

Central Banking, Free Banking, and Financial Crises

Roger W. Garrison

A growing literature explores the concept of free banking on both a theoretical and an historical basis. George Selgin (1988) sets out the theory of free banking and makes a compelling case that, despite the uniqueness of money, the forces of supply and demand are more conducive to monetary stability, correctly understood, than are the edicts of a central bank. Larry White (1984), focusing on the free-banking episode in nineteenth-century Scotland, and Kevin Dowd (1994), collecting studies of experience with free banking in many countries and time periods, have shown that this alternative to central banking has a respectable history.

The aim of this paper is to get a fix on the possible and currently relevant sources of macroeconomic instabilities in the economy and to identify the most promising banking arrangements for dealing with those instabilities. Possible maladies and remedies can be considered in the context of competing schools of macroeconomic and monetary thought. Attention is directed to the issue of whether the perceived problem and/or its solution is inherent in the market economy or lies outside the market process. This formulation immediately gives rise to a two-by-two matrix with maladies and remedies represented in one dimension, market forces and extramarket forces represented in the other. The fruitfulness of this approach is demonstrated by its ability to sort out competing schools of thought, put current debate in perspective, and assess the prospects for a stable macroeconomy—with the Federal Reserve as currently constituted and with the alternative institution of free banking.

This exercise in comparative-institutions analysis does not deal with the dynamics of the macroeconomy in transition between one set of monetary institutions and another or with the political issues of just how such a transition might be brought about. Nor does it deal directly

*Roger Garrison is professor of economics at Auburn University.

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with the ultimate nature of the monetary standard. There is a strong presumption, however, that only a central bank can preempt a commodity standard with its own fiat money and that banknotes issued by competing banks in a free-banking system would have to be redeemable in some real commodity, such as gold, to make them acceptable in a market where banknote holders can easily express their preferences among issuers. There is broad agreement among Austrian-oriented writers that a banking system characterized by (1) central direction and (2) fractional reserve is not conducive to economic stability. However, there is some disagreement among the Austrians as to which of the two mentioned characteristics is fundamentally responsible for the instability. The argument in this paper follows Ludwig von Mises, as portrayed by White (1992), and takes the centralization of the current banking system to be the most fundamental issue and the most appropriate focus for prescribing reform.

The Equation of Exchange

Underlying all theories of money and banking—as well as all prescriptions of policy and recommendations for reform—is the familiar equation of exchange: $MV = PQ$. For the economy as a whole, buying must equal selling, where buying is represented by the total supply M of money times the frequency (the circulation velocity V) with which each monetary unit on average is spent and where selling is represented by the average price P of goods times the total quantity Q of goods sold. Although true by construction, the equation of exchange helps us to keep in view the interdependencies that characterize the macroeconomy. It is impossible, for instance, to conceive of a change in only one of the four magnitudes represented in the equation of exchange. Any one change implies some offsetting change or changes on one side or the other of the equation—or possibly on both sides. For instance, a decrease in money's circulation velocity, which simply reflects an increase in the demand for money, must be accompanied by (1) an increase in the money supply, (2) a decrease in prices, or (3) a decrease in real output sold (or by some combination thereof).

The equation also facilitates the comparison of competing schools of thought. Considering in sequence Keynesianism and Early and Late Monetarism can provide a basis for setting out the distinctive perspective that emerges from the theory of free banking.¹ The case

¹The comparison of schools facilitated by the equation of exchange is wholly independent of the unique qualities of Austrian macroeconomics, which features the intertemporal allocation (and possible misallocation) of resources and requires theorizing at a lower level of aggregation.

against central banking and in favor of free banking, then, is preceded by some history of thought—possibly more than some may think justified. The comparison of schools of thought is included for two reasons. First, some writers have recently gotten it wrong, presenting monetarist ideas under the Keynesian label. Second, the case for free banking contains arguments that are sufficiently close to Keynes's own that they need to be distinguished explicitly from his.

Keynes believed that the economy is chronically unstable because of instabilities associated with both Q and V . Goods, in the Keynesian construction, are decomposed into consumption goods C and investment goods I , the latter being inherently unstable in view of the pervasive uncertainty faced by the business community—the “dark forces of time and ignorance that envelop our future” (Keynes, 1936, p. 155). The strength of the investment sector, according to Keynes, is highly dependent on psychological factors—“animal spirits” (pp. 161–62) that motivate each (and, through contagion, all) of the economy's investors. The occasional waxing and waning of the animal spirits affect I —and affect C as decisions in the business community govern incomes and hence spending. Both directly and derivatively, then, the uncertainty of the future translates into fluctuations in the economy's output magnitude Q .

The equation of exchange reminds us that changes in Q cannot be the whole story. If prices and wages are sticky and the money supply is wholly determined by the monetary authority, the rest of the story must center on money's circulation velocity V . What Keynes called the “fetish of liquidity” is, in this view, nothing but another perspective on the waning of “animal spirits.” Would-be investors abstain from committing themselves to investment projects, whose profitability is uncertain, and instead hold their wealth liquid.

The economy, according to Keynes, is prone to periodic collapse. Pervasive uncertainty inherent in investment activity and prospects of economic disaster occasionally overwhelm the business community. Entrepreneurs cease their individual attempts to outguess one another and begin collectively to guess against the economy. In droves, they forego real assets in favor of liquidity. Q falls, and along with it, V . Liquidity, or money (Keynes used the terms synonymously), constitutes something of a “time out” for the entrepreneur/speculator—somewhat analogous to rest areas along an interstate highway. Fog on the highway or the wearing effects of traffic congestion can make the rest areas increasingly attractive.

The origin and essence of the problem, in the Keynesian view, is to be found on the righthand side of the equation of exchange (a decreased Q). Keynes works on both sides of the equation, however, in

devising possible solutions to the problem. For instance, much of Keynes's discussion of monetary reform, which included support in principle for Silvio Gesell's stamped money as well as for taxing transactions in securities markets, was aimed at making the time-out option—the option of getting or staying liquid—more costly. Keynes favored all attempts to deprive money of its liquidity value only to lament that investors would find other assets (e.g., gems and precious metals) that could provide refuge from the uncertain future (Keynes 1936, pp. 353–58).

Reforms in this direction are analogous to installing toll gates at the rest areas—or possibly eliminating rest areas altogether. Travelers would make better time between New Orleans and Atlanta if there were no possibility of stopping along the way. Keynes did not consider that some would-be travelers might not depart New Orleans in the direction of Atlanta under such conditions; he did lament that closing or charging for rest areas might cause travelers to find other places to stop along the highway.

In lieu of prevention in the form of making liquidity less attractive or more costly, Keynes recommended monetary policy to accommodate the demand for liquidity—satiating that demand if necessary to keep money from competing with real investments in the collective mind of the business community. To the extent that money-demand entails a large psychological element, the rest-area analogy holds. A road sign that reads “LAST REST AREA FOR NEXT 100 MILES” may attract many customers, whereas the travelers may stop very infrequently if there were rest areas all along the way.

While increasing the supply of money to neutralize the effects of a fetishistic demand for liquidity may be a necessary component of policy prescription, it will not be sufficient, according to Keynes, to restore conditions of prosperity. This is only to say that a decreased V is a symptom rather than the essence of the problem. The solution must involve the substitution of government spending for private investment spending—accommodated, of course, by money creation. Fiscal stimulation prods the reluctant travelers along the economic highway. Keynes viewed fiscal policy as primary; monetary policy as secondary.

In the Keynesian view, then, the malady is inherent in the market; the remedy entails extramarket forces. It is in the very nature of things that our weary travelers will, on occasion, follow one another into the increasingly overcrowded rest areas, where each traveler is reluctant to resume the journey alone. Restoring and maintaining stability requires intervening forces in a double-barreled way; the interveners must work simultaneously on both sides of the equation of exchange.

Monetary reform and fiscal stimulation are intended to keep the travelers out of the rest areas and to keep them moving along smartly. Central banking is essential for the task. But ultimately, Keynes (1936, p. 378) called for a wholesale replacement of our current system with a system of public transportation: A comprehensive socialization of investment is offered as the only solution to the problem of unemployment.

Early monetarism, as explicated by Clark Warburton (1966) in the 1940s and 1950s and as revived in recent years by Leland Yeager (1986), has a kinship to the equation-of-exchange perspective on the Keynesian view. Both schools perceive a possible malady and remedy that fit into the two-by-two matrix in the same way: Market malady; extramarket remedy. They differ radically, however, in terms of the specific nature of the problem and the implied judgment about the efficacy of the market economy. Market participants may opt for more money in preference to more real output—where the relevant alternatives to holding money are both investment goods and consumption goods. The demand for money is not fetishistic, and changes in it are not necessarily contagious, but money demand can and does change. The velocity of money is not constant in the same way that Planck's constant and Avogadro's number are.²

With a given money supply, increases in the demand for money put downward pressure on prices.³ Except in the fanciful case in which prices adjust fully and instantaneously to this monetary disturbance, the adjustment process involves quantities as well as prices. Our highway travelers are trying to stop and rest even in the absence of adequate rest areas. The unintended consequence is a general slowdown of traffic. A decreased V impinges on Q as well as on P —even if the ultimate, or long-run consequence is a proportionate decrease in P . In principle, a monetary policy that succeeds in relieving downward pressure on prices by meeting every increased demand for money with an increased supply will result in greater stability for the economy as a whole. A constant P becomes, in this view, the essence of monetary stability. The problem (decreased V) and solution (increase M) are set out in precisely this way by Paul Krugman (1993, p. 26–28 and *passim*)—but

²It should be noted, however, that even before the impact of Milton Friedman's empirical work was fully felt, the Early Monetarists held that the typical and most significant reductions in MV were attributable to reductions in M and not in V .

³Here and throughout the paper, the phrases "increase in the demand for money" and "decrease in the velocity of money" are used interchangeably. Although this usage is not unconventional, some monetary theorists take money demand to be defined by the equation of exchange itself. That is, $M_d = (1/V)PQ$, in which case *any* change on the righthand side of the money-demand equation would constitute a change in the demand for money.

with this view offered as Keynes's understanding of the nature of business cycles! Early Monetarism is wrongly attributed to Keynes.⁴

Early and Late Monetarists share an analytical framework as well as a basic judgment about the central bank's capacity to do good and to do harm. It was Milton Friedman, of course, who shifted the focus of attention away from problems of monetary disequilibrium to the general relationship between M and P that endures over space and time. Empirical studies using data from many different economies and many different time periods lent support to the proposition that changes in the lefthand side of the equation of exchange are overwhelmingly attributable to changes in the quantity of money. Study after study demonstrating the stability of money demand (a near-constant V) had the effect of focusing attention on the money supply M as a basis for accounting for both inflation and deflation. Changes in the money supply are much more likely to be a problem than to be a solution to a problem. Empirical and theoretical considerations, as well as considerations from political economy, underlay this summary judgment. Under typical conditions, in which money demand remains relatively constant, there is a "long and variable lag" that separates changes in the money supply and the subsequent changes in the price level. This empirical fact, coupled with the lack of any timely and unambiguous indicator of actual changes in the demand for money, weighs against the prospects for even well-intentioned money-supply management having a stabilizing effect on the macroeconomy. Dimming the prospects still further, of course, is the fact that the central bank may intend to do more than act as a stabilizing agent and that some of its intentions, such as dealing narrowly in alternating episodes with the problems of inflation and unemployment and with problems associated with the strength or weakness of the dollar in international markets, are antithetical to the idea of a central bank as macroeconomic stabilizer.

⁴Even worse, the school of thought whose sails have most recently caught the academic wind calls itself New Keynesianism—seriously missing the mark with both parts of its name. Gregory Mankiw and others (Ball, et al., 1988) remain largely agnostic about the specific source of change on the lefthand side of the equation of exchange. Their theorizing holds up whether it is M or V that decreases. The Keynesian label is adopted simply on the basis of their recognition that prices do not change instantly—a basis that actually distinguishes their (and many other) arguments only from extreme versions of New Classicism. The "New" is added in recognition that the assumption of sticky prices is replaced with "sophisticated" reasons for prices not adjusting instantaneously. But Early Monetarism as initially set out and in modern expositions does not fail to include reasons for the behavior of those who set prices. New Keynesianism is Early Monetarism offered with the aid of now fashionable modeling techniques, which involve mathematically tractable—if largely implausible—constraints on price- and wage-adjustments.

We can locate Monetarism in our two-by-two matrix by noting that both malady and remedy are in the extramarket category. In fact, Monetarism consists, by and large, of (1) the recognition that the central bank is a destabilizing force and (2) the recommendation that it *not* be a destabilizing force. Adherence to a monetary rule according to which the money supply is increased at a slow, steady, and preannounced rate is likely to engender more macroeconomic stability than central bank activism can achieve—no matter how well-intentioned and expertly conceived. Actual experience both before and after the heyday of Monetarism suggests that the same understanding that gives rise to Monetarists' view of the central bank also accounts for the central bank's inability and unwillingness actually to adopt and abide by a monetary rule. The so-called Monetarist experiment begun in October of 1979 under the chairmanship of Paul Volcker, for instance, was Monetarist only in a limited and perverse sense. The Federal Reserve did shift its attention from interest rates to monetary aggregates, a move that would be preliminary to actually adopting a rule for monetary growth. But its policies following this shift made for even greater variation in the money supply (and in the rate of interest) creating significantly greater macroeconomic instability than had been experienced before. Ultimately, a monetary rule, however widely and forcefully recommended, is at odds with the even more widely perceived view that the Federal Reserve Chairman is the second most powerful individual in the country.

Free Banking

The basic case for free banking is the general case for decentralization of economic activity. The uniqueness of money does not immunize it against the forces of supply and demand and does not make the invisible hand of the marketplace any less beneficial to society. Quite to the contrary, our rest-area analogy suggests that market forces have special advantages in adjusting money supply to money demand. While the market cannot respond on a daily basis, supplying rest areas anywhere along the highway that they happen to be demanded by today's travelers, free banking can and automatically would supply liquidity along the economic highway anytime and anywhere it is demanded. The case for decentralization is strengthened by comparing free-banking dynamics to central-bank policies that we have actually experienced and even to the policies of an idealized non-politicized central bank whose sole objective is that of maintaining macroeconomic stability. A comparison favoring free banking follows from two propositions. First, the failure in fact of the central bank to adopt a monetary rule (and the unlikelihood of its adopting such a rule in the future)

weighs in favor of decentralization. What the Federal Reserve lacks the will and ability to do can be done automatically by the impersonal forces of supply and demand governing banknote issue. Second, the difference between the implicit rule that the decentralized banking system follows and the simple monetary rule of slow and steady growth of the money supply gives free banking higher marks as a stabilizing force in the economy. In the final analysis, the simplicity of the monetary rule derives from the judgment that discretionary moves are more likely to destabilize than to stabilize. The monetary rule is imposed, then, in the spirit of the unspoken maxim of yesteryear's medical profession: "Maintain good bedside manners, and strive to do no harm."

Free banking automatically discriminates between real disturbances and monetary disturbances, reacting only to the latter (Selgin 1988, pp. 64–69). The "automaticity" implies both a timeliness and an absence of political pressure—features that are forever denied to central banking. Under steady-state conditions in which the economy is experiencing no growth and no changes in the demand for money, the simple monetary rule and the implicit free-banking rule are the same: zero growth in the money supply. The consequences are also the same: a constant price level. Under more typical conditions of some positive rate of real economic growth and some variability in the demand for money, the two rules differ. The simple monetary rule is based on a long-range estimate of secular growth and of secular movement in money demand. An estimated growth rate of 3 percent and an estimated upward trend in money demand (downward trend in velocity) of 2 percent translate into a money growth rate of 5 percent. Strict compliance with the rule would mean that movements in the price level would exhibit no long-run trend. Actual deviations from trend in either output or in velocity, however, would result in upward or downward pressure on the general level of prices. Accordingly, the rule itself might be adjusted to allow for the differential harmfulness of inflation and deflation. Ingrained notions that prices and wages are stickier downwards than upwards and that unemployment bites harder into economic prosperity than does inflation may justify—narrow political motives aside—a rule of increasing the money supply at some rate slightly in excess of 5 percent. A mild inflation might be considered cheap insurance against any actual deflation.⁵

⁵By wholly ignoring discoordinating consequences of deflationary pressures and factoring in the effect of an anticipated price-level decline on the real value of money holdings, Friedman (1969, pp. 45–47) argues for a theoretically optimal growth rate for M that is considerably *lower* (2% instead of 5%) than that implied by secular changes in Q and in V .

The implicit rule automatically implemented by free banking is the old central-bank maxim (usually observed in the breach): "Print money to hold but not money to spend." If the holders of banknotes issued by a particular bank are willing to hold still more, it is in the interests of the bank to increase its issue. The fact that the bank's customers are holding rather than spending implies the absence of inflationary pressures. In this context, the bank need not even consider whether the increased demand for its own notes is a general increase in the demand for money or an increase in the demand for its banknotes relative to the demand for other banknotes. However, if an individual bank increases its issue even in the absence of any increase in demand to hold its banknotes, then the extra spending of them will soon impinge on the bank's reserves. The sustainable level of note issue is demand-determined. In a decentralized and competitive environment, each individual bank can be expected to forego the short-term gains that overissuing its own banknotes might entail in order to avoid the long-term losses that the market process would inevitably impose.

In contrast to the simple monetary rule, which is devised to accommodate real economic growth by checking deflationary pressures whatever their source, the implicit free-banking rule involves no change in the money supply in response to a change in real output. This difference in the two rules reflects the automatic discrimination, inherent in free banking, between real and monetary disturbances. An increase in the demand for money puts downward pressure on product and factor prices in general. If there were no money-supply response, a general decline in economic activity would follow, since prices and wages could not fully and instantaneously adjust themselves to the new market conditions. Goods in general would go unsold; production would be cut; workers would be laid off. Such quantity effects can be self aggravating, as the Early Monetarists emphasized. With a less-than-perfectly flexible price system, general deflationary pressures can push the economy below its potential during the period in which prices are adjusting to the higher monetary demand. And the fact that some prices and some wages are more flexible than others means that the adjustment period will involve changes in relative prices that reflect no changes in relative scarcities. These are precisely the kinds of problems that are highlighted by modern monetary-disequilibrium theorists, e.g., Yeager (1986), and that are avoided by free banking's responsiveness to increases in money demand.

Suppose, however, that with an unchanging demand for money, the economy experiences economic growth. Despite the implications of the familiar neoclassical growth models, the economy's output does not undergo a general change; there is no disembodied growth that might

be explained in terms of an economywide technology shock. Rather, the outputs of various goods increase as a result of an increased availability of particular resources used in producing them or the discovery of a new technique that converts particular inputs into a particular output more efficiently. Downward pressure on the prices of the particular goods that account for the economy's growth will be felt primarily in the markets for those very goods. Relative prices adjust to reflect the fact that these goods are now more abundant. The market process at work here is the one that gets emphasis in the sophomore-level economics of supply and demand. Perversities that dominate in the context of an increase in money demand get little or no play in the context of economic growth. The increased Q , which simply reflects a positive net change in the sum of all the economy's individual q_s , is accompanied by a decrease in the corresponding p_s . It would be misleading here to evoke the fears of "deflationary pressures." The individual p_s become adjusted to their corresponding q_s on a market-by-market basis. The fact that this new constellation of p_s average to a lower P than before has no special claim on our attention. There is no downward pressure on P over and above the forces of supply and demand that operate separately in the affected markets and reflect the underlying economic realities. There are no perversities inherent in this sort of a relative (and absolute) adjustment.

In terms of the equation of exchange, we can say that free banking adjusts M so as to offset changes in V ; but allows changes in Q to be accommodated by changes in P . Economic growth does involve price deflation in a literal sense (the price level falls as output increases) but does not involve any macroeconomic malady that is commonly associated with the term "deflationary pressures." In effect, by distinguishing between malignant and benign deflation, free banking provides a much stronger check against inflation than that provided by the simple monetary rule.⁶ It would be misleading to classify free banking in terms of malady and remedy because the malady never gets a chance to show itself. Significantly, though, there are no extramarket forces at work here either creating problems or fixing them.

Central Banking and the Debt Bomb

The case for a decentralized banking system, which by and large parallels the case for markets and against central planning agents, is a

⁶Selgin (1991) distinguishes clearly between what I have called malignant and benign deflation. It is interesting to note that free banking, which relieves only the malignant deflationary pressures, may get close to Friedman's theoretical optimum, which assumes those pressures away. (See footnote 5.)

strong one. The central bank cannot outdo free banking or even match its performance as a macroeconomic stabilizer. It lacks the ability to distinguish on a timely basis between movements in V and movements in Q , it lacks the incentives to act in ways that would promote stability, and as a key player in a political environment, it actually responds to incentives in ways that foster instability. None of these characteristics, however, is at odds with our understanding of the origins of the Federal Reserve System—especially as explicated by Rothbard (1994), whose story does not place great emphasis on the lofty goal of macroeconomic stabilization.

It is commonly understood, now, that the Federal Reserve accommodates the Treasury by monetizing the government's debt. That is, it injects credit markets with new money so as to relieve the upward pressure on interest rates that Treasury borrowing would otherwise entail. And with telling exceptions, the Federal Reserve maintains an easy-money policy in the year-and-a-half before each presidential election.⁷ The so-called political business cycles have now become an integral part of the macroeconomic landscape. Further, the Federal Reserve is called upon to deal with other real or perceived problems having little to do with macroeconomic stability. It is expected, for instance, to lower interest rates when the housing market is in a slump and to strengthen or weaken the dollar in response to movements in exchange rates or trade flows. All these attempts to manipulate employment rates, interest rates, and exchange rates interfere with the Federal Reserve's ability to achieve and maintain macroeconomic stability or even to refrain from inducing instability. If the simple monetary rule fares poorly in comparison with the implicit rule of free banking, it fares well in comparison with the actual policies of the Federal Reserve.

These political factors are well recognized by modern Fedwatchers. Less well recognized are the cumulative effects of decades of deficit accommodation and macroeconomic manipulation. With federal

⁷The telling exceptions involve Presidents Ford, Carter, and Bush. In 1976 Ford simply did not play the game. He did not press Federal Reserve Chairman Arthur Burns, who had helped Nixon get re-elected four years earlier. With Ford perceived as a non-starter, Carter boasted that his administration would "hit the ground running," which in terms of monetary policy meant that the expansion was started much too early. By re-election time (1980), the stimulative effects of the monetary expansion had receded into history and inflation was upon us. With equally bad timing, but in the opposite direction, Bush tried to play the game in 1992 but started the expansion too late—after finally realizing that he couldn't ride through the election on his victory in the Persian Gulf. The monetary stimulant was felt during the first few months of the Clinton administration. Starting too late, too early, and not at all, these three incumbent campaigners had one thing in common: They lost.

indebtedness now measured in the trillions of dollars and increasing annually by hundreds of billions, the need for a stabilizing monetary system is all the more important. The debt bomb is not ignored by Wall Street. An explosive ending to this era of fiscal irresponsibility may or may not be in the making, but the bomb's incessant ticking has its own effect on the stability of securities markets.⁸ A consideration of the actions of the Federal Reserve in recent years aimed at dealing with so-called mini-crashes in the financial sector provides a further basis for assessing the prospects of centrally produced macroeconomic stability. From the narrow perspective of the financial sector the issues of malady and remedy look deceptively like those identified by Keynes: market maladies and extramarket remedies. An activist central bank is seemingly justified by its indispensable role in taming an otherwise wild financial sector. But a fuller understanding of the situation suggests that it is an unbridled Treasury rather than unbridled capitalism that lies at the root of the economy's current problems. And it is the Federal Reserve—its very existence—that removed the bridle. On this understanding, the malady and remedy are both in the extramarket category, but the diagnosis and prescription are not as simple as the Monetarists would have us believe.

Increasingly, the significance of the Federal Reserve in the context of the macroeconomy derives from its ability to monetize government debt. This is not to say that the actual rate of debt monetization dominates the Federal Reserve's current agenda but rather that the very potential for debt monetization is taking on increasing significance. How has the federal government been able to get away with such a chronically and conspicuously large budgetary imbalance—and with no sign of meaningful fiscal reform—without subjecting itself to the substantial penalty imposed automatically by credit markets? Why is there no default-risk premium on Treasury bills? Excessive debt accumulated by individuals, corporations, or even municipalities is eventually dealt with when the borrowers lose their creditworthiness and face prohibitive rates of interest. This salutary aspect of the market process is short-circuited in the case of Treasury debt by the very existence of a central

⁸There are a number of books written in the spirit of *Bankruptcy 1995* (1992) offering calculations of one sort or another about when the debt bomb will blow. Will it be when interest payments dominate the growth path of the debt? Or when interest payments exceed tax revenues? Calculations based on these and related eventualities are almost surely irrelevant. In informal discussion, I have designated all such calculations as establishing what I define to be the "Gore Point"—the point at which even Al Gore perceives the debt as a problem. (A colleague has suggested an equally apt name the "Barro Point," in honor of Robert Barro, who persistently downplays all the worries about government indebtedness.) The important point here is that financial markets do not await the education of Al Gore. Much of the instability currently observed on Wall Street is attributable to the chronically large debt and deficit.

bank. The Federal Reserve in its standby capacity as a buyer of government debt keeps the default-risk premium off Treasury bills. The potential for debt monetization allows federal indebtedness to rise unchecked to levels that would have been thought fanciful only a few administrations back and to remain high and rising into the foreseeable future.

The *potential* for debt monetization, critical for maintaining an uneasy balance between economic and political reality, gives rise to speculation about the timing and extent of *actual* debt monetization. At issue here are prospective movements, possibly dramatic ones, in the inflation rate, interest rates, and exchange rates, which in turn can have dramatic effects in securities markets. The attractiveness of securities can be differentially affected by the inflation that would result from actual debt monetization or by the movements in exchange rates that reflect the Treasury's greater or lesser reliance on foreign credit markets or by movements in interest rates brought about by changes in the Treasury's domestic borrowing. At some point, uncertainties about the timing and extent of debt monetization may dominate securities markets. In this case, the dense fog that drives our travelers off the economic highway and into the rest areas is not inherent in the market economy at all but rather is emitted by the Fed-backed Treasury.

It has become conventional wisdom in recent years that there is some link (though a poorly defined one) between chronically high budgetary deficits and instability of securities markets (Feldstein 1991, p. 8 and *passim*).⁹ And it is taken for granted that it is the Federal Reserve's responsibility to deal with that instability, providing on a timely basis whatever liquidity is demanded so as to keep the occasional sharp declines of security prices, the mini-crashes, from affecting the performance of the macroeconomy. The implicit objective, here, seems to be that of building a firewall between the financial sector and the real economy, allowing both to lead their separate lives. Ironically, it is largely the existence of the Federal Reserve—its potential for debt monetization—that enables the Treasury to borrow almost limitlessly, thus creating the very instability that is to be kept in check by that same Federal Reserve.

Short-term success of the Federal Reserve in maintaining the firewall between the financial and real economy depends critically on the wisdom and credibility of the Federal Reserve Chairman. Prospects for

⁹This is not to suggest that deficit-induced instabilities are the only macroeconomically significant ones. Instabilities emanating directly from the Federal Reserve and instabilities associated with perverse banking regulations and deposit-insurance pricing also have a claim on our attention. But, arguably, the deficit-induced instabilities deserve more attention than they have so far received. See Garrison (1993 and 1994).

longer-term success are problematic despite—or possibly because of—a sequence of short-term successes. Considerations of the nature of the Federal Reserve's role in the context of possibly volatile swings in the demand for liquidity suggest that continued central management of the economy's money supply does not offer the best hope for macroeconomic stability.

Suppose that the Treasury or the White House urges that the Federal Reserve become more accommodating and that the Federal Reserve Chairman expresses reluctance. Will the urgings get more intense? Will the reluctance fade? Speculation about the ultimate outcome will likely show up on Wall Street as an increased trading volume and an increased volatility of security prices. Traders who have little confidence in their own guesses about a possible change in the Federal Reserve's policy stance are likely to get out of the market. Securities prices weaken as these traders begin to liquidate, causing others to follow suit. Now, even those traders who do have guesses about the Federal Reserve begin guessing instead about the market's reaction to the uncertainty. The scramble to get out of the market manifests itself as a liquidity crisis. Abstracting from the fact that this instability has its origins in extramarket forces, we notice that the nature of this destabilizing speculation is exactly as described by Keynes (1936, pp. 153–58).

In dealing with the liquidity crisis, the Federal Reserve is immediately pitted against itself. It must expand the money supply to accommodate the increased demands for liquidity—and by the right amount in a timely fashion—while maintaining its credibility that it will not expand the money supply in response to the urgings from the White House. Fedwatchers are going to need some tea leaves here to determine just exactly what the Federal Reserve is and is not doing. Once again, the equation of exchange provides a sound basis for sorting it all out. M is being increased to offset a downward movement in V . If the increase in M is too little, the net downward movement in MV will result in the dreaded deflationary pressures which will impinge only partly on P and hence partly on Q . The Federal Reserve's firewall is too weak; the liquidity crisis spills over into the real economy. If the increase in M is too great, then, willy-nilly, the Federal Reserve is succumbing to the urgings of the executive branch to further accommodate the Treasury's borrowing. The extent of the accommodation, as measured by the net upward movement in MV , will in time show up as inflation, which was one of the prospective eventualities that underlay the speculation and the liquidity crisis.

As complicated and convoluted as this reckoning is, it constitutes only half of the story. Removal of the liquidity from the financial market in a timely manner is as important as its timely injection. The failure

of the Federal Reserve to move against an increasing V that characterizes the end of the liquidity crisis accommodates the Treasury and puts upward pressure on prices. Possibly more critical are the repercussions of the excess liquidity in international money markets. Overaccommodation can weaken the dollar. If this weakness is perceived as the beginning of a trend, the result may be heavy selling of dollars and dollar-denominated assets. Thus, a botched attempt to deal with a liquidity crisis can provoke a currency crisis. The Federal Reserve must somehow defend the real economy against this double-edged sword.¹⁰

The Federal Reserve may be allowed some scope for error. The same difficulties that it faces in knowing just what to do and just when to do it provide a shroud of uncertainty, even after the fact, about just what it did—and all the more so about what it intended to do. But several considerations combine to suggest that, in the long run, the Federal Reserve is playing against high odds.

First, right or wrong, the financial markets will make their moves ahead of the Federal Reserve. Changes in the demand for liquidity and in the strength of the dollar are determined as much if not more by anticipations about what the Federal Reserve will do rather than what it has just done. This consideration is what gives great importance to the Chairman's credibility. And his credibility reflects more than his personal integrity and his reputation for reasonableness and consistency. It is affected as well by the economic constraints he faces and political pressures he feels.

Second, each episode will have characteristics of its own depending upon all the contemporaneous political and economic factors. Goals of the Federal Reserve over and above the particular goal of accommodating the Treasury serve as a background against which expectations are formed. The Federal Reserve may be pursuing a strategy of gradual monetary ease to promote more rapid economic growth and then subsequently a strategy of gradual monetary tightening to stave off inflationary pressures. It may be possible to maintain credibility while increasing the monetary aggregates at an accelerated rate in the first episode but not possible while reversing the direction of change (relative to trend-line monetary growth) in the second episode.

Third, even if the Federal Reserve generally wins its battles against liquidity crises, it will find that winning streaks are difficult to maintain indefinitely. And perversely, a sequence of wins can create

¹⁰The idea that the Federal Reserve's attempt to deal with a domestic liquidity crisis may trigger an international currency crisis in this way is drawn from Lawrence Summers' discussion of the "Macroeconomic Consequences of Financial Crises" in Feldstein, 1991, pp. 153–56.

a false sense of confidence on Wall Street that the Federal Reserve is always willing and able to deal effectively with liquidity crises. Such confidence might cause investors to maintain a generally lower level of liquidity in their portfolios than if they had serious doubts about the streak continuing. Lower liquidity levels generally can mean more dramatic increases in the demand for liquidity during a crisis. For the Federal Reserve, the winning streak gets increasingly more difficult to maintain.

Temporarily and partially offsetting all these reasons for pessimism about prospects for enduring macroeconomic stability is the widespread belief that the particular individuals that have served as Federal Reserve Chairman are "geniuses." Dating from the summer of 1979 Paul Volcker and, after him, Alan Greenspan have risen to the occasion whenever crisis threatened. It may indeed be difficult to name two other individuals who could have done better. "Genius" might involve overstatement; "seasoned," "savvy," and "nimble," may be more to the point. But there is a greater point to be made here. Any governmental institution whose success depends critically on the caliber of the individual in charge cannot be considered a lasting source of stability for the economy. Even geniuses can err. More importantly, in some episodes where expectations turn pessimistic, the monetary ease needed to deal with a liquidity crisis may be more than enough to trigger a currency crisis. Foreign and domestic traders may leave no room for the Federal Reserve Chairman to exercise his genius. And further, geniuses are not necessarily succeeded by geniuses. Volcker served two four-year terms; Greenspan has begun his third term after an unsuspenseful reappointment in early 1996—which had the effect of postponing speculation for another four years. How much confidence will Wall Street have in Greenspan's turn-of-the-century successor? How much confidence will it have in the Federal Reserve in the days or weeks before a successor is named? Suppose that the Treasury is putting pressure on the Federal Reserve for greater accommodation—possibly because our trading partners are reluctant to extend our government further credit until they know who is replacing Greenspan. What would happen to the demand for liquidity? And how would the lame-duck Federal Reserve Chairman respond so as to maintain his own credibility as well as that of his successor-to-be-named-later? Even mildly cynical or pessimistic answers to these questions may suggest that this financial crisis may burn through the firewall. The real economy would then become an innocent victim as the central bank attempts its extramarket remedy to the extramarket malady in the form of a fiscally irresponsible Treasury.

Free Banking as Both Prevention and Cure

The merits of free banking during periods of economic tranquility are identified on the basis of the theory of competition as applied to the banking industry and the experience provided by a key episode in nineteenth-century Scotland and more recent episodes involving other countries with partially free banking. Assessing the likely performance of free banking during twentieth-century financial crises in the United States necessarily involves some speculative reasoning. It is worth noting, however, that the most prominent nineteenth-century defender of free banking argued his case partly on the basis of the ability of competitive forces to "meet an incipient panic freely and generously" (Bagehot 1873, p. 104).

Whatever the problems and limitations inherent in free banking or in market economies generally, competition that characterizes a decentralized system wins out over the policy edicts of a central bank largely because of the absence of key perversities that are inherent in central control. The advantages of decentralization are partly in the form of prevention, partly in the form of cure.

One of the major sources of today's macroeconomic instability, the excessive federal debt and deficits, would be largely absent under free banking. Without a central bank to keep the default-risk premium off Treasury bills, the federal government, like overextended firms and even fiscally irresponsible municipalities, would have had to deal with its fiscal imbalance long ago. Free banking, which is free not to monetize Treasury debt, could accomplish what debt-limitation ceilings, the Gramm-Rudman deficit-reduction plan, or even a balanced-budget amendment cannot accomplish. Without a chronically high and growing debt and the attendant speculation about the changing particulars of deficit accommodation, financial crises are less likely to occur.

If a financial crisis does occur, the provision of supernormal amounts of liquidity is forthcoming under free banking—but without the destabilizing speculation about the particular movements in the money supply. Questions about the "will" or "intent"—or "genius"—of the banking system as a whole simply do not arise. The supply of liquidity automatically follows demand upward during the financial crisis and downward as crisis conditions fade. It is true that some banks will be more responsive than others at meeting the occasional supernormal demands for liquidity. One of the beneficial aspects of competition in any sector of the economy is that those firms who best satisfy ever-changing demands prosper relative to their competition and are thus put in charge of greater resources. With free banking, then, success breeds success. A sequence of crises gives increased responsibility to those very banks that are best at dealing with crises.

To this point the advantages of free banking over central banking are set out in terms of the likelihood of our needing a firewall between the financial and real sectors of the economy and the ability of each banking institution actually to provide that firewall. The firewall metaphor, however, presumes that no systematic adjustments are needed in the real economy. But it is entirely possible and even likely that whatever caused the crisis conditions to prevail in the financial sector also caused non-financial resources to be misallocated. Simultaneous financial and real crises, as might be brought about by the ill-conceived policies of an administration bent on growing the economy, could not be quelled by a firewall. Quite to the contrary, the reallocation of resources in the economy would require a well-functioning market process, which includes movements in resources that reflect movements in securities prices. Here, the implicit monetary rule observed by free banking takes on a special significance. Movements on the lefthand side of the equation of exchange (an increasing V) are effectively countered; movements on the righthand side (in the p s and hence in P) are not. If the economy's real sector is out of balance, it needs help from the financial sector to regain its balance. In such circumstances, "firewall" is the wrong metaphor; "penny in the fusebox" would be more accurate. Only free banking can allow the financial sector to guide the real sector while preventing the demands for liquidity from degrading the market's performance.

A Summary View

In the Keynesian view, the central bank is a part of an extramarket remedy to a market malady. Investment markets are inherently unstable; government control of the economy's money supply is an important element in macroeconomic stabilization policy. The case against central banking—and for free banking—reverses the characterization of both remedy and malady. Free banking is a part of a market remedy to an extramarket malady. Even this stark reversal understates the case for free banking. It would remain valid even if we take the dramatic and chronic fiscal irresponsibility of the Treasury as given. Periodic crises that will inevitably occur in such a debt-ridden economic environment would be more ably countered by the market forces of free banking than by the policy moves of a central bank. But the extent of the Treasury's fiscal irresponsibility is itself dependent upon whether the Treasury can count on an accommodating central bank. Free banking limits the scope of this potential source of instability while at the same time enhancing the market's ability to deal with whatever instabilities that may persist.

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