

# Has Fractional-Reserve Banking Really Passed the Market Test?

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**T**he theory of free banking has experienced a great renaissance in recent years. The authors of many articles, books, and doctoral dissertations have made the case for the possibility and suitability of a purely private or competitive banking system. Virtually all these works were inspired by some variant of Austrian economics, which is no surprise, because Austrians tend to analyze institutional arrangements without any a priori bias in favor of government solutions. In any case, the new literature on free banking is one of the most important fruits of contemporary Austrian economics.<sup>1</sup>

Disagreements among these modern authors concern for the most part the economic and legal significance of fractional-reserve banking. More recently, two considerations have played an especially important role in the debate. Defenders of fractional-reserve banking stress that it is a legitimate market activity because, after all, nobody is coerced into accepting fractional-reserve money substitutes.<sup>2</sup> They also emphasize the fact that, today, virtually all Western banking systems operate on a fractional-reserve basis. It is therefore not farfetched to argue that this manifest practical success derives at least in part from the socially beneficial character of fractional

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1. See Hülsmann 2000a for an overview. See also Nataf 1982, 1987, 1991, and 1997. Among more recent writings, see Gentier 2000, 2001; Janson 2001; Salin 2001; and Terres 1999.

2. See, for example, Salin 2001, Selgin 2000, and Selgin and White 1996.

reserves, which have, so to speak, passed the “market test,” whereas the alternative institutional arrangement of 100 percent reserves for money titles has not.<sup>3</sup>

These arguments are important and powerful ones. My purpose in this article is to evaluate them through a reexamination of fractional-reserve banking in light of the role that product differentiation plays in the market process. I believe this approach is necessary if we are to come to grips with the point of view championed by a group of French economists who, though endorsing a rejection of Lawrence White’s and George Selgin’s economic case for fractional-reserve banking, uphold it on moral grounds as a *possibly* legitimate free-market business (see, in particular, Gentier 2001; Nataf 1997; Salin 1998, 2001). By contrast, White and Selgin’s position more or less implies that fractional reserves are *inherently* beneficial and legitimate. Several authors, including myself, have pointed out the shortcomings of this latter position, showing that it relies on fallacious economic principle and refuting it by a discussion of these principles. It now seems to be necessary to restate the case against fractional-reserve banking in a more nuanced way than it has been stated in previous writings. My goal is to examine the precise conditions under which fractional-reserve banking might be a legitimate free-market activity and what the exact nature and scope of this activity would be. My analysis demonstrates the fruitfulness of this focus on product differentiation.

I first describe several types of banking products that can be distinguished meaningfully on practical grounds. I discuss the extent to which fractional-reserve banking involves offering such a distinguishable product and what role this product is likely to play in the market process. Then I analyze an important case in which the market participants do not distinguish between two inherently different banking products—namely, money titles and fractional-reserve IOUs. I show that in this case Gresham’s Law becomes operative—the fractional-reserve IOUs crowd out the money titles. The monetary system turns into a fractional-reserve monetary system and becomes subject to recurrent liquidity crises (business cycles) that jeopardize the division of labor in the entire economy. I argue that these consequences result independent of whether their cause—namely, lack of product differentiation—is brought about accidentally or intentionally.

I then show that a good deal of evidence exists for the intentional suppression of product differentiation in the past. In many cases, fractional-reserve banking has relied on obscurity of language, which the bankers have promoted intentionally and fraudulently. I also argue that the differentiation between fractional-reserve IOUs and genuine money titles has been suppressed not only through fraud, but also through outright coercion. Today, money warehousing, along with the concomitant issue of money titles, is not a legally protected business in the Anglo-Saxon world. Fractional-reserve banking alone enjoys legal sanction. Its present-day dominance in deposit banking is therefore not a matter of having passed the market test, but of legal privilege and monopoly.

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3. See, for example, Salin 2001 and Selgin 2000, 99.

Finally, I briefly consider the impact of modern monetary institutions—in particular, central banks and paper money—on product differentiation in the banking industry. I argue that these institutions have prevented a clarification of the nature of fractional-reserve banking and that therefore they are best understood as instruments in an extended political cover-up.

### Some Types of Banking Products

My purpose in this section is not to give an exhaustive typology of banking products, but to argue that at least two product types differ categorically. Most financial instruments have, of course, an intermediate-type nature: financial engineers try to blend risks and benefits of the various purer instruments into new mixes that appeal to the customers.

A first type of banking is money warehousing. The bank stores money for other people and issues standardized *money titles*, such as banknotes, to the depositing customers, who can then use these banknotes in their daily transactions in lieu of money proper. Fundamentally, the bank acts here as a warehouse for money, and therefore its money titles are covered 100 percent.

A second type of free-market banking is credit banking. Here people invest their money in the bank for a certain length of time—for example, by granting a credit to the bank or by buying its bonds. The bank issues an “I owe you” (IOU) to the creditor, to whom it pays interest, and lends the money at a higher interest rate to a third person, thus earning an income from the interest-rate differential.

The crucial difference between these two types of products—money titles, on the one hand, and credit claims or IOUs, on the other—is that in the first case the depositor retains an exclusive legal claim to the money at any point in time, even though the money is physically stored in the warehouse. By contrast, in the second case the bank obtains a temporary exclusive legal claim to the money during the time of the credit, and only after this time does the creditor regain his exclusive legal claim to the money. Thus, the two types of banking differ categorically. A business either engages in money warehousing and sells money titles or engages in credit banking and sells IOUs. No third possibility exists. It makes no sense to say, for example, that both the banker and his customer have valid legal claims to the same sum of money at the same time, and it would be impossible for both to use the same sum of money at the same time (Hoppe, Hülsmann, and Block 1998).

Credit banking can be modified in countless ways to suit the particular needs of bank customers with tailor-made financial instruments. One modification that is important for our present purposes consists in making the IOUs more liquid. For example, a credit bank can *standardize* its IOUs to facilitate market penetration, as stock papers or bonds are standardized. In this case, liquidity comes at no expense of return. It is simply an additional feature of the IOU.

