduced their opportunity cost by allowing issuers of money to pay interest or dividends at competitive rates. In short,

a system suitably free of base money could meet not only the Allais–Tobin worry about an anti-capital-formation effect from too much indulgence in liquidity preference but also Friedman’s worry about waste of resources from too little indulgence in it. It would do both through the fuller flourishing of financial intermediation.

How Base Money Might Be Abolished

Conceiving of a particular method helps show that abolishing a distinct base money would be feasible and advantageous.¹¹ My present purpose is to show how questioning base money links discussions of even very different reforms together while illuminating our existing system; it is not to offer new arguments for and answer objections to any particular reform. Without getting into details, about which an extensive literature has developed anyway, I’ll merely sketch the “BFH system” in broad strokes. (See, in part, my 1989; the papers reprinted in Part Four of my 1997 book, three of them coauthored with Robert L. Greenfield; and Woolsey and Yeager 1994. Dowd 1996 advocates essentially the same reform.) Government would get out of the money business, giving a noncoercive nudge toward general use of a new unit by adopting it in its own transactions. The new dollar would be defined by things whose supply and demand are essentially *nonmonetary*, namely, a bundle of ordinary goods and services. The defining bundle would not be a liquid asset. Its bulk and heterogeneous content would make it unusable itself as medium of exchange, base money, redemption medium, or reserve medium.

Only private banks would issue media of exchange—checking accounts, banknotes, and coins denominated in the new dollar (and probably also checkable equity mutual funds). To make the denomination of banknotes and bank accounts in the new unit operational and credible, their private issuers, prodded by competition, would very probably undertake to keep them redeemable. They would not be redeemable in base money because none would exist. Instead of being concerned with reserves and reserve ratios of base money, banks would attend simply to the soundness of their overall portfolios and to the quick marketability of adequate parts of them. Nor could bank money be redeemable directly in the various goods and services composing the standard bundle. That would be too awkward for all concerned, and the absence of direct redeemability would in fact be an advantage. Instead, money would be redeemable *indirectly* in some convenient redemption medium (perhaps gold or specified securities). A ten-dollar note, being redeemable in the quantity of redemption medium having the same actual current market value as ten standard commodity bundles, would always be worth ten bundles.¹² Interbank settlements on account of checks and banknotes routed through clearinghouses would constitute routine redemptions of monetary obligations. They would put banks to the test of keeping their money issues actually worth the numbers of standard bundles denominating them. Arbitrage would join in powerful pressures keeping monetary obligations fully worth their face values. Neither an individual bank nor the system as a whole could keep more of its money in circulation than the public demanded to hold at the defined value of the dollar and at the corresponding stable price level.

Neither the redemption medium nor the standard bundle would be a base money or a distinctive reserve medium. Neither could become the object of a panicky scramble. Being

continuously traded on organized markets, furthermore, the redemption medium would have a flexible price that would continuously equilibrate its supply and demand.

In a fiat-money system, the meaningfulness of the unit of account is tied up with determining its real size through regulation of the quantities of base and total money; it is tied up with the functioning of the payments and credit systems. (The gold standard differs in making this regulation of money supplies and credit partially automatic.) The contemplated system severs these bothersome ties.

It avoids monetary disturbances of the kinds that have caused depressions, recessions, and inflations of historical experience. It avoids imbalances between demanded and actual quantities of money by “automatically” accommodating the actual quantity to the demand for money at a stable price level corresponding to the definition of the pricing unit. (The quantity of money would be demand-determined, but soundly, not in the perverse sense of the fallacious real-bills doctrine.) Financial intermediaries convey resources freed from current consumption by savers accumulating cash balances to the projects of business and other borrowers.

Objections can be raised. Is it really desirable, for example, to hold the price level steady even in the face of adverse supply shocks such as the oil shocks of the 1970s? Should not widespread gains in productivity reduce the general price level? Plausible considerations support either answer to either question. No monetary system and no other set of social institutions has advantages only, free of any disadvantages. The human condition requires weighing pros and cons and accepting tradeoffs.

