CONTROVERSY

Accounting for Fractional-Reserve Banknotes and Deposits—or, What's Twenty Quid to the Bloody Midland Bank?

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For centuries—even before government guarantees came on the scene—Western payment systems predominantly have used banknotes and demand deposits backed by fractional rather that 100 percent reserves. Explaining the long historical prevalence of fractional-reserve instruments poses a difficult challenge to those who believe that such products necessarily or usually represent a fraud.[1] A business practice is fraudulent, of course, only if someone is duped. The challenge then is to explain how the public was duped continually for centuries. How on earth did the bankers keep the word from getting out? The challenge is especially great when we notice that *if* an informed public really had wanted to patronize money

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1. The fraud position in the recent literature stems from Rothbard 1962, 1983, and 1990. Rothbard's followers on the question include Block 1988; Hoppe 1994; Huerta de Soto 1995, 1998; Hülsmann 1996, 2000, and the article in this issue; and Hoppe, Hülsmann, and Block 1998. Rothbard held that the fractional-reserve banker defrauds his customer; a recent variant holds that the banker and his customer conspire to defraud third parties.

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warehouses, then money-warehousing entrepreneurs would have profited by getting the word out. As George Selgin and I wrote in 1996,

> competition will beat down the returns to capital invested in fractional-reserve banking until the marginal bank is earning only the normal rate of return. In this situation, were it really true that most depositors are willing to forego the interest they are receiving (and instead pay storage fees) in order to have the security of a 100-percent-reserve bank—but simply don't realize that their banks aren't holding 100 percent reserves—then any banker (who *does* know what the banks are up to, after all), possessing even an ounce of entrepreneurial insight, would see an easy way to grasp pure profit. All the banker has to do is to offer credible 100-percent-reserve accounts, while alerting the public to the other bankers' practices, and depositors will come flocking in. (97–98)

In his article "Has Fractional-Reserve Banking Really Passed the Market Test?" in this issue of *The Independent Review,* Jörg Guido Hülsmann tries to meet this challenge. In his view, fractional-reserve banking has not really "passed the market test." He offers an imaginative story about how the bankers managed to keep the public duped for centuries: they "relied on obscurity of language, which the bankers have promoted intentionally and fraudulently," and they acted as a "cartel" in accepting and redeeming one another's notes and checks. Their customers, when trying to pay with fractional-reserve banknotes and checks, became virtual co-conspirators in hiding the differences. Money warehousers could not profit by exposing the differences because bank lawyers persuaded the courts to render decisions that effectively banned the business of money warehousing. Thus, fractional-reserve banking prevailed over warehouse banking not because of the workings of a substantially free market, but because of government intervention in the market and the abridgement of freedom of contract.

This story, fortunately or unfortunately, is a fictional tale that does not fit the details or the broad patterns of banking history. Some ambiguities were unavoidable when deposit banking was a new business, but the distinctions needed for clear deposit contracts were established early on. The banknotes and demand deposits popular historically were in fact clearly distinct from warehouse certificates. Warehouse certificates were not a viable type of circulating currency note; in fact, w*arehouse certificates are inherently unsuited to circulate and are not known ever to have circulated historically.* Banks that agreed to accept one another's liabilities at par were not acting as a "cartel" or conspiring against their customers. They did not adopt the more cartel-like policies (holding one another's notes as reserves) that Hülsmann imagines. Court decisions that affirmed fractional-reserve banking contracts did not ban money-warehousing contracts.

Fractional-reserve banking did not need fraud or coercion to prevail over warehouse banking. It prevailed by offering customers a better deal. Fractional-reserve banking really has passed the market test. Government interventions were later responsible for central banks and for taxpayer-backed deposit guarantees (on these

issues there is no quarrel between Hülsmann and the "free bankers"), but they were not responsible for the historical prevalence of fractional-reserve banking.

Fiduciary Media Were Differentiated from Money-Warehouse Certificates

Hülsmann appears at first to be open to the possibility of nonfraudulent fractional-reserve banking, indicating that it might legitimately play some role in the market economy if fractional-reserve banknotes were clearly differentiated from money warehouse certificates. By Hülsmann's criteria, however, clearly differentiating fractional-reserve banknotes amounts to ruling out of bounds the kind of banknote contract that actually has been popular historically and admitting only an odd kind of fractional-reserve contract. His belief that widely used historical banknotes were not in fact clearly differentiated from "100 percent money certificates" seems to rest ultimately on his a priori conviction that the banknotes *would not and could not* have been popular if people had realized what they were getting.

Hülsmann begins by describing two "inherently different" ideal-type banking products: "money titles and fractional-reserve IOUs." Although he allows that "most financial instruments have, of course, an intermediate-type nature," he does not allow that demandable debt—the common contractual form historically taken by demand deposits and banknotes—is a blend of the two types. Thus, the spectrum between his two ideal types excludes major real-world banking products.

In the first ideal type, the bank "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." At the same time, the bank "acts here as a warehouse for money, and therefore its money titles are covered 100 percent." In this 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."

