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# Deposits, Loans and Banking: Clarifying the Debate

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**Abstract:** The relationship between banking deposits and loans remains a contentious topic. While the defense of a 100 percent reserve clause to eliminate fractional reserves has commonly been asserted on economic and ethical grounds, new legal arguments found in Jesús Huerta de Soto (2006) remain largely ignored. We address Michael S. Rozeff's (2010) recent article as a case in point of this ignorance. Contrary to supporters of fractional reserve demand deposits, we show that such a contract – one treating a loan and a deposit interchangeably – is impermissible due to both established and a priori legal principles. At best, a fractional reserve demand deposit contract may be considered an aleatory contract. Based on an uncertain future event, we find this type of contract wholly incompatible with the reason individuals hold money – the mitigation of uncertainty. Despite what defenders of fractional reserve banking claim, deposit and loan contracts are distinct, and may not be contractually melded together.

Key words: Banking, fractional reserves, fraud, ethics, law, business cycle

JEL category: E32, E59

## Deposits, Loans and Banking: Clarifying the Debate

#### Introduction

The questions pertaining to the ethical and legal arguments surrounding fractional reserve banking have received renewed attention not only from the side of the supporters of a 100 percent reserve banking system (Philipp Bagus and David Howden 2009; Jesús Huerta de Soto 2006; Jörg Guido Hülsmann 2008), but also from fractional reserve free bankers (Michael S. Rozeff 2010, Pascal Salin 1998). Rozeff (2010) responds to some of the new arguments offered by the supporters of 100 percent reserve banking, though its focus remains mostly on the older argument that Murray N. Rothbard made in *The Case for a 100 Percent Gold Dollar* (1974), taking to task the position that fractional-reserve banking is fraudulent.

This article shows that the advocates of fractional reserve free banking have largely missed the legal arguments brought forward for 100 percent reserve banking. First, we will demonstrate that certain contracts are not valid despite being voluntarily agreed upon. Second, we will analyze the essence and nature of deposit and loan contracts defending in particular both Huerta de Soto's (2006) and Ludwig von Mises' (1971) views. Finally, we classify a fractional reserve demand deposit contract showing that it may be considered, at best, an aleatory contract – a contract contingent on an uncertain event. Such a contract contradicts the reason individuals deposit money – the mitigation of uncertainty.

#### **Freedom and Contracts**

Rozeff (2010) argues that in a free society any voluntary agreed upon contract is legitimate. What he fails to realize is that a lack of coercion is a necessary but not sufficient condition for contract formation. Rozeff does not take into account that we do not live in isolation, but in a world where

institutions, especially legal institutions, continually arise and evolve. More specifically, voluntary agreements may violate traditional legal principles. These legal principles do not emerge instantly "in a vacuum" (Huerta de Soto 2006, 20). Rather, the law is a series of rules and institutions that have evolved through a lengthy process involving the participation of a multitude of distinct individuals.<sup>1</sup>

Some, including Rozeff, view liberty as a physical "ability to do what I want." Yet, here is no conflict between obedience to a law and a life of liberty. In fact, to be free to act in a state of liberty the law must provide some degree of protection from infringements by others against this liberated existence. Cases that do not take into account the full property rights of the exchanged goods under contract are specific examples demonstrating that "not ... every mutually advantageous contract should be permitted" (Hans Hermann Hoppe 1994, 70). A banking system allowed to operate under fractional reserves entails a "do what I want" approach to liberty. This belief ignores the established legal principles that allow society to flourish.

As the universal principles of law tend to reflect human nature, they are not a sign of ethical relativism or ethical subjectivism but rather complement a natural law approach (Huerta de Soto 1991). Human nature unfolds through the universal principles of law that have emerged. This view of an objective human nature and objective ethics which manifests itself via universal legal principles that arise in society stands in contrast with the ethical subjectivism of Rozeff (2010, 499) who states: "People who make market exchanges decide more fundamentally what policies and practices they regard as fraudulent."

It is not up to the subjective whims of people if an action is to be considered fraudulent or not; this

<sup>&</sup>lt;sup>1</sup> Hayek (1960; 1973; 1989) further explains the process. Bruno Leoni (1961) illustrates the evolution of legal institutions and common law with the emergence of Roman law through the trial and error method over centuries in a process that continuously improved it.

is objectively definable. The nature of man provides the foundation of objective ethics (Rothbard 1998, part 1). A theory of property rights must naturally precede a theory of contract law that is necessary for the articulation of ethical claims. The basic fact that two persons cannot claim exclusive ownership of one property simultaneously is incontrovertible, and it logically follows that no contract can exist based upon this premise.