Conceivably the most efficacious way to increase the liquidity of IOUs is to promise their owners that the IOUs can be redeemed in cash on demand. This prom-

ise is made, for example, in the contemporary case of so-called time deposits. The return on the IOU is then lower than it otherwise might be because the banker keeps a bigger amount of cash to satisfy customers who have chosen this investment scheme. Also, the customers know that they have no guarantee that they can always get money by presenting their IOUs because this possibility is contingent on the amount of IOUs presented by other customers at the same time. After all, the banker merely gives his promise to “try his best” to redeem the IOU on demand. The very fact that some of the money represented by the IOU is lent to other customers prevents him from guaranteeing redemption—at least from guaranteeing it *in the same sense* in which it can be guaranteed for money titles.

### Free Banking under Product Differentiation

The case that can be made for “free-market fractional-reserve banking”—that is, for some sort of fractional-reserve banking that inherently does not violate private-property rights—relies entirely on the scenario I have just described. At least some defenders of fractional-reserve banking concur with this view. Pascal Salin asserts that his case for fractional-reserve banking relies on the following interpretation of a “deposit” contract: “When A ‘deposits’ one unit of gold in the bank, he is no more the owner of one unit of gold, but the owner of a piece of paper (a note) which, according to the bank promise, is redeemable at any time against one unit of gold. In other words, the bank becomes the legitimate owner of gold: There has been an exchange of one unit of gold against one unit of notes” (2001, 4). Salin’s scenario is indeed a possible one. It can so happen that a person who “deposits” a sum of money with his banker really means to buy an IOU plus redemption promise.

Indeed, it is not difficult to see that a free market might exist in IOUs plus redemption promise (IOUs + RP). Although these IOUs yield lower returns than other investments, they are more liquid; and although they are not always as liquid as money titles, they are costless or even promise some return. Their high liquidity makes them much more suitable than stock papers or bonds as a means of payment in daily transactions, even though they are not quite as liquid as money titles because they have a higher default risk. In short, IOUs + RP offer a particular combination of risks and benefits that the previously mentioned alternative banking products do not offer.

There is no reason to assume that all these IOUs + RP would be homogeneous. Each bank might offer a slightly different one, and, even apart from the question of how the banks themselves offer their IOUs + RP, customers might evaluate these IOUs differently, for example, because the coverage ratio might differ from one bank to another. For reasons I discuss later, however, bankers have an incentive to standardize and homogenize the various IOUs + RP.

Granted that a market for IOUs + RP is perfectly conceivable and that such a market probably would play some role in any fairly advanced monetary economy, how

large would this market be, and how important would it be in comparison with the markets for money titles and pure credit instruments? I cannot answer these questions in any general way because the answer depends on the particular circumstances of time and place and, ultimately, on the individual market participants' decisions. The only sure way to find out how large the market for IOUs + RP would be to create a truly free market by protecting private-property rights and then applying *laissez-faire*.

As far as the more limited phenomenon of *monetary* exchanges is concerned, however, we can be fairly certain that virtually all monetary exchanges would be made in cash or genuine money titles only. At any rate, we would have to expect this outcome in a market characterized by rigorous product differentiation. The reason is that *all* genuine money titles are valued at one equal rate with money proper (that is, all would be valued at par), whereas the various fractional-reserve IOUs + RP would be evaluated at different rates (all of which would be below par because of the higher default risk). The IOUs + RP of the various issuing banks would be valued differently because these banks have different risk exposures owing to their particular geographical situation and especially to the particular structure of their assets and liabilities. From this condition, it follows that, for all practical purposes, each individual IOU + RP would be a heterogeneous good. It therefore would be unsuitable as a medium of exchange in a wide network of indirect exchanges. Its use as a medium of exchange would be limited to a more or less narrow circle of experienced people who know the issuer's particular situation and who therefore are in a position to assess the risks of using this particular IOU + RP.

In short, in a free market with proper product differentiation, fractional-reserve banking would play virtually no monetary role. Salin believes that "among fractional-reserve systems, those with individual responsibility would probably be preferred to those with 'collective' responsibility, because people will have experimented that they are less inflationary" (2001, 24). I agree, but of course this superiority of individualized fractional-reserve banking would mean that fractional-reserve IOUs would play virtually no monetary role. The fractional-reserve IOUs + RP would be traded in rather narrow circles of merchants and bankers, whereas the overwhelming majority of the population would pay in cash or with genuine money titles. (This outcome is exactly what Henri Cernuschi anticipated when he said that he advocated the right of everyone to issue his own banknotes, so that no one would accept banknotes any more: "I believe that what is called freedom of banking would result in a total suppression of banknotes in France. I want to give everybody the right to issue banknotes so that nobody should take any banknotes any longer" [Cernuschi 1866, 55, qtd. in Mises 1998, 443]. Today, for the same reason, Philippe Nataf maintains Cernuschi's position.)

This result obtains, as previously stated, in a free market with proper product differentiation. Now, in the free market, strong forces ensure the maintenance of such product differentiation. In fact, virtually all market participants have at least some incentive to make and to maintain relevant distinctions between the various financial

products. Bank customers surely have an incentive to inform themselves well about the comparative risks and benefits of the various financial products. Some professional financial advisors work primarily to keep their customers well informed about the differences between different products. Even the producers themselves have at least some incentive to distinguish the essential features of their products from the essential features of competing products. Money warehouses, for example, have an incentive to stress the comparatively greater security of their money titles, even though they will be silent when it comes to talking about deposit fees. Similarly, free-market fractional-reserve bankers certainly have an interest in stressing the comparative inexpensiveness of their IOUs + RP, although they have no interest in stressing their comparatively higher default risk.

### **Banking Crises under Product Differentiation**

How would fractional-reserve banks' refusals to redeem their IOUs + RP play out in such a setting? Let us say the Brown Bank has in the past issued banknotes as IOUs + RP and now declares that it presently cannot redeem these notes. This action would not entail any legal problems because the Brown Bank had merely "promised to do its best" to redeem its notes on demand before the IOU comes to maturity. It never said that the money would be there, as in a money warehouse, waiting to be picked up by the owner of a money title. It therefore has not defaulted on the contract, which merely stipulates payment of the owed money at some not yet defined point in the future.<sup>4</sup>

What would be the economic implications of its refusal to redeem the banknotes? As a direct consequence, some goods cannot be sold at the prices at which they otherwise could have been sold. Certain customers of the Brown Bank cannot cash in their fractional-reserve notes. It follows that these persons cannot use the money that they expected to have after redemption to buy goods on the market. In order to be sold at all, these goods therefore have to be sold at lower prices, which might imply that some businesses will become unprofitable and go bankrupt.

It needs to be stressed, however, that in the setting we are considering right now, the negative repercussions of a refusal to redeem IOUs + RP remain within more or less narrow limits. This containment occurs for the following reasons.

First, one bank's refusal does not necessarily affect the ability of the other fractional-reserve banks to redeem their IOUs + RP. As I have pointed out, the various IOUs + RP circulating in the market are perceived as different goods, and therefore each of them is evaluated on its own terms. One bank's refusal does not warrant the expectation that other fractional-reserve banks might refuse to redeem their IOUs

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4. All present-day fractional-reserve banks do not specify a fixed maturity of their IOUs. This condition per se does not make fractional-reserve banking illegitimate; in fact, the contract between the banker and his customer might provide for contingent rules that determine maturity. One example is option clauses: here the banker can refuse to redeem the IOU only by invoking the agreed-on option clause; accordingly he then would have to fulfill his obligation at the latest after the time stipulated in the clause.

+ RP. In fact, it might very well be the case that the other banks redeem the IOUs + RP of the Brown Bank, even though at some higher discount rate than before. In this case, Brown's redemption refusal would not alter substantially the character of its IOUs + RP. They still would be very liquid IOUs, the only change being that their market price had dropped to reflect the diminished services of the issuer, Brown.

Second, regardless of how many banks refuse to redeem their IOUs + RP, the monetary system is hardly affected at all. As I have argued earlier, under thorough product differentiation, IOUs + RP would play no significant monetary role in the first place because they are (rightly) perceived as heterogeneous goods and command different prices. Virtually all monetary exchanges would be made with money proper or with genuine money titles. It follows that, even if the redemption refusal of one bank triggers a confidence crisis within the entire fractional-reserve sector and forces the other fractional-reserve issuers to refuse redemption, too, this refusal will have practically no effect on the monetary system. The quantity of money proper and of genuine money titles will be entirely unaffected by such a possible collapse of the fractional-reserve sector.

To sum up, because under a regime of thorough product differentiation fractional-reserve banking would play no significant monetary role, it would have no more harmful effects than any other kind of business venture. Any damage would accrue in the main to those who voluntarily had chosen exposure to the specific risks of fractional-reserve IOUs + RP.

### Free Banking under Homogenized Fractional Reserves

Fractional-reserve bankers have a powerful incentive to eradicate product differentiation in the fractional-reserve business or, at any rate, to diminish the public's awareness of the differences between their products. To the extent that fractional-reserve bankers can enlarge the circle of persons ready to accept their IOUs + RP in monetary exchanges, they increase the demand for these IOUs. It is difficult to bring about this increased acceptance as long as people perceive each of the different IOUs + RP as a heterogeneous good because in this case each of them commands a different set of market prices, which makes the IOU unsuitable as a medium of exchange. Therefore, the fractional-reserve bankers have an incentive to cartelize themselves in order to eradicate the differences between the various IOUs + RP that the individual banks issue and to offer some sort of *homogenized* IOU + RP.<sup>5</sup>

This scheme might be put into practice, for example, by each cartel member's commitment to redeem at par the IOUs + RP of all other members. Before the creation of the cartel, each bank would have redeemed only its own IOUs + RP at par,

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5. A formal cartel agreement or organization would not be strictly necessary to enforce the homogenization process. I am indebted to Pascal Salin for this point.

whereas it would have redeemed the other IOUs + RP at a discount, giving rise to different market prices for the different IOUs + RP. After the cartel agreement, each bank would redeem at par the IOUs + RP of all cartel members, and as a consequence the various IOUs + RP would command the same market price. In other words, the cartel agreement would bring an “IOU + RP price system” into being. The prices paid in terms of these homogenized IOUs might still be higher than prices paid in terms of money or money titles, but the homogenization nevertheless would increase the attractiveness of IOUs + RP for use as media of exchange.

Moreover, it would increase their attractiveness vastly for use as financial assets and thus as collateral for further credits. The cartel agreement would reduce greatly the risk that any given IOU + RP cannot be redeemed at par at any point in time. As a consequence, the cartel members would issue more IOUs + RP than previously, for example, in the form of more fiduciary credits (“credits out of thin air”), which they can back up with fractional-reserve IOUs + RP issued by other banks. Other banks in turn would use these additional IOUs + RP to back up their additional fractional-reserve issues, and so forth. The cartelization of the fractional-reserve banks therefore reinforces a zigzag process of fractional-reserve issues and credit expansion (Hülsmann 2000b, 431).

What impact will the homogenization of IOUs + RP have on monetary exchanges? Again, it is impossible to make any generally valid statements about the absolute quantitative impact of this homogenization process on the demand for IOUs + RP. All we can say is that homogenized fractional-reserve banknotes would be used more frequently as media of exchange than heterogeneous notes. We cannot say, however, to what precise extent the market participants would prefer using these homogeneous IOUs + RP to using money proper or genuine money titles. Both products have distinctive advantages and disadvantages, and only the market process can show, by its results, how the market participants weigh these advantages and disadvantages.

In any case, the one great disadvantage of fractional-reserve IOUs + RP as compared to money titles remains. Fractional-reserve banks are more likely than money warehouses to refuse redemption, and the cartelization and homogenization of fractional-reserve banking aggravates this problem in one important respect. As noted earlier, under strict product differentiation, one bank’s refusal to redeem its IOUs has no necessary consequences for the other banks. In a system of homogenized IOUs + RP, however, the situation differs. Here, one cartel member’s refusal to redeem its IOUs + RP invariably will set off bank runs on the other members. Then all members of the fractional-reserve banking cartel will have to refuse redemption, for two reasons.

First, the very purpose of the homogenization is to eradicate in the eyes of the public the differences between the various IOUs + RP. The cartel’s redemption policy is intended to dissuade the public from raising questions about the financial probity of individual issuers. Thus, when circumstances force one bank to refuse redemption of its IOUs, the public is likely to become suspicious about the continuing redeemability of other IOUs as well.

Second, and more important, the other banks keep the IOUs + RP of the refusing bank as collateral for their liabilities. One bank's refusal to redeem at par its IOUs on demand jeopardizes the term structure (and thus the risk structure) of the assets of all other banks holding these IOUs as supposedly highly liquid collateral. Now these other banks discover that they cannot rely on the IOUs of the refusing bank to back up the redemption promises they had given on their own IOUs. As a consequence, they quickly refuse redemption, too.

The homogenization of the IOUs + RP thus ensures that any one bank's redemption refusal spreads in a domino effect to the rest of the fractional-reserve banks. The domino effect is the scourge of the homogenized fractional-reserve banking cartel. Its mere threat operates as a deterrent against fractional-reserve bank customers' use of fractional-reserve IOUs and against fractional-reserve bankers' joining such a homogenizing cartel.

The possible occurrence of the domino effect cannot be eliminated by any technical or organizational means. Such measures do not strike at the root of the problem—namely, the fractional-reserve coverage of the redemption promise. The possibility always remains that one cartel member will not be able to honor its promises. As soon as this contingency occurs, the domino effect quickly destroys the entire cartel. In the course of time, fractional-reserve bankers have created various institutional devices—in particular, various institutional set-ups designed for the pooling of money reserves—to ensure that all cartel members always will be able to redeem their IOUs, but these measures do not and cannot eliminate the problem of undercoverage (Huerta de Soto 1998; Hülsmann 1996a, 1998).

Even if all members of the fractional-reserve banking cartel were to refuse redemption of their IOUs, this refusal would not necessarily jeopardize the monetary system, and it would not necessarily lead to an economic crisis, entailing the simultaneous bankruptcy of a great number of firms. The homogenization of IOUs + RP might increase the monetary role of these IOUs, but it would not lead to the displacement of money and of genuine money titles. The fractional-reserve cartel eliminates product differentiation only insofar as IOUs + RP are concerned; it does not touch the difference between IOUs + RP, on the one hand, and money and money titles, on the other hand. Therefore, to the extent that exchanges in the economy are based on the latter, a refusal of the fractional-reserve banks to honor their promises cannot entail a collapse of the monetary system.

Moreover, the fractional-reserve banks' refusal to redeem their notes is not, in the context we have considered so far, a breach of contract; it is not a case of bankruptcy. The banks were the owners of the money entrusted to them in exchange for their IOUs + RP, and thus they merely promised redemption in the sense that they would try their best to buy back their IOUs with money or money titles. (In distinct contrast, the money warehouses are not the owners of the money deposited with them, so in their case *redemption* of a money title has a completely different meaning—namely, a surrender of property from the guardian to the owner.) As a con-

sequence, the operations of the fractional-reserve banks are not disrupted in any way by their inability to redeem their notes. Likewise, this inability does not necessarily disrupt the operations of any other market participant. As long as the market participants are aware of the true nature of IOUs + RP—that is, as long as they are aware of the difference between these IOUs and genuine money titles—they can base their business calculations on money payments alone, discounting any payments made in IOUs + RP by a factor that reflects the uncertainty of redeeming these notes into money.

To sum up, even when a cartel of fractional-reserve banks homogenizes the various IOUs + RP these banks issue, these homogenized IOUs + RP are unlikely to displace money and genuine money titles. To the extent that the monetary system remains based in large part on the latter, any sudden irredeemability of fractional-reserve IOUs cannot bring about a meltdown of the monetary system or a general economic crisis.

### **Confusion of Money Titles and Fractional-Reserve IOUs**

So far our analysis of fractional-reserve banking has been based on the assumption that fractional-reserve banknotes and deposits (designated IOUs + RP) are, in the eyes of market participants, clearly distinguished from money and money titles. Let us now drop this assumption and consider a situation in which market participants are not aware of the difference between money and money titles, on the one hand, and fractional-reserve IOUs, on the other. Let us assume that market participants believe, for whatever reason, that the services of a money-title banknote are essentially the same as those of a fractional-reserve banknote, thereby confusing these two essentially different things. What consequences does this subjective view have?

As a preliminary, it should be stated clearly that this view is in fact erroneous. These two types of banknotes are not really the same thing ultimately. Rather, we have here one of the many instances in which the same word—here *banknote* or *deposit*—is used in two incompatible senses. To be sure, a money-title banknote and a fractional-reserve banknote might look exactly alike, or the form a bank customer had to fill out for a money-title deposit might look exactly like the form he had to fill out for a fractional-reserve deposit, but these similarities are superficial. Having considered this matter already in some detail, let us now examine the implications of the confusion.

Notice first that the confusion between money titles and fractional-reserve IOUs brings into operation what is commonly known as Gresham's Law. Imagine a potential bank customer who is offered two types of deposits with a bank. He believes that both deposits deliver exactly the same services. The only difference is that he has to pay for the first type of deposit, whereas does not have to pay—or even receives payment—for the second type of deposit. Clearly, he will choose not to be charitable to his banker and will subscribe to a deposit of the second type. When genuine money

titles and fractional-reserve IOUs are confused, therefore, the latter will drive the former out of the market.

Second, the economywide confusion about the nature of fractional-reserve IOUs sets in motion an error cycle that gives rise to a periodic recurrence of booms and busts (Hülsmann 1998). Let us consider this consequence in greater detail.

Money warehousing does not involve any particular risk that necessarily jeopardizes business success periodically. Here, as in other “normal” businesses, people have an undisturbed relationship to reality. (More precisely, in any normal business, people do not have a priori a disturbed relationship to reality. They can perceive real-world conditions correctly and in fact do so perceive them on a more or less regular basis. In the case of a confusion of money titles and IOUs + RP, however, such an undisturbed relationship is ruled out ipso facto.) In regard to money warehousing, people’s beliefs about what exists here and now correspond for the most part to what does exist in reality. By and large, they have a correct opinion about the existence of factors determining their success. In particular, they tend to have a correct opinion about the things they own right now and can put to use for future benefits. If they own a money title over twenty ounces of gold, they believe that these twenty ounces exist, and in a genuine money warehouse they do exist. Uncertainty, ever the companion of human action, clouds not so much presently existing things as it hides future events, especially customers’ future decisions. Yet this condition is not peculiar to deposit banking; it applies just as much to other types of banking or to businesses in other fields of industry.

The same holds true for the issue of IOUs + RP. These bankers and their customers by and large also have correct views about what they own and what they owe here and now. Most important, the customers know that they cannot count on having the money corresponding to their IOUs always ready at hand. They count only on the money and money titles in their possession because only these items are part of their property here and now.

In distinct contrast, the view that fractional-reserve IOUs provide exactly the same services as genuine money titles distorts reality. It is not true and it cannot be true in any circumstances that such IOUs represent a corresponding amount of money in the banks ready to be picked up at any time. By the very nature of fractional-reserve banking, more IOUs exist in circulation than money proper. The economywide confusion of such IOUs with genuine money titles thus entails a systematic dissociation between the real world and what market participants believe the real world to be. Each market participant believes that a certain amount of money is readily available for him here and now, but this amount of money does not exist in the aggregate. Hence, in this sort of fractional-reserve banking, there is necessarily a discrepancy between what people believe exists and what really exists. In this sense, such fractional-reserve systems are in a permanent state of disequilibrium.

As long as the banks can satisfy redemption demands, this systematic error of the market participants remains unexposed. Only when a bank is faced with more redemption demands than it can satisfy out of its reserves does the fraud become obvi-

ous. Because of the connectedness of all businesses, the bankruptcy of one bank commonly triggers a domino-effect run on all other fractional-reserve banks, spelling ruin for the entire banking system.

Advocates of fractional-reserve banking have questioned the inner necessity of these events. They have argued that an optimal quantity of fractional-reserve notes exists beyond which the risk of further issues more than offsets the possible profits for the bank (White 1989, 1999). In the case we are now considering, however—the case of a confusion between IOUs and money titles—this argument is clearly fallacious (Hülsmann 1996a, 1998, 2000b).

First, entrepreneurs face not only calculable risk, but incalculable uncertainty (Knight 1921; Mises 1998, chap. 6). Bank customers' decision to stage a run is to some degree tainted with uncertainty, and therefore it cannot be incorporated into a clean-cut cost-benefit calculus. The banker has no way of knowing how far he can go with further note issues. He has to find out by trial and error—that is, he has to speculate on the likelihood of redemption demands in the future. Yet in this speculation he can be dead wrong.

Second, even if it were possible to calculate something such as a probability distribution of redemption demands, a cost-benefit analysis still would be impossible because in the case of a confusion between IOUs and money titles it is impossible to give a clear-cut account of (opportunity) costs. The fundamental fact is that one can define the costs of a decision only if the decision maker's property is given because any decision concerns the use of given property, and the opportunity cost of a decision is the value of the next-best use of the property in question. Now, if IOUs are held to be the same thing as money titles, then it is not at all clear what belongs to whom because multiple claims exist for any given quantity of money at any point in time. As a consequence, the bankers, insofar as they rely in their decisions on a money calculus at all, systematically underestimate the cost of their decisions.

Third, the bankers, finding themselves under the pressure of competition, are pushed to explore the very limits of their note issues. The more rigorous the competition, the quicker they will reach the point at which any further note issue or any unforeseen event will trigger the bankruptcy of the weakest bank first and then of the rest of the rotten industry.

To sum up, the economywide confusion between money titles and fractional-reserve IOUs by its very nature produces business cycles and their characteristic features: money-title expansion in the boom phases and sudden contractions of the use of fractional-reserve money titles in the bust phases.

### **Fraudulent Fractional-Reserve Banking**

The foregoing analysis shows the a priori consequences of a confusion between money titles and fractional-reserve IOUs. For the veracity of our analysis, it is irrele-

vant whether there is in fact or has been at some time in the past a confusion of this sort. Also irrelevant is why such a confusion came about in the first place.

So far we have been able to neglect these questions and even had to neglect them because they concern not theoretical issues, but historical facts. Whether money titles and fractional-reserve IOUs are confused in the present-day United States, or whether they were confused in sixteenth-century Florence or in eighteenth-century Hamburg or at other times and places—these are matters of historical fact. As far as the present-day United States is concerned, I am inclined to believe that the confusion is a matter of fact, the best proof being certain American advocates of fractional-reserve banking themselves, who maintain that only gradations of difference exist between money, money titles, and fractional-reserve IOUs (Selgin 1988, 1996; White 1989, 1995, 1999). Similarly, if such inferences from monetary experts' opinions have any value at all, then France does not seem to have fallen prey to the confusion that is here in question. Salin, despite all his sympathies with fractional-reserve banking, clearly states that in this system “money-holders do know that they only have a conditional title” (2001, 21).

In any case, the existence of the confusion we were considering here, as well as the reason why the confusion arose in those cases where it did arise, can be ascertained only by concrete historical case studies. This question has special interest from a moral and legal point of view because it brings into play the issue of fraudulent fractional-reserve banking. Given that fractional-reserve bankers are among those who stand to profit from a confusion of money titles and fractional-reserve IOUs, it is not far-fetched to suppose that at least some of them have fallen prey occasionally to the temptation of promoting such confusion. If a fractional-reserve banker knowingly misrepresents his IOUs as conveying all the benefits that only money titles can convey, then clearly this misrepresentation would amount to fraud.

A cursory examination of the available evidence suggests that cases of fraudulent fractional-reserve banking historically have been rather widespread. Again and again fractional-reserve banks have done everything possible to obfuscate the difference between genuine (that is, 100 percent-covered) money titles and imperfectly redeemable IOUs. They have chosen to clothe their IOUs in the same outer garments (account entries, printed and numbered paper slips, and so forth) as genuine money titles, and they have given their IOUs names such as *banknote* and *check* that have made them indistinguishable from money titles. Through such semantic trickery they have induced market participants to adopt a particular interpretation of fractional-reserve “banknotes” and “checks”—namely, that they are genuine titles and that the holder of such titles owns money stored in the issuing bank. However, with regard to professional economists' justification of fractional-reserve banking or lawyers and judges' vindication of this business scheme in court, the interpretation of the same “banknotes” and “checks” has been quite different: economists use terms such as *investment* and *credit* to describe money in a fractional-reserve account, and the

lawyers claim that the bank owns the money, as it owns any money that it receives as an investment.<sup>6</sup>

The history of banking is replete with such cases, wherein semantic trickery from the side of fractional-reserve bankers prompted upset customers to file lawsuits against their banks. Even though the legal records are clothed in the language of their times, the question of whether a certain sum of money was given to the banker for safe keeping or as an investment runs like a red thread through the history of banking.

For example, in the 1342 case *Isabetta Querini v. Bank of Marione Vendelino*, the question was whether Mrs. Querini left her money in the bank as a “regular deposit” (for safe keeping) or as an “irregular deposit” (as an investment). Querini claimed that the former was the case, whereas the bank argued that it received the money as an investment (Mueller 1997, 11–12; on similar cases in the Middle Ages, see Huerta de Soto 1998, chap. 2).

Similarly, in a grand résumé of the history of banking, Knut Wicksell (1935) surmises that because bank customers would not have wanted their deposits lent out to other people, fractional-reserve bankers had to keep such lending a secret:

So long, however, as people continued to believe that the existence of money in the banks was a necessary condition of the convertibility of the deposit certificates, these loans had to remain a profound secret. If they were discovered the bank lost the confidence of the public and was ruined, especially if the discovery was made at a time when the Government was not in a position to repay the advances. (1935, 75)

Wicksell, who endorses fractional-reserve banking, goes on to discuss the case of the Bank of Amsterdam. This bank produced two kinds of financial instruments: *receipts* (that is, genuine money titles that the bank issued “against deposits of metallic money or bullion”) and *bank money* (that is, liquid IOUs that “certified a credit at the bank” but that the public believed to be genuine money titles because the bank accepted them as cash for any payments). The Bank of Amsterdam did not care to advertise these significant differences between receipts and bank money but rather sought to maintain the public’s erroneous perception that both had the same legal status—obviously, to stimulate the issue of bank money:

The history of the Amsterdam bank is remarkable in this respect. It was founded in 1609 and was intended from the beginning to be a pure giro bank, without the right to lend any of its deposits. Gradually, however, the curious custom mentioned by Adam Smith arose, by which the bank issued against deposits of metallic money or bullion receipts on the production of

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6. See the statements by pro-fractional-reserve lawyers quoted in Rothbard 1983, 93–94.

which the money could be recovered, and documents which certified a credit at the bank, *bank money* so-called, which could be used in all payments to the bank and consequently circulated between individuals as a means of payment throughout the country. The receipts, again, had to be renewed every six months and the prescribed commission paid, otherwise they lapsed and the money deposited became the property of the bank. The “bank money,” on the other hand, retained its character as a bank liability and therefore continued to circulate throughout the country. Consequently many merchants sold their deposit receipts or let them lapse and carried on equally well with “bank money” alone. Only when payment in metal became necessary, e.g. to foreign countries, were they obliged to procure valid deposit receipts, which could easily be obtained on the market at prices varying with demand and supply. The bank, again, regarded the lapsed money as its own property and considered itself free to lend it without restriction. But in this way a corresponding amount of “bank money” was converted into mere credit notes without any metallic cover. It appears to have been the obscurity in this arrangement—especially uncertainty as to the bank’s obligation to redeem in regard to the amount of “bank money” in excess of the deposit receipts still valid—rather than real insolvency which brought about its downfall in 1795, when in consequence of political events its status became known for the first time. (Wicksell 1935, 75–76)

These examples suffice to illustrate that many fractional-reserve bankers have engaged in fraudulent practices.<sup>7</sup> In their contacts with actual or potential customers, such bankers have insinuated that the titles they issue do not differ substantially from genuine money titles. They also intentionally have avoided having their products assimilated to any form of credit or investment because such assimilation would imply that the title owner had given up the right to use his money for a certain length of time. Yet, in the settlement of legal disputes, they have adopted the opposite point of view and insisted that “what was really meant” by a deposit in their bank was that the bank received a credit from a customer.

The use of language per se is not at issue here. I am not claiming that words such as *banknote* or *deposit* should be used in a certain sense. Rather, the point is that a large number of fractional-reserve banks, to say the least, have used such words intentionally in two mutually exclusive senses and that this usage has concealed underlying real differences. These banks’ customers were led to believe that they had bought a financial product of type A, but in legal settlements they were told that they actually had bought a product of type B.

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7. The most exhaustive treatment of such cases appears in Huerta de Soto 1998, chap. 2. An English translation is forthcoming.

It is conceivable, of course, that in many other cases fractional-reserve banking was not fraudulent because originally no awareness existed of the difference between a liquid IOU and a money title. Such intellectual confusion might have stemmed from ambiguities of language, in particular from ambiguities of the word *promise*. Thus, the traditional inscription of banknotes in the era of commodity money read something like “I *promise* to pay to the bearer of this note the amount of X ounces of gold.” If the word *promise* were taken to denote the mere intention to do something, then the “banknote” would be no money title at all, and the issuing bank might be a legitimate free-market financial institution issuing IOUs + RP. A banker can intend to redeem a note and announce that intention without thereby bringing any claim against himself into existence. By contrast, if the word *promise* on a banknote denotes the action by which a property right (in a definite quantity of money stored in the bank) is brought into existence, then the banknote is a money title, even though the money to which it gives claim does not exist. Issuing such a title involves a practical impossibility, for its very nature implies that more money titles always exist than corresponding money.<sup>8</sup>

### **The Modern Monopoly of Fractional-Reserve Banking**

Ambiguities of language are an inevitable aspect of human social life, but normally they are temporary. Eventually people become aware of substantial differences hidden by identical expressions, especially if those differences have as much pecuniary impact as they have in banking. Therefore, we should expect that these issues will come to light (for example, in lawsuits) sooner or later and that henceforth either legal provisions or customer pressures will oblige the bankers always to clarify which kind of product they are offering.

The ultimate driving force in this process of clarification is the bank customers because the fractional-reserve bankers themselves have no interest in pointing out that their IOUs differ from genuine money titles, yet in times of normal business the customers have no interest in the discussion of the imperfect nature of their fractional-reserve money titles. Their position as buyers of a commodity X would be impaired if they had to confess that the money title they are offering as payment for X was not a perfect substitute for the money that the title purports to represent. They would have to fear that the sellers of X require higher prices to compensate themselves for the higher risk involved in accepting a fractional-reserve title.

Hence, only the repeated experience of bank runs and of loss of their deposits is likely to convince bank customers that their money might be safer in a 100 percent bank. This conviction in turn might induce them to force their banks to disclose precisely which type of financial instrument was on offer and to act accordingly. In the

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8. According to Rothbard (1998), the word *promise* denotes a mere intention to do something, and he argues that therefore a promise cannot be the foundation of any enforceable claim. For Reinach (1989), the word *promise* describes the very social act that brings claims and obligations into existence.

history of banking, however, at least as far as the Anglo-Saxon countries are concerned, this sort of learning by bad experiences was interrupted by several disastrous nineteenth-century court decisions, which established a de facto monopoly for fractional-reserve banking.

In the first half of the nineteenth century, several customers of British banks filed lawsuits against their banks, claiming that by “depositing” certain sums of money they intended to entrust the banker with the safekeeping of their property. They stressed that they did not intend to invest these sums in the bank, nor did they wish to authorize the bankers to use the money as they saw fit and hence did not consent to bearing the risk of losing a part or all of their investment. The bankers held that the opposite was true. They claimed that the money “deposited” with them was an investment and that by making this investment the customers consented to bearing the risk of eventual irredeemability. Now, in accordance with the principles of the common law, the British judges had to decide whether, in the cases under consideration, the money the banks had received constituted a bailment (that is, a warehouse deposit) or an investment. In all cases, they decided that the banks had received the money as an investment.

Whether these decisions were right or wrong we cannot tell. The question of whether a certain sum of money was received for safe keeping or as an investment certainly cannot be answered on a priori grounds but must be examined in each individual case. Perhaps in all the cases decided by the British judges, the money “deposited” in the banks was in fact intended as an investment.

From the point of view of economic theory, however, the judges committed a fateful error. Indeed, they justified their decisions not by using the facts of the particular cases under consideration, but by evoking a completely unwarranted and fallacious a priori principle. They argued that all sums of money received by banks are necessarily investments. In the words of Lord Cottenham, judge of the classic case *Foley v. Hill and Others* (1848):

Money, when paid into a bank, ceases altogether to be the money of the principal; it is then the money of the banker, who is bound to an equivalent by paying a similar sum to that deposited when he is asked for it. . . . The money placed in the custody of a banker is, to all intents and purposes, the money of the banker, to do with it as he pleases; he is guilty of no breach of trust in employing it; he is not answerable to the principal if he puts it in jeopardy, if he engages in a hazardous speculation; he is not bound to keep it or deal with it as the property of his principal; but he is, of course, answerable for the amount, because he has contracted. (qtd. in Rothbard 1983, 94, who quotes from Holden 1970, 32)

This principle denies the very possibility of banking in the sense of money warehousing. Yet because money warehousing obviously is possible, Lord Cottenham’s judgment is tantamount to denying legal sanction to it. Ever since then, money ware-

housing has lacked legal protection in the Anglo-Saxon world, and the variety of banking products has been reduced accordingly.<sup>9</sup> Even if a banker had offered a money warehousing service, his customers could not have enforced their claims if later he had chosen to break the terms of the contract and invest the money entrusted to him as a bailment. Clearly, then, the judgment was a grave intervention in the operation of the banking market and gave *carte blanche* for the future violation of private-property rights. Its ultimate effect was to give fractional-reserve banking a *de facto* monopoly.<sup>10</sup>

As a by-product of this monopoly, a clarifying distinction never arose between genuine money titles, fake (fractional-reserve) money titles, and IOUs + RP. Any knowledge of these differences that survived in the intuitions of the common man was destined to be stamped out when, some time later, Western states imposed the monetary institutions that would shape the modern world: the central-bank system and the ensuing transformation of gold titles into paper currencies.

Central banks protect the banking establishment by pumping additional central-bank notes (in a commodity money system) or paper money into the economy whenever bank runs threaten the fractional-reserve banks (Rothbard 1983, 1990). These inflationary measures, which save the banks at the expense of all other market participants, make the system display an artificial stability. Most important, central banks by their very existence attract the public's attention in times of financial crises. The public no longer perceives business cycles and breakdowns of the entire banking system as upshots of the fractional-reserve principle run amok under the protection of the law, but as a "macroeconomic" problem requiring action by the central-bank managers.

This confusion has been exacerbated by the state-sponsored institution of paper money, which came into being when national central banks, with the support of their governments, refused to redeem the gold titles they had issued. This breach of contract transformed the former gold titles into paper currency, a transformation that fundamentally has modified the nature of central banks and their notes. Government decrees have given the national central banks the privilege to deny note redemption to their customers and have protected these irredeemable central-bank notes by legal-tender

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9. As Huerta de Soto (1998) shows, no such blunder was committed by the jurisdiction on the European continent, which was steeped in the tradition of the written Roman law. Significantly, Roman law prohibited fractional-reserve banking, and continental judges frequently outlawed it in the entire period stretching from antiquity to the nineteenth century. Then all of Europe came increasingly under the sway of Anglo-Saxon monetary thought and monetary institutions, with the ominous result that fractional-reserve banking and central banking established themselves on the continent. One important aspect of Huerta de Soto's contribution is that his history of banking explodes the "hypothetical history" of banking institutions that has become fashionable under the impact of works by Lawrence H. White and George Selgin (see, for example, Selgin 1988, chap. 1). In the latter account, fractional-reserve banking appears as the crowning event in the evolution of banking institutions. By contrast, Huerta de Soto shows that in actual history fractional-reserve banking emerged again and again as a fraudulent degeneration of deposit banking that was repressed successfully at most times and places on the European continent and that started to dominate deposit banking only as a consequence of judicial error in comparatively recent times.

10. Rothbard, quoted in the first passage, fails to notice this implication, but the point is critically important. Clearly, the present-day dominance of fractional-reserve banking has resulted not from the greater benefits of this type of business, but from its legal privilege.

laws, which suppressed all alternatives so that the central-bank notes stayed in circulation. These notes no longer were money titles because they could not be redeemed against anything else. They had become independent goods—paper money. Similarly, the central banks were no longer banks at all; they had become money producers.<sup>11</sup>

This radical institutional innovation further protected the fractional-reserve banking system. Before the institution of paper money, the specter of bank runs limited monetary expansion, but with a paper-money producer in place to back them, the banks could launch a virtually unlimited expansion. From now on, the only (ultimate) limit was the threat of hyperinflation. Unfortunately, this dramatic transformation has never penetrated the public's consciousness. The reason is patent: both the central-bank notes and the central bank itself continued to exist physically without any change of their appearance (an interesting case of what might be called "economic transubstantiation").

It is therefore hardly surprising that the government-led transformation of central-bank money titles into paper money not only has prevented the self-healing forces of society from turning down fractional-reserve banking schemes, but also has spelled further confusion among financial analysts and monetary economists. Indeed, it has corrupted the very language used to describe monetary institutions because it has blurred the differences between money and money titles as well as between money producers and banks. Today, advocates of fractional-reserve banking, such as White (1999) and Selgin (2000), deny that these differences exist at all. In their eyes, banks produce money because money titles *are* money—by virtue of the mere fact that people own them for purposes of indirect exchange! This view is absurd, just as it would be absurd to say that dreaming of drinking a cool beer is the same thing as actually drinking a cool beer because the dream gives someone the same sensations.

### The Economics of Political Cover-up

Government was one of the most important driving forces for the establishment of fractional-reserve banking. Government's nature is to live parasitically off the property of other people (Hoppe 1989, 1993; Rothbard 1978). Because it coerces its subjects into supporting it, it does not act responsibly, constantly adjusting its expenses to available income, but instead always relies on the possibility of squeezing a little more out of the taxpayer's pockets. Because of this unique source of income, government always has been a preferred debtor, receiving additional credits at levels of indebtedness that would exclude further credits for any private individual or group. Not surprisingly, therefore, in all of recorded history, government households have been a disastrous mess of rampant deficits. Especially in modern, democratic times, government income is never sufficient to satisfy the whims and greed of those who happen to be for a couple of years at the helm of the state (Levy and Feigenbaum 1987). When governments

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11. For the implications emanating from "central-bank banks," which issue titles for money that they do not themselves produce, as compared to "central-bank paper-money producers," see Hülsmann 1996b.

try to cover these deficits by increased taxation, a direct confrontation with their subjects is unavoidable. Because no government likes to provoke such resistance, governments again and again have sought to cover their deficits by fraudulent means. In this endeavor, inflation traditionally has been one of the favorite means of cover-up (Friedman 1992, 207–13; Rothbard 1990; Sennholz 1987).

One of the easiest ways to cheat on money is to print and issue more money titles than money proper exists, which explains why kings have favored the establishment of banks issuing false money titles in order to spur “development”—that is, to channel economic development into those locations and into those forms of industry and technology the ruler favors. Kings have granted monopoly privileges to submissive bankers in exchange for the promise to support the court with credits created out of nothing—or, more precisely, created by printing titles for money that does not exist—and they have enacted legal-tender laws to keep false money titles in circulation whenever the public becomes aware that these notes, despite all appearances, are not genuine money titles.

The relationship between government and banking, however, is not a one-sided affair. It was not always a preexisting government that transformed honest bankers into frauds issuing “money titles” on a fractional-reserve basis. Often it was the bankers who succumbed to the temptation of a fraudulent business practice with obvious material advantages for the perpetrator. Looking back on the history of fractional-reserve banking, Mises stressed that “Banknotes became fiduciary media within the operation of the unhampered market economy. The begetter of credit expansion was the banker, not the authority” (1998, 788). Only later did these bankers seek a closer cooperation with government to protect their interests against honest competitors and against agitation regarding false money titles. This cooperation then invigorated the government, extending its size and scope of activities beyond what they would have been without fraudulent banking. In city-states and other communities with plebiscitarian or democratic forms of government, which facilitate political takeovers, the bankers themselves took control of the government or even set up their own.<sup>12</sup> Whether the bankers reinforced cooperation with government, took it over, or set up their own, the same basic scheme of political cover-up was used: the initial violation of property rights (fraudulent banking) was covered up with increased political involvement and cooperation.

In short, fraudulent banking is not necessarily the result of government activity, but sometimes is an instance of the spontaneous emergence or reinforcement of government (Hülsmann 1998, 16).<sup>13</sup> The banker turned fraud who issues the first

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12. This tendency seems to be very strong in the United States. See, for example, Hammond 1957; Rothbard 1994, 1995; and Tabarrok 1998. Another example is republican Florence, which the Medici family came to dominate in the fifteenth and sixteenth centuries. The house of Medici had purely commercial origins in the Medici merchant company, which “after the manner of these organisations from the time of their origin represented a combination of trade and banking” (Schevill 1949, 58). See also de Roover 1963 and Kent 1978, 71 ff.

13. For a more general discussion of this human-fall theory of the emergence of government and a comparison with the traditional conquest theory, see Hoppe 1998.

uncovered money title is in fact a “political entrepreneur.”<sup>14</sup> He “tests the market” to discover how far he can go in violating property rights without encountering resistance. Each uncovered ticket that he can bring into circulation, each new institution that fosters the continuing circulation of uncovered tickets, is a further political discovery.

A most spectacular political discovery was the invention and imposition of monopoly central banks as lenders of last resort. Their mission was to save fractional-reserve bankers in times of “liquidity crises”—that is, to cover up the inherent ruin of their scheme whenever it was exposed in the hard light of economic reality. Yet because the original central banks themselves operated on a fractional-reserve basis, they could provide no permanent cover-up but were ever more threatened with bankruptcy the longer they stayed in existence. Therefore, the political cover-up of fractional-reserve banking has benefited immensely from a further political discovery—namely, the central bank’s privilege of violating its obligation to redeem the money titles it has issued (Hülsmann 2000c; Rothbard 1990).

Thus, all major monetary institutions of the nineteenth and twentieth centuries can be understood as elements in an extended political cover-up to save an inherently fraudulent and bankrupt business scheme from a fate that it richly deserves.

## Conclusion

It is important to stress the differences between 100 percent-covered money titles, liquid IOUs, and fractional-reserve “money titles” because the obfuscation of these differences has been a crucial element in the age-old struggle to preserve and expand fractional-reserve banking. This obfuscation has reached the point of outlawing genuine money titles and of corrupting the language of monetary economists and financial analysts, and it explains the longevity of fractional-reserve banking and its manifold and close ties to government. It also explains why fractional-reserve banking by its very nature involves economic disequilibrium and therefore periodically brings about booms and busts.

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14. The essential difference between political entrepreneurship and market entrepreneurship is that the latter promotes ways of cooperation that are profitable for all parties involved, whereas the former promotes some parties’ cooperation to steal, plunder, rob, rape, and kill others. This essential difference goes unnoticed in the public-choice literature (see the foundational text by Buchanan and Tullock 1962, 19, 23–30). For criticisms of this aspect of the public-choice approach, see Block and DiLorenzo 2000; Hoppe 1993, chap. 1; and Rothbard 1997.

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**Acknowledgments** I thank Nikolay Gertchev, Pascal Salin, Nathalie Janson, and an anonymous referee for comments. This essay was first presented as a paper at a colloquium on fractional-reserve banking organized by the Centre de recherche J. B. Say at the University of Paris–Dauphine on April 5, 2002. A previous version also was presented as “Government, Fractional-Reserve Banking, and Financial Crises” at the Twenty-fifth Annual Conference of the Association of Private Enterprise Education, April 2–4, 2000, Las Vegas, Nevada. I thank the Alexander von Humboldt Foundation and the Ludwig von Mises Institute for financial support.