Although this arrangement sounds straightforward, closer examination reveals that it would not be feasible for a money warehouse to provide attractive "banknotes" or a product "such as banknotes." It is easy to see how a warehouse bank would provide checkable deposits. To cover its operating costs, the warehouse bank easily can deduct (at low transaction cost) monthly storage fees from the deposit balances on its books and debit-per-transaction fees against the deposit accounts to or from which it transfers payments. But how can a warehouse bank assess fees for storing the 100 percent reserves it holds behind a payable-to-bearer note that circulates as an ordinary banknote does—that is, that changes hands without the issuer's knowledge? Because the bank would not know who the current holder of the note is, it could not deduct periodic storage fees from the holder's account balance. (The current holder need not even have an account at the bank.) Without collecting storage fees, the warehouse bank would incur losses on its notes. Thus, Ludwig von Mises's dictum that "Issuing money-certificates is a ruinous business if not connected with issuing of fiduciary media" (1966, 435) applies most forcefully to circulating notes.

One conceivable way to charge storage fees to the holder of a payable-to-bearer warehouse note is to have the note depreciate in the holder's hands at a scheduled rate (the schedule might be printed on the back of the note), entitling the bearer to slightly less money in the vault each week. Such a depreciating note would be an unattractive product, however, in comparison to a currency that remains at par, either "money proper" or a fractionally backed note (whose issuer holds interest-earning assets and thereby can defray costs without collecting fees from note holders).[2] Such a depreciating warehouse note would saddle the holder both with a negative return *and* with the computational cost of dealing with a nonpar medium of exchange.

We can imagine other ways to collect storage fees that would avoid nonpar valuation, but they would make holding and spending a warehouse note less attractive than using an ordinary bearer banknote (or basic money) in other ways. (1) A warehouse note can be signed over and dated on each transfer, and storage fees can be assessed retroactively on each signer when the note is returned to the warehouse for redemption. Under that plan, transfer would be cumbersome, and it would have to be limited to customers of clearinghouse-member banks who agreed to pay the fees and who provided clear identification (sacrificing the anonymity usually associated with using currency). Collecting the tiny fees due from each signer probably would not compensate the bank for the labor of entering the names and dates from the back of the note. (2) An occasional "negative lottery" can be held, canceling the redeemability of (say) 0.5 percent of the notes in circulation (if the competitive storage fee is 0.5 percent per period). This plan, however, eliminates the warehouse note's potential appeal to risk-averse individuals. Either of these techniques renders the warehouse note less attractive to hold and use than a fractional-reserve note that is considered safe.

Judging by historical evidence from free banking systems of the past and by the fees charged by gold warehousing services today, the default risk involved in holding a fractional-reserve note or deposit issued by a reputable bank (a member of the clearinghouse) is less than a money warehouse's likely storage fee. Storage fees are 1 percent per annum on gold warehouse accounts currently offered by e-gold Ltd. or Crowne Gold. Annual losses to note holders and depositors were a small fraction of 1 percent in nineteenth-century Scotland, Canada, and Sweden (to name three systems that have been studied relatively well). Faced with such percentages, the potential clientele for warehouse banking will be limited to *highly* risk-averse individuals. Fractional-reserve notes will prevail in competition with warehouse notes.

My hypothesis—that any device for collecting storage fees would make warehouse notes too cumbersome for customers to "use these banknotes in their daily transactions in lieu of money proper," as Hülsmann puts it—is perfectly refutable.

2. Fractional-reserve banks might even afford to pay interest on their notes *if* there were a cheap enough way to deliver it. In White 1987, I argue that historically there was no sufficiently cheap way to deliver interest, against the hypothesis that free competition among fractional-reserve banks implies interest-bearing notes (where banks pay interest on their other liabilities). Collecting the mere pennies worth of interest accruing on a twenty-dollar note by having the note appreciate over time would not be worth the computational bother imposed on the note holder in dealing with a nonpar note.

One need find only one or more historical examples of warehouse notes actually being used as circulating currency and spell out how in practice the storage costs were defrayed. The preceding analysis leads me to suspect that there are no historical examples to find, but I may be wrong.

The obvious need to defray storage costs *somehow* on a circulating warehouse note (or "genuine money certificate") cuts the ground out from under the notion that people commonly have been unable to discern the character of the notes they have been offered in the marketplace. A circulating note without any system for defraying storage fees *is obviously* and *can be only* a fractional-reserve note.

In Hülsmann's second ideal-type contract, a term deposit, "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." In this 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." Of course, as Hülsmann recognizes, the depositor's claim is typically only to an *equivalent sum* of money, not to the specific coins he deposited. Units of money are fungible (interchangeable), so the depositor normally does not care about (and agrees to a deposit contract that does not provide for) getting the very same coins back.

The fungibility of money units is more than a small detail because it dissolves the presumed necessity for the creditor to have "exclusive claim" to a sum of money on the date the deposit contract matures, and it makes fractional-reserve demand deposits feasible. Hülsmann assumes that the deposit contract authorizes the bank to use the deposited money (gives it "temporary exclusive legal claim to the money") only until a definite date at which the contract expires and requires the bank to have that sum of money back in the vault. Yet the bank may know from experience that almost certainly some portion of its customers will roll over their deposits that are maturing today, and it may make a contract with its customers that allows it to use that knowledge to their mutual advantage. That is, the contract need not call for the bank to have every penny demandable in the vault today. Although the customer does take a risk by allowing the bank to hold a fractional reserve (in other words, to invest for longer terms than the terms of its liabilities), he may choose to do so in light of the associated higher return on his deposit. The bank can pay a higher return because it can make longer-term loans at higher rates (the "yield curve" is normally upward sloping) or acquire securities that it need not liquidate.

A term deposit requiring 100 percent reserves at maturity is thus not the only possible type of contract allowing the bank to lend out deposited funds. Another possibility is a term deposit contract *not* requiring 100 percent reserves at maturity. At the depositor's option, the contract can call for the deposit to roll over automatically until the depositor terminates the arrangement. As the term to maturity goes to zero, such a contract becomes a *demandable debt* that gives the customer the legal right to reclaim (and transfer, if it is a checking account) any part of the deposited sum on any date, but that also allows the bank to continue using the sum until the date the depos-

itor actually reclaims it. According to Pascal Salin's description of such a 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)," or a contractual claim, "which, according to the bank promise, is redeemable at any time," typically in whole or in part, "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"—demandable bank debt, a banknote, or a demand deposit (2001, 4). The depositor has acquired an IOU with an on-demand redemption option.

Hülsmann declares that "A business either engages in money warehousing and sells money titles or engages in credit banking and sells IOUs. No third possibility exists." This statement would be unobjectionable if his two categories together exhausted all the possibilities. His view of "credit banking," however, does not encompass demand deposits. He conceives only of contracts that, as noted previously, require the bank to have in the vault today every penny that *might* be demanded today. Under such a requirement, a demand deposit *must continually* have 100 percent reserves; it cannot be a fractional-reserve IOU.

A fractional-reserve demand-deposit or banknote contract does *not* create a situation in which "both the banker and his customer have valid legal claims to the same sum of money at the same time," as Hülsmann puts it. The customer who holds a banknote or a demand deposit has a debt claim payable on demand. *When* he presents a valid banknote or check or withdrawal slip to the bank's cashier, the sum demanded belongs to the presenter, and the bank must pay him that sum in cash. *Until then,* the cash belongs to the bank. As Salin has stated, customers with banknotes or demand deposits "know that they only have a conditional title" (2001, 21); that is, their exclusive title to a sum of cash is not in force until they meet the condition of actually demanding redemption.

Hülsmann comes close to granting this point when he writes:

> 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 fulfil his obligation at the latest after the time stipulated in the clause.

Only one further small step remains to be taken to acknowledge the legitimacy of fractional-reserve banknotes—namely, the step of recognizing that even a banknote *without* an option clause provides an agreed-on "contingent rule" for maturity. A note that says "will pay the bearer on demand" is fully mature (that is, the bank is obliged to fulfill its obligation) when (and not before) the bearer actually demands to be paid.

Hülsmann recognizes that a banker, in order to increase the attractiveness of his fractional-reserve (term) deposits or promissory notes, might want to "promise their

owners that the IOUs can be redeemed in cash on demand." For some reason, he does not recognize that the bank might make a *legally binding* commitment to redemption of its liabilities on demand (while retaining discretion over the use of its assets, including the level of its cash reserves). According to Hülsmann, the banker only "gives his promise to 'try his best' to redeem the IOU on demand" but does not enter into a contract that makes him legally actionable if he does not pay on demand. Why not? Hülsmann explains: "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" (emphasis in original).

"Guaranteeing redemption" is a somewhat ambiguous phrase here. It is true that redemption is a somewhat riskier prospect for the customer of a fractional-reserve bank, even if the risk with a reputable bank is practically negligible. But "the very fact" of holding fractional reserves against demand liabilities does not itself prevent the banker from "guaranteeing redemption" in the sense of *legally binding himself* to redeem. Rather than the mere "IOUs plus redemption promise (IOUs + RP)" that Hülsmann imagines, banks historically have offered IOUs plus redemption-on-demand contracts (IOUs + RODCs). That is, banknotes did not read "Bank X will do its best to pay the bearer on demand," but simply, "Bank X will pay the bearer on demand."

We should expect IOUs + RODCs typically to be more liquid than warehouse titles. I already have explained why, in the case of circulating currency, reputable fractional-reserve banknotes are more liquid than warehouse notes would be—namely, because warehouse notes would be encumbered by the need to impose money-storage charges on their holders. Warehouse bankers more handily can charge storage fees on deposit account balances, but checking customers who prefer accounts without such fees (and even paying interest) would choose not to keep their checkable deposit balances in warehouse form. If such depositors are the majority (as is to be expected in an unhampered banking system where depositor losses from fractional-reserve bank default are well below the level of warehouse storage fees), then the popularity of warehouse deposits would be limited.

A firm basis is thus lacking for Hülsmann's prediction that under laissez-faire "we can be fairly certain that virtually all monetary exchanges would be made in cash or genuine money titles only." This outcome is not what we observe in the historical banking systems closest to laissez-faire. Or consider the contrast today between money orders or cashier's checks (both of which are more secure for the recipient) and ordinary checks (which pose a risk of bouncing). Using a money order allows one to buy from a slightly larger set of sellers than using an ordinary check, but money orders are far more expensive to use and hence are rarely used. They are reserved for the relatively rare cases (such as one-shot mail-order transactions) in which the prudent seller will not accept an ordinary check. The volume of checks dwarfs the volume of money orders. (Note that deposit insurance is not part of the reason because it does not indemnify the recipient of a bad check.)

Hülsmann imagines that under laissez-faire "*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)" (emphasis in original). Against such a priori speculation about how the market would price imaginary products, we can refer to historical evidence on how markets in fact have priced banknotes (IOUs + RODCs). In the developed banking systems closest to laissez-faire, such as Scotland's (White 1995), banknotes in fact were not evaluated at different rates, nor were all evaluated below par. The notes of reputable clearinghouse member banks in fact circulated at par, at least as widely as the banks were branched. The default risk was considered negligible (and in fact was negligible). Money warehouse notes, as far as I know, are nowhere to be found in the historical record. Hülsmann's claim that "in a free market with proper product differentiation, fractional-reserve banking would play virtually no monetary role whatever" is thus historically false (unless we are to construe the terms *free market* or *proper product differentiation* so as to render the claim unfalsifiable).

As Hülsmann points out, Henri Cernuschi declared in 1866: "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 1966, 446). Cernuschi was perhaps speaking hyperbolically. If not, he simply was overlooking the historical record of Scotland, Canada, Sweden, Switzerland, New England, and other cases in which the freedom to issue notes resulted in trustworthy banking and the widespread circulation of notes, nearly to the exclusion of coin;[3] or, for some reason, he thought that free banking would produce anomalous results in France. Two pages after quoting Cernuschi, Mises wrote: "If the governments had never interfered, the use of banknotes and of deposit currency would be limited to those strata of the population who know very well how to distinguish between solvent and insolvent banks" (1966, 448). As banking developed in Scotland and in other capitalistic countries with relatively free banking systems, the strata of the population who trusted reputable banknotes grew to become the majority.

Hülsmann detects "confusion between money titles and fractional-reserve IOUs" in Selgin's writings and in my own: "As far as the present-day United State 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 1984, 1989, 1999)." Later on, our credit for recognizing even "gradations of difference" (Hülsmann's term, not ours) vanishes: "Today, advocates of fractional-reserve banking, such as White (1999) and Selgin (2000), deny that these differences exist at all." In fact, as anyone who reads our

3. For a set of historical case studies of free banking regimes, see Dowd 1992.

work will see, Selgin and I explicitly recognize the differences between *(a)* "inside" or bank-issued money and *(b)* "outside" or basic or reserve money. Nowhere does either of us deny that these differences exist. Hülsmann appears to think that we "deny" the differences because "In their [our] eyes, banks produce money because money titles *are* money—by virtue of the mere fact that people own them for purposes of indirect exchange!" (emphasis in original). But to say that a banknote is "money" is not to deny that it is a different type of money than a gold coin.[4] To place both types under the wider umbrella of "money," as we do following standard usage because both are commonly accepted media of exchange, is not to say that the two types of money are identical.

Hülsmann's reading of the history of banking is that

> 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.

This is a highly fanciful reading. The names *banknote* and *check* are quite distinguishable from the names *warehouse receipt* or *money certificate*. As for their outer appearances, bank IOUs did not carry the words *bailment* or *warehouse receipt* or *100 percent covered by gold in the vault,* as money warehouse receipts could carry to differentiate themselves. Confusion is especially unlikely given that private warehouse receipts (as far as we can ascertain) have never been circulating bearer instruments like banknotes, for reasons explained earlier.[5] The very fact that a banknote is payable *to bearer* (and not exclusively to a named party who is paying storage fees) differentiates it from a warehouse receipt. It borders on the absurd to charge banks with modeling their notes after warehouse receipts when no circulating warehouse receipts ("genuine money titles") existed to be modeled. Banknotes were numbered to deter counterfeiting, not to resemble warehouse receipts. Bank deposits took the form of account entries because they *were* account entries.

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4. In Mises's terminology, a fiduciary banknote is "money in the broader sense," even though it is not "money in the narrower sense" (1980, 526).

5. The U.S. Treasury did issue "certificates" 100 percent covered by gold and silver, inscribed, for example, with "This certifies that there have been deposited in the Treasury of the United States of America $20 in gold coin payable to the bearer on demand" or "This certifies that there is on deposit in the Treasury of the United States of America $10 in silver payable to the bearer on demand." (U.S. taxpayers footed the bill for coin storage and other costs of issuing the gold and silver certificates. I assume elsewhere in my discussion that money warehouses would have to cover their costs without subsidy.) Private commercial banknotes in the United States were inscribed quite differently. They declared simply that the banking company "will pay the bearer on demand" or "promise to pay the bearer on demand" the note's face value, with no statement about what was in the company's vault.