There are things we may objectively state about ethics and, especially, the cultivated legal principles that are not open to perversion ad hoc. Rozeff along with other free bankers (George Selgin 1990; Lawrence H. White 1992, 156) tend to embrace an ethical relativism which is consistent with his general "anything goes" approach. Yet, this relativism is contradicted by Rozeff's own argument as he implicitly defends liberty (or his definition thereof) as an objectively desirable standard. If ethics is "contentious" (Rozeff 2010, 499) and that which people regard as being ethically correct determines if it is correct, then how can he (or anyone else) use liberty as an objective standard? Why would monetary freedom (or any other type) be good? Rozeff bases his argument only on his subjective preference for liberty and, thus, it rests on a fragile theoretical foundation.<sup>2</sup>

Rozeff contends the very definition of property is subjective, stating: "[Rothbardians] have defined the property rights acceptable to them, and they must live by them" (2010, 499). General agreement does form enduring definitions. However, definitions should not contradict the conventional use of terms. Rozeff suggests that the nature or essence of the legal concept of a "deposit" or "property right" is arbitrary and changeable: "One possible arrangement makes the

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Interestingly, Rozeff accuses Rothbard of arbitrarily assuming property rights as Rothbard (and others) claim that a deposit is property owned by a depositor. As will be shown, it is the objective determination of property rights that allows the Rothbard school to be completely non-arbitrary in assigning property rights, something which Rozeff (among others) falls prey to repeatedly.

The term "Rothbardian" to describe those in favor of 100 percent reserves on demand deposits is more than a little unfortunate given the recent fervor in some less official venues that has led individuals on both sides of the debate to declare themselves "Rothbardians." Even a short while ago, many who considered themselves Rothbardian concerning libertarian law would disagree on the finer points of banking law. For the purposes of this paper, we use the term "Rothbardian" in the traditional sense – those who follow Murray Rothbard in claiming that fractional reserve deposit contracts are fundamentally fraudulent, illegal and lead to detrimental consequences via the business cycle, based on a priori principles.

depositor into a creditor and the banker into a borrower who takes possession of the title to the borrowed assets" (2010, 501). <sup>4</sup> This nominalist philosophy contrasts with the essentialist approach which maintains that economics consists in investigating "types and typical relationships of phenomena... in [their] totality and whole complexity of their nature" leading to their cognition and understanding (Carl Menger 1985, 56). In the same way as Menger investigated the concepts of value, utility, exchange and price, there also exists an objective nature of legal concepts such as "deposit", "loan", "fraud" and "property." The essence of price and value as well as the essence of loan and fraud exists independently of subjective interpretation.

The fractional reserve demand deposit contract violates universal principles of law. As we do not live in a legal vacuum in the free market, which is itself made possible by objective legal principles in the first place, not every voluntary agreement is valid and enforceable.

## A legal perspective on deposit and loan contracts

Both contracts – deposits and loans – may involve specific (i.e., art) or fungible (i.e., money) goods. Thus, a *deposit* may consist in a unique piece of jewelry, 10 tons of rice in a silo, or \$1,000. Similarly, a *loan* may consist of a unique bicycle, a gallon of gasoline, or \$1,000.

These two types of contracts are very different in nature resulting in crucial legal and economic differences. One significant divergence is that the purpose or cause of each respective contract is radically distinct. In a deposit contract, the depositors wish to safe-keep goods and maintain their availability at all times. This essential purpose of the deposit contract is independent of the type of good or its particular characteristics (i.e., fungible or nonfungible). In sharp contrast, a loan contract entails the loss of the availability to the lender of the bicycle, the gasoline or the money for an

In distinction, Hülsmann (2004) conducts an a priori analysis of what "property" objectively is. He analyzes the fundamentals of the concept and shows that property is something that belongs to a person and is in effect part of them. Huerta de Soto (2006, ch. 1) provides an extension of this with an analysis of the fundamental natures of "deposit" and "loan" contracts and differences between them.

agreed upon time. The lender is willing to give up availability out of generosity or for an agreed upon interest payment. These essential differences between deposit and loan contracts have evolved since Roman legal theorists first established them.