My purpose has not been to clinch the case for any specific reform. Pondering one helps us, rather, to recognize and cope with intuitions derived from our current monetary system that interfere with our understanding not only of radically different systems but even of the current system itself.

Conclusion

A monetary system is a vast monitoring, record-keeping, and accounting device that serves the multilateral clearing of transactions. Whatever may have been true in the past, money is not fundamentally a tangible commodity. Neither morality nor economic advantage requires that so-called “money surrogates” or “substitutes” be fully or even partially backed by base money. The very existence of base money distinct from other kinds of money poses problems. Thoughts of reform should attend not so much to how to restore characteristics of money in its early stages of evolution as on how best to get the functions of a modern monetary system performed. One-hundred-percent reserves of base money are not part of the answer.

Notes

1. To forestall quibbling, I acknowledge that these records do not convey “entitlements” in an exaggeratedly strict sense of the word; they are not ironclad rights to receive specific goods and services at fixed prices. They are tickets to exercise purchasing power on the market. Consider how Ayn Rand, speaking through her fictional Francisco d’Anconia, interprets such “claims”:

When you accept money in payment for your effort, you do so only on the conviction that you will exchange it for the product of the effort of others.... [T]hose pieces of paper in your wallet ... are a token of honor—your claim upon the energy of men who produce. Your wallet is your statement of hope that somewhere in the world around you there are men who will not default on that moral principle which is the root of money. [1957, part 2, chapter II, p. 387 in the Signet edition].

2. Mostafa Moini gives a recent paper (1999) the significant title “Toward a General Theory of Credit and Money.” Moini’s interpretation is similar to that of Kuenne and Schumpeter, although he was apparently unaware of their works cited in the present paper. Moini does summarize H. D. Macleod’s “credit theory of money,” citing Macleod’s *Lectures on Credit and Banking* (1882), *The Elements of Banking* (1891), *The Theory of Credit* (1893), and *The Theory and Practice of Banking* (1892–93), books not yet available to me. Narayana Kocherlakota (1998) also recognizes money as a record-keeping device and, although without using the specific terms, as a credit instrument and clearing device. He too wrote unapparently unaware of Kuenne’s and Schumpeter’s work, but he does attribute similar views to writings of Robert M. Townsend dating from 1980 to 1990.
3. To call money a record-keeping device is not to forget its traditionally listed functions. Essential to those functions, however, is money’s record-keeping aspect in the sense explained here.
4. This formulation does not deny that a commodity demanded partly for monetary purposes has a higher market value than if it were demanded only for ordinary nonmonetary purposes. See the remarks about gold shortly below.
5. Briefly on pages 151 and 553, however, and perhaps inconsistently, Huerta de Soto defines money as any generally accepted medium of exchange. On page 598n. money is the unique perfectly liquid good. On page 554 its essence is to possess perfect liquidity—immediate, complete, and unconditional. On p. 383n. its chief role is “to serve as vehicle for the creative exercise of the entrepreneurial function.”
6. Given the stock of base money, the existence of nonbase money in addition does make the purchasing power of money smaller than it would otherwise be; but continued depreciation of money would require not merely fractional reserves but continual reduction in the reserve ratio. If dilution of money’s purchasing power is to be prevented, then anything that tends to reduce the real quantity of money demanded or to raise the income velocity of money would have to be ruled out, including such apparently legitimate financial innovations as checkable or readily cashable mutual funds and asset-management accounts. Alternatives to tight regulation of financial practices would be either ideal central-bank management of the stock of base money or definition of the money unit by some commodity or commodity basket whose supply and demand do not have any significant monetary character.
7. Huerta de Soto (1998a:579n., 615) seems to accept the legitimacy of mutual-fund banking on the grounds that the nominal value of an equity holding is not fixed. The effects of such an innovation, however, including weakening of the demand for and so the purchasing power of actual money, would seem to be qualitatively the same as the effects of ordinary fractional-reserve banking.
8. Already in 1913 Herbert J. Davenport saw the precariousness of pyramiding large amounts of bank-credit money onto a narrow base of “money of ultimate redemption.” Occasionally bank customers, banks trying to fortify their endangered reserves, and people seeking safety by unloading securities and other assets get into a scramble for this ultimate money, triggering a financial crisis or even a depression (Davenport 1913, chap. XVII, esp. pp. 283–290; compare Hawtrey’s theory, 1913, of how demands for circulating specie may trigger a business downturn).
9. Currency boards provide relatively rare exceptions. Under such a system, external reserves cover domestic base money 100 percent, but not the total money supply. If banks get into a liquidity crisis and the board bends its principles to rescue them, creating additional base money, it undermines the system.
10. But a classificatory and verbal maneuver should not override straightforward observation of what functions money performs, and how. Preoccupation with money’s supposed character as a good draws attention from its character as receipt vouchers and claim tickets that accomplish decentralized record-keeping and facilitate multilateral transactions.
11. A referee complains that I dwell too exclusively on the disadvantages of base money. What about its advantages? I’m afraid I have nothing exciting to say about them. Base money is a familiar key element in monetary systems of our existing type, which do indeed function tolerably well in calm times. Furthermore, how base