Reinhold C. Mueller finds that a clear distinction was established between warehousing deposits and IOUs early in the development of modern banking, and it was already reflected in a Venetian bankruptcy law of 1330:

> Venetian law and practice recognized the distinction between the *depositum regulare* and the *depositum irregulare* developed by jurists in the later Middle Ages. The former involved the consignment of valuables (including money, if in sealed bags). . . . The custodian . . . had to restore to the owner on demand exactly what had been left with him. For the service rendered, he could charge a fee. The irregular deposit, on the other hand, involved coin. . . . The depository had the obligation to "restore the equivalent" ("restituere tantundem"), as the jurists put it. The person making an irregular deposit at least tacitly permitted the depository to employ the funds, which implied both the passage of ownership from the depositor to the depositary and some kind of participation by the depositor in the risk of the enterprise, whether the deposit was interest-bearing or not. (1997, 12–13)

If this distinction was clear, why did court cases arise over whether a particular deposit was for warehousing or for investment? Hülsmann offers bank misrepresentation as the sole reason for such legal disputes: "semantic trickery from the side of fractional-reserve bankers prompted upset customers to file lawsuits against their banks." The account of the first case he cites, however, the 1341 case of Isabetta Querini as discussed by Mueller (1997, 11–12), does not indicate that her bank, rather than Mrs. Querini, was misrepresenting their contract. The dispute arose in the context of a bank liquidation, when a depositor could gain by misrepresenting her contract in order to move to the head of the queue. When the Venetian bank of Marino Vendelino failed, Querini sued in merchant court to get her entire deposit back, ahead of other claimants in the bank's liquidation. She claimed that she had left her money only for warehousing (making it not part of the assets to be divided pro rata among the creditors) and not for investment. She won in the first round but lost on appeal, the appeal court ruling that she in fact had invested the money.

For a second case of supposed misrepresentation by a bank, Hülsmann quotes Wicksell's (1935) discussion of the Bank of Amsterdam in the seventeenth century, apparently not noticing that it does not support his own story line. The bank issued two products, genuine money warehouse receipts *and* IOUs. Hülsmann supposes that "the public believed [the IOUs] to be genuine money titles because the bank accepted them as cash for any payments." Yet the difference must have been obvious to the public because, as Wicksell tells us, the warehouse receipts "had to be renewed every six months and the prescribed commission paid," whereas an IOU "retained its character as a bank liability and therefore continued to circulate throughout the country." Sure enough, because of the prescribed warehousing fee, "many merchants sold

their deposit receipts or let them lapse and carried on equally well with 'bank money' alone" (1935, 75–76). A merchant who sold his warehouse receipt or deliberately let it lapse clearly *did* recognize the difference. As for the nonmerchant public, we are offered no evidence for the implausible proposition that they accepted (commission-free) "bank money" only out of ignorance that they were not getting (commission-laden) warehouse receipts.

These two examples thus really do not "suffice to illustrate that many fractional-reserve bankers have engaged in fraudulent practices." They do not even show fraud in the two chosen cases, let alone in many cases.

Hülsmann thinks it conceivable that in many cases "no awareness existed of the difference between a liquid IOU and a money title." (He does not say whether he thinks it conceivable that many members of the public were aware of the difference and consented to the greater return of a fractional-reserve arrangement despite its greater risk.) He speculates: "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.'" But in the United States and Canada, at least, although the "promise to pay" inscription was fairly common, the more common inscription (exhibited by considerably more than half of the pre-1860 commercial banknotes for sale on eBay) was "*will* pay"—for example, "The Spearsport Bank will pay Five Dollars to bearer on demand" or "The Bank of Montreal will pay to bearer on demand Ten Dollars."[6] In Scotland, "promise to pay" was the most common inscription, but one leading bank's note read: "The Royal Bank of Scotland is hereby obliged to pay to _____ or the Bearer on demand Twenty shillings." (see Checkland 1975, 188). All of these phrases meant the same thing: they were the language of debt obligations, not of warehouse or bailment obligations. No commercial banknote or deposit contract said anything such as "we are keeping Five Dollars in silver coin in our vault, which remains the property of Mr. Brown (or properly recorded assignee), and will return it on demand, provided that the agreed storage fees are paid." A money warehouse receipt or bailment contract for silver coin would use such language.

Hülsmann anticipates an obvious objection to his thesis that deposit contracts were persistently obfuscated—namely, 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." He counters that the pressure for revelation must come from bank customers (forgetting the interests of money warehousers), who themselves became part of the cover-up: "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

6. To view the inscriptions on notes currently available for sale on eBay, go to http://listings.ebay.com/aw/plistings/list/category3420/index.html).

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."

The phrase "fractional-reserve money titles" here is a bit confusing. A banknote is a demandable bank debt. It does not purport to be a warehouse receipt or "money title" in the sense of a certificate covered exclusively and unit for unit by money in the vault. A buyer offering a banknote or check has no confession to make. The seller already knows that he is not being offered coin or a warehouse receipt for coin (with its obligation to pay storage fees). It is true that if the note or check is a claim on a suspect bank, the buyer has no reason to advertise that fact, but sellers are not incurably naive. As Mises observed, "In the course of time, the inhabitants of capitalistic countries would learn to differentiate between good and bad banks" (1978, 140). The seller who ponders whether to accept a note or check at par has every reason to ascertain first whether in turn he can get par value for it. This determination is not difficult: he need only to check his own bank's current list of "good banks" for whose notes and checks (subject to collection) it will give par value deposit credit. It was common practice in the nineteenth century for sellers to refuse "uncurrent" notes that their own banks would not accept at par.

Mutual Par Acceptance Is Not a "Cartel" Arrangement

Bankers can increase demand for their IOUs by making mutual par-acceptance pacts (Selgin and White 1987). Hülsmann calls this arrangement a "cartel." A cartel, however, is usually understood as an agreement among firms to *raise* price and otherwise to limit competition, to the detriment of consumers. A par-acceptance arrangement is a *pro-consumer* cooperative arrangement in which each member in effect agrees to sell his product at a *lower* price (to put less of a discount on other banks' notes in exchange for its own). Unlike the usual cartel, it does not raise prices or encourage the entry of new, price-shaving competitors.

In historical par-acceptance agreements, contrary to what Hülsmann imagines, banks typically did not agree to "redeem at par the IOUs of all other members." Each clearinghouse member *accepted* other members' IOUs at par *in exchange for its own IOUs* (banknotes or deposit balances); it but did not gratuitously *redeem* rivals' notes (for gold). At the end of the day, the accepting bank would take the rival IOUs it had collected to the clearinghouse to redeem them against their issuers. A bank that provided gold for the redemption of its rivals' IOUs would have subsidized its rivals' expansion at its own expense. Had all member banks agreed to do so, they would have created a common-pool problem for themselves.

The subsidy and common-pool problems would have been even more severe if the accepting banks had chosen to hold one another's IOUs indefinitely and not returned them via the clearinghouse. Hülsmann seems to have such a counterfactual

practice in mind when he imagines that "the cartel members will issue more IOUs + RP . . . which they can back up with fractional-reserve IOUs + RP that have been 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." In fact, banks routinely redeemed rivals' notes for gold because the notes were neither attractive financial assets (they paid no interest) nor useful reserve assets (in comparison with gold or silver). When asked for note currency, a bank naturally found it profitable to issue its own notes (not to reissue a rival's), so it had no use for rivals' notes other than to redeem them. Only a legally privileged (central) bank, such as the Bank of England, had its liabilities held as reserves by other banks. Hülsmann's "zigzag process of fractional-reserve issues and credit expansion" depends entirely on the groundless and historically false assumption that banks foolishly would hold one another's notes as the equivalent of gold reserves.

The par-acceptance and clearinghouse arrangement did not reduce the pressure on banks to maintain adequate reserves. On the contrary, the clearinghouse rigorously enforced redemptions against member banks, keeping them on their toes. The arrangement made excess notes and checks return all the more quickly and surely for redemption.

In Hülsmann's scenario, the "very purpose of the homogenization is to eradicate in the eyes of the public the differences between the various IOUs + RP." But why would a strong bank want to back the debts of a weak rival? Mises cogently explained why it would not:

> But, some people may ask, what about a cartel of the commercial banks? Could not the banks collude for the sake of a boundless expansion of their issuance of fiduciary media? The objection is preposterous. As long as the public is not, by government interference, deprived of the right of withdrawing its deposits, no bank can risk its own good will by collusion with banks whose good will is not so high as its own. One must not forget that every bank issuing fiduciary media is in a rather precarious position. Its most valuable asset is its reputation. It must go bankrupt as soon as doubts arise concerning its perfect trustworthiness and solvency. It would be suicidal for a bank of good standing to link its name with that of other banks with a poorer good will. Under free banking a cartel of the banks would destroy the country's whole banking system. It would not serve the interests of any bank. (1966, 447)

Strong banks historically did not affiliate with weak banks because they did not want doubts about weak banks to spill over onto themselves. For that reason, historical clearinghouse associations had capital adequacy (net worth) requirements for membership. Weak banks were excluded.

Hülsmann's "cartel" scenario is not useless. It provides valuable illumination by contrast: following out its logical implications shows why banks *don't* agree to redeem one another's liabilities or hold one another's IOUs in place of reserves.

The next imaginary scenario is one where "market participants are not aware of the difference between money and money titles, on the one hand, and fractional-reserve IOUs, on the other." The puzzle in this scenario is why the issuers of "money titles" fail to differentiate their products by declaring their 100 percent reserve status boldly on the face of every note and on every deposit agreement. Hülsmann writes: "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." The two products would look exactly alike, however, only if money warehouses foolishly failed to differentiate their products with prominent labels such as *bailment* or *warehouse receipt* or *100 percent covered by gold in the vault,* labels that the fractional-reserve banker patently could not use.