For the special case of a monetary deposit and monetary loans there are three main economic differences.

First, the monetary loan contract exchanges present goods *and* future goods. The borrower receives monetary units now and will pay the lender monetary units in the future. In contrast, there is no exchange of present goods for future goods in the monetary deposit contract. Depositors do not give up the availability of the monetary units but retain the right to withdraw them on demand.

Rozeff (2010, 508) criticizes Mises' (1971, 268) distinction between present and future goods, asserting that he "radically departs from treating the depositor as someone who makes subjective valuations of the goods under his control." This critique is based on Mises' claim that the deposit fulfills the same service for the depositor as money proper. It fails to recognize that Mises, trained as a lawyer, applied the definition of what a deposit is (the deposit is made with the desire of full availability and thus a perfect monetary substitute), and what a credit transaction is to demonstrate that they are distinct contractual obligations. The fundamental definition of these concepts remains outside the realm of subjectivity. Mises relied on the study of his academic teacher Eugen von Böhm-Bawerk (1881) in his analysis. Böhm-Bawerk was the first to stress the double-counting problem that results from the neglect of the distinction between present and future goods (or more correctly, the rights to goods in the future). In this context, Böhm-Bawerk criticized the credit theory of Henry Dunning MacLeod. MacLeod argued that new loans imply additional goods, and by extension that new loans entail more wealth (Böhm-Bawerk 1881, 5-6). Unsurprisingly,

increasing wealth). Yet, as Böhm-Bawerk pointed out, MacLeod failed to understand that a credit transaction is *merely* a title to a still non-existent future good, which does not create a corresponding present good (Böhm-Bawerk 1881, 5-11).

The second economic difference is that the monetary loan contract transfers the availability of money. The borrower gains the availability and utilization of the money for a specified term, while the lender sacrifices this use. This is essentially different in the monetary deposit contract: the depositor, and only the depositor, retains the *complete and continuous* availability of the money. In fact, the availability of the money for depositors may be improved if depositors regard the money safer under the custody of the depositary or more convenient by offering convenience services such as ATMs, debit cards, etc.

Third, as there is an exchange of present goods for future goods in the loan contract there is an interest payment.<sup>5</sup> Naturally, as there is no exchange of present goods for future goods in the monetary deposit contract there is no such interest payment.

These three economic differences constitute three fundamental legal differences between the two contracts.

First and foremost, the essential cause or purpose of the two contracts is radically distinct. The essential purpose of a loan contract is to transfer the availability of present goods to the borrower. In distinction, the main motivation or cause for the depositor in a deposit contract is the custody or safekeeping of the money.<sup>6</sup> The depositor typically pays the depositary a fee for this custody and

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The interest payment may be waived out of generosity by the lender.

Money is a fungible good. The depositary does not have to guard the exact same units of a fungible good that were received as deposit. Rather the depositary has to safeguard and return a *tantundem*, at the depositor's request. The tantundem is an equivalent amount of goods in both quantity and quality of the deposited good. As units of the same quality stemming from different depositors can be mixed and need not be safeguarded separately, the storage costs are reduced and hence, the provision of transaction services is facilitated.

safekeeping service.<sup>7</sup>

Second, the monetary loan contract demands the establishment of a maximum or determinable term by which the loan must be retired (lest it become a sale or a gift). This also facilitates the calculation of the applicable interest payment. In contrast, there is no term for returning the money in a deposit contract because it is "on demand." The depositor retains full availability and can withdraw his money at any time.

Last, there are distinct obligations for the depositor and the depositary. For the depositor the obligation is to pay the required fee in exchange for the safekeeping of their deposit. In contrast, for the depositary the obligation is to maintain the availability of the tantundem at all times to the depositor (i.e., the depositary must hold goods of equivalent quality and quantity to those deposited), and return it on request.