money acquired its current status is historically understandable, and the steps along the way seemed plausible to those who took them. My present purpose is not, however, to rehearse what is already familiar.

12. Reference to redemption in value amounts rather than physical amounts may make the hasty reader suspect some gross fallacy. It *would* be a fallacy to suggest, for example, a gold standard in which a dollar was defined by and redeemable in whatever changeable physical quantity of gold happened at the time to be worth one dollar on the market. I am guilty of no such fallacy. I am supposing that a dollar bill, say, would always be redeemable in something having the actual value of a *physically* specified basket of goods. The purpose of redeemability, by the way, is not to make the very definition of the unit of account operational; that would be no more intelligible than some sort of redeemability of meter sticks to make the scientific definition of the meter operational. Its purpose, instead, is to assure the meaningfulness of denominating obligations in the independently defined unit of account. Along with competition, it would prod money-issuers to fulfill their commitments.

References

- Allais, M. (1947) *Économie et Intérêt*. Two volumes. Paris: Imprimerie Nationale.
- Cohen, M. R. and Nagel, E. (1934) *An Introduction to Logic and Scientific Method*. New York: Harcourt, Brace.
- Davenport, H. J. (1913) *The Economics of Enterprise*. New York: Macmillan. (1968) Reprinted New York: Kelley.
- Diamond, D. W. and Dybvig, P. H. (1983) "Bank Runs, Deposit Insurance, and Liquidity." *Journal of Political Economy*, 91: 401–419.
- Dowd, K. (1991) "Financial Instability in a 'Directly Convertible' Gold Standard." *Southern Economic Journal*, 57: 719–726.
- Dowd, K. (1996) *Competition and Finance: A Reinterpretation of Financial and Monetary Economics*. New York: St. Martin's Press.
- Fischer, D. H. (1970) *Historians' Fallacies*. New York: Harper Torchbooks.
- Friedman, M. (1969) "The Optimum Quantity of Money." In *The Optimum Quantity of Money and Other Essays*. Chicago: Aldine.
- Goodfriend, M. (1991) "Money, Credit, Banking, and Payments System Policy." Federal Reserve Bank of Richmond. *Economic Review*, 77: 7–23.
- Gurley, J. G. and Shaw, E. S. (1960) *Money in a Theory of Finance*. Washington: Brookings Institution.
- Hawtrey, R. G., (1913) *Good and Bad Trade*. London: Constable. (1970) Reprinted New York: Kelley.
- Hoppe, H.-H. (1994) "How is Fiat Money Possible?—or, The Devolution of Money and Credit." *Review of Austrian Economics*, 7(2): 49–74.
- Hoppe, H.-H., Hülsmann, J. G. and Block, W. (1998) "Against Fiduciary Media." *Quarterly Journal of Austrian Economics*, 1(1): 19–50.
- Huerta de Soto, J. (1998a) *Dinero, Crédito Bancario y Ciclos Económicos*. Madrid: Unión Editorial.
- Huerta de Soto, J. (1998b) "A Critical Note on Fractional-Reserve Free Banking." *Quarterly Journal of Austrian Economics*, 1: 25–49.
- Hülsmann, J. G. (1996a) *Logik der Währungskonkurrenz*. Essen: Akademie Verlags- und Druck-Gesellschaft.
- Hülsmann, J. G. (1996b) "Free Banking and the Free Bankers." *Review of Austrian Economics*, 9(1): 3–53.
- Kocherlakota, N. R. (1998) "The Technological Role of Fiat Money." Federal Reserve Bank of Minneapolis. *Quarterly Review*, 22(3): 2–10.
- Kuenne, R. E. (1958) "On the Existence and Role of Money in a Stationary System." *Southern Economic Journal*, 25: 1–10.
- Leijonhufvud, A. (1987) "Rational Expectations and Monetary Institutions." In: de Cecco, M., and Fitoussi, J.-P. (Eds.) *Monetary Theory and Economic Institutions*, pp. 44–65. Houndmills: Macmillan.
- Menger, C. [1950 (1871)] *Principles of Economics*. Translated by Dingwall, J. and Hoeselitz, B. F. Glencoe: Free Press.
- Menger, C. (1892) "On the Origin of Money." *Economic Journal*, 2: 239–255.
- Menger, C. [1970 (1892, 1909)] "Geld." Reprinted in *Gesammelte Werke*, IV: 1–116. Tübingen: Mohr (Siebeck).
- Moini, M. (1999) "Toward a General Theory of Credit and Money." Presented at the Austrian Scholars Conference, Auburn, Alabama, 17 April 1999.

- Patinkin, D. (1956, 1965) *Money, Interest, and Prices*. First and second editions. New York: Harper & Row.
- Rand, A. (1957) *Atlas Shrugged*. New York: Random House. Reprinted as a paperback Signet Book by New American Library.
- Schumpeter, J. A. (1956) "Money and the Social Product." In: Henderson, E. and others (Eds.) *International Economic Papers*, Vol. 6, pp. 148–211. London: Macmillan. Translated by Marget, A. W. from "Das Sozialprodukt und die Rechenpfennige. Glossen und Beiträge zur Geldtheorie von heute." *Archiv für Sozialwissenschaft und Sozialpolitik*, 44: 1917–18. Reprinted in Schumpeter, *Aufsätze zur ökonomischen Theorie*, Tübingen, 1952.
- Schumpeter, J. A. (1970) *Das Wesen des Geldes*. Edited from manuscript (mostly drafted by around 1930) and with an introduction by Fritz Karl Mann. Göttingen: Vandenhoeck & Ruprecht.
- Selgin, G. A. (1988) *The Theory of Free Banking*. Totowa, NJ: Rowman & Littlefield.
- Selgin, G., and Lawrence, H. W. (1996) "In Defense of Fiduciary Media—or, We are *Not* Devo(lutionists), We are Misesians!" *Review of Austrian Economics*, 9(2): 83–107.
- Shah, P. J. and Yeager, L. B. (1994) "Schumpeter on Monetary Determinacy." *History of Political Economy*, 26: 443–464.
- Tobin, J. (1965) "Money and Economic Growth." *Econometrica*, 33: 671–684.
- Velasco, A., and Chang, R. (1998) "The Asian Liquidity Crisis." C. V. Starr Center for Applied Economics, New York University, Research Report 98-27.
- Woolsey, W. W. and Yeager, L. B. (1994) "Is There a Paradox of Indirect Convertibility?" *Southern Economic Journal*, 61: 85–95.
- Yeager, L. B. (1989) "A Competitive Payments System: Some Objections Considered." *Journal of Post Keynesian Economics*, 11: 370–377.
- Yeager, L. B. (1997) *The Fluttering Veil*. Selgin, G. (Ed.), Indianapolis: Liberty Fund.