In Hülsmann's scenario of a clueless public, "the bankruptcy of one bank commonly triggers a domino-effect run on all other fractional-reserve banks, spelling ruin for the entire banking system." But how can one say what happens "commonly" in an imaginary world that has never existed (a world in which banks issue IOUs + RP rather than IOUs + RODCs, are ready to give the public gold for rivals' notes but do not seek gold themselves from the notes' issuers, and face a public oblivious to the difference between banknotes and warehouse receipts)? In historical free banking systems, the bankruptcy of one bank commonly did not trigger contagious runs on all other banks. The suspicion that one bank was *nearing* insolvency commonly would lead to a *gain* in deposits for other banks that were considered stronger, as the first bank's customers made a "flight to quality."[7]

Considering the "uncalculable" probability of bank runs in a system buffeted by domino effects, Hülsmann rejects the theory according to which "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)." It is true of course that no probabilistic model can incorporate the incalculable. Although the reserve-optimization model in my *Theory of Monetary Institutions* (White 1999) does not deal *explicitly* with bank runs (I consider them elsewhere in the book), runs are implicitly incorporated in the optimization calculus through the probability assigned to reserve losses being equal or nearly equal to total demand liabilities. A more explicit treatment would consider how much more probable a run becomes with various marginal changes in the bank's portfolio. The optimizing banker would disregard runs in his decisions about reserves, other assets, and liabilities only if he believed that no marginal adjustment would have any effect on the probability or costliness of experiencing a run of any size.

Hülsmann's clueless-public scenario unspools finally into a Kindleberger-like scenario of bank mania, panic, and crash. George Selgin (1992) has shown that such a sce-

7. On historical contagion effects, see Kaufman 1994.

nario was *not* what happened in historical panics and crashes. Mises summarized the typical actual results of free banking competition: "For the most part banks of good repute are blamed for their conservatism and their reluctance to expand credit. In the eyes of people not deserving of credit such restraint appears as a vice. But it is the first and supreme rule for the conduct of banking operations under free banking" (1966, 447).

Court Decisions Did Not Ban Money Warehousing

To account for why money warehousers did not expose the difference between their own product and bank IOUs, Hülsmann maintains that the business of money warehousing was effectively outlawed. He declares: "Today, money warehousing, along with the concomitant issue of money titles, is not a legally protected business in the Anglo-Saxon world." Yet he provides no evidence that this condition exists today, much less that it has existed for centuries. He cites not a single court ruling or legislative act that has outlawed money warehousing.

An interesting historical question arises here: Why had money warehousing, apparently a significant part of the banking business in fourteenth-century Venice and in early-seventeenth-century Amsterdam, virtually disappeared from the market by the time of nineteenth-century London? Ellis T. Powell (1966) provides evidence that the decline in money warehousing came not when the law changed but when the customers of the London goldsmith-bankers, in the second quarter of the seventeenth century, began to find fractional-reserve deposits more attractive than warehousing. As the goldsmith-bankers began to lend money, having previously been plate dealers and gold warehousers, competition compelled them to waive storage fees and then to offer interest (at the considerable rate of 6 percent per annum) on short-term deposits. Powell quotes a contemporary source on the popularity of these new accounts: "this new practice giving hopes to everybody to make Profit of their money, until the hour they spent it, and the conveniency, as they thought, to command their money when they pleased, which they could not do when lent at interest upon personal or real Security; These hopes, I say, drew a great Cash into these new Goldsmiths' hands" (61–62).

Given that money warehousing virtually had disappeared by the nineteenth century, we should not be surprised to find English courts then ruling that any ordinary deposit contract, which was neither an explicit bailment of money in a sealed container nor a contract explicitly specifying the retention of 100 percent reserves, was an IOU, leaving the bank discretion over its allocation between reserves and other assets. In other words, the court ruled that a bank deposit *in the absence of explicit contract terms to the contrary* was an unsecured debt claim. Such legal treatment is a far cry from a ban on warehouse banking or from the establishment of a "monopoly of fractional-reserve banking."

Common-law courts recognize bailments in the warehousing of goods. In a standard bailment contract, the "bailee" (for example, a warehouse) takes custody of

a specific piece of property delivered by its owner and agrees (for a fee) to store it safely until the "bailor" (owner) calls for it. Bailment is not the universal default rule for storage. For example, according to Stephen F. White (2002), "Bailment relationships between boat owners and their marinas are not the norm. They require extraordinary security. . . . [U]nder maritime law, most courts have refused to recognize the existence of a bailment unless there is an express written agreement between the parties creating one." Powell (1966, 68) cites an 1820 case recognizing that lodging a cask of gold coins in a bank constitutes a bailment, not a debt. So the presumption must be that an explicit bailment contract for warehousing money, or a 100 percent reserve contract, would be enforceable. To rebut this presumption, Hülsmann would have to find a court decision declaring that an explicit 100 percent reserve contract was null and void.

Legally protected money warehousing exists even today. U.S. law treats the storage of money (or of any other property) in a bank safety-deposit box as a bailment.[8] Several firms offer money substitutes under explicit warehousing contracts: for example, e-gold Ltd. and Crowne Gold offer explicit 100 percent–backed gold transactions accounts, and NORFED, Inc., offers circulating notes that are explicit warehouse receipts for silver. The face of a "one-ounce silver" NORFED note reads: "Silver certificate. This is a receipt . . . given in exchange for Title to One (1) Troy ounce of .999 Fine Silver." The back reads: "Warehouse Receipt. . . . This warehouse receipt for one (1) troy ounce of .999 fine silver stored at the warehouse identified below shall expire unless renewed or surrendered within twenty years from date of issue. The undersigned warehouse official certifies that this silver is insured against fire and theft. Storage and insurance fees have been prepaid for five (5) years from date of issue." This example shows how a 100 percent reserve note can be inscribed to differentiate itself clearly from a fractional-reserve note.[9]

8. In *Seitz v. Lemay Bank & Trust,* 959 S.W. 2d 458 (Mo. banc 1998), the court held the bank liable to a safety deposit–box holder, viewing the contract as a bailment, when flooding damaged the goods stored in the box. The Supreme Court of Missouri affirmed: "When a bank lets a safe deposit box to a customer, a bailment relationship is created" (*Geoffrey J. Seitz and Valerie A. Seitz v. Lemay Bank & Trust Company,* available at http://www.osca.state.mo.us/Courts/PubOpinions.nsf/0f87ea4ac0ad4c0186256405005d3b8e/cb864dc905eeaf918625659800542a93?OpenDocument). The bailment of money in sealed containers or safety-deposit boxes clearly does not provide an immediately workable model for a checkable deposit with 100 percent reserves. A model might be sought, however, in contracts for the warehousing of standard-grade grain in elevated silos, which for convenience (grain goes in at the top and out at the bottom) allow the warehouse to "repay" the "depositor" in equivalent rather than the very same grain.

9. For e-gold, see http://www.e-gold.com; for Crowne Gold, see http://www.3pgold.com. The NORFED notes ("Liberty Dollars") are the seeming exception that actually proves the rule that 100 percent reserve warehouse notes cannot circulate at par because they cannot recover storage costs in any convenient way. The notes can waive explicit storage fees only because NORFED gives the one-ounce silver note a face value of (and sells it for) U.S.$10, whereas the warehoused silver ounce has a current market value of approximately U.S.$5. On a marked-to-market basis, then, the notes have a fractional reserve. For more on the NORFED enterprise, see http://www.norfed.com and White 2000.

Hülsmann reads the English judges as "evoking a completely unwarranted and fallacious a priori principle. They argued that all sums of money received by banks are necessarily investments." A more sensible reading is that the judges had to appeal to some default-mode understanding of what a "bank deposit" is *when the contract is silent on the disposition of the deposited sums.* It is reasonable to think that a customer wanting a bailment should not expect one from a "bank" that does not declare itself a "warehouse" or otherwise does not promise 100 percent reserves. In particular, Lord Cottenham's judgment, holding the bank responsible only for meeting its explicit contractual obligation (to redeem on demand) and not for something not specified (whether and how it invests the deposit), is quite consistent with upholding an explicit warehousing contract where one exists. Thus, Cottenham's ruling does not "den[y] the very possibility of banking in the sense of money warehousing." It does not say that an explicit money-warehousing contract *cannot* be written. It simply says that a bank deposit *that doesn't purport to be a warehousing contract* is not *by default* a warehousing contract. Cottenham did not innovate, but simply confirmed the common practice and consequent understanding of his time that a "bank" was not a money warehouse. He did not rule that the courts would refuse to enforce an explicit money-warehousing contract.

The position that money warehousing did not become illegal under Anglo-American law, but merely unpopular, that the law never gave "fractional-reserve banking a de facto monopoly," would be bolstered if an example could be found of an explicit money warehouse allowed to open for business in the nineteenth century. Contrariwise, the position that money warehousing was illegal would be bolstered if an example could be found of the legal suppression of an explicit money warehouse. More information needs to be gathered to draw a conclusive judgment, but an example of the first sort does appear to exist. The *Banker's Magazine* in November 1858 (a year after the panic of 1857) first reported efforts to found "the Bullion Bank of New York." Under the Bullion Bank's business plan, "the deposits are not to be used, any part of them, by the bank; but are to be retained always in actual cash to the order of the several depositors; the deposits will consequently be always, to the full amount, on hand in cash" ([Untitled article] 1858, 409). The bank would cover its costs with "commissions" charged on deposit balances and transfers. In its December issue, the magazine published the Bullion Bank's prospectus. In April 1859, it printed the bank's Articles of Association, dated February 17, 1859, and reported: "It is understood that this institution will commence operations at an early day" ([Untitled article] 1858, 409; "A Bullion Bank" 1858; "The Bullion Bank of New York" 1859, 759). No mention appears of any legal barrier facing the bank. I have not found, however, any report of the bank's actually opening for business (or of the project's being scrapped). I suspect that the projectors simply failed to raise the capital ($1 million) they aimed for, but this outcome remains to be confirmed.

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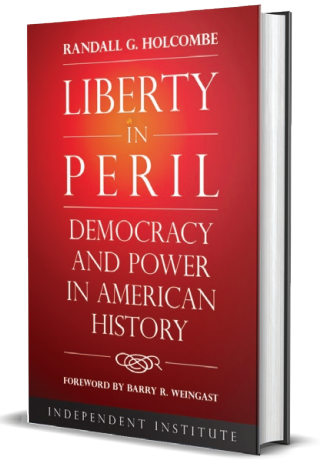

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