### A legal assessment of the fractional reserve demand deposit contract

Having reviewed the essence of a deposit and a loan contract we may assess the possibility and legitimacy of a fractional reserve demand deposit contract: granting loans against demand deposits

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A short clarification is necessary before we begin our analysis to prevent misunderstandings. We remind the reader that we take free bankers on their own grounds, i.e., we assess these contracts in a free market setting. We, consequently, abstract from instruments and institutions such as the federal

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This fee may be waived out of generosity of the depository. Some may note that depositors may enforce their own 100 percent reserve deposits by utilizing safety deposit boxes within the present banking system. The foregone convenience of a "traditional" deposit plus the fee incurred for using a safety box counters the enhanced perception of safety via the deposit's 100 percent reserve. In this case, the use of a fractional reserve demand deposit, if conscientiously made, will not result in fraud, but rather will be the result of calculating the costs and benefits of the options available. Such an argument does not address whether the *structure* of the fractional reserve demand deposit is legally consistent or valid – something that this article answers in the negative. Is there no need for 100 percent reserve demand deposits, since safety deposit boxes can serve the same goal of deposit security? This would be true, but if and only if 100 percent reserve demand deposits and safety deposit boxes afforded equal "moneyness" or liquidity. Since they do not, the latter cannot be a good substitute for the former.

funds market and discount window lending (in the case of the U.S.). The following legal analysis supposes that there are no financial system interventions. Most importantly, there is no central bank or public deposit insurance. The legal assessment changes when public deposit insurance is available or a central bank exists. Under this scenario, special privileges and property rights violations define the fractional reserve deposit contract. Furthermore, in a free market setting a fiat currency depending on the support of the government via legal tender laws or central banking could not exist (by definition). Our legal assessment of deposit contracts does apply, however, to fiat currencies. From a legal perspective it is unimportant if the original deposit is made in metallic or fiat paper – the fundamental tenets of the contract remain misaligned.

Moreover, we want to avoid delving into the functioning of the modern banking system. It is true that fractional reserve banks create deposits by granting loans and holding fractional reserves. For our legal analysis, it is irrelevant if a deposit is an originary deposit, i.e., one of cash deposited, or a newly created deposit resulting from a new loan of a fractional reserve bank. New deposits may come from outside the banking system as cash is deposited or from the inside when banks create deposits. We legally assess all deposit contracts independent of their origin.

There are several possibilities with which to assess fractional reserve banking in a free market.

If a depositor makes a deposit contract and the banker does not safeguard the money but instead uses it for his own purposes we face the crime of embezzlement: bankers appropriate the deposit without the knowledge or consent of the depositors. In this case, fractional reserve banking results in a breach of contract. We may also consider this incident as fraud through misrepresentation, as

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In our modern banking system, banks make loans first (without awaiting for new deposits from individuals), and then acquire the necessary reserves (required reserves) from other banks or the central bank itself (Wray 1998, esp. ch. 5). In contrast, the free market institutional setting of free bankers has no public central bank that supports the banking system. More importantly, for a legal analysis of deposit and loan contracts, it is of secondary importance how the deposits originate. We assess their legal nature and its implications based solely on the existence of such deposits.

the banker induces the depositor into a fractional reserve contract (i.e., a loan contract) without making it clear that it is not the deposit contract originally sought. One of the most important merits of Huerta de Soto (2006, ch. 2) is to show with numerous examples how fractional reserve banking emerged historically as a result of this type of contractual bifurcation.<sup>9</sup>

Hoppe, Hülsmann, and Walter Block (1998) cite its fraudulent nature to provide an additional argument against fractional reserve banking. They argue that issuing more titles to money than there is money in existence is fraudulent, notwithstanding any stipulated "agreements" between the guilty parties to the contrary. <sup>10</sup> Indeed, when a bank or any other person issues more titles to money than he has money this is legally considered forgery (i.e., the falsification of a legal document).

While Rothbard (1974; 1994) characterizes fractional reserve banking as fraud based (in part) on an historical review of banking practices, Huerta de Soto provides comprehensive theoretical and historical evidence to support this claim. Huerta de Soto explains how the *depositum confessatum* – a loan veiled as a deposit in order to escape the canonical ban on usury – contributed to the perversion of the clear Roman legal doctrine on monetary deposits (2006, 16fn15, 64-71). In all these historic instances, fractional reserve banking emerged as embezzlement or misappropriation. Bankers appropriated genuine deposits and used them for their own benefit. *Ex post* there was then

Hoppe (1994) provides support that fractional reserve banking conditions historically arose due to cases of undeniable fraud. Some may argue that the depositor entering into such a contract represents a clear case of *caveat emptor*. However, the reason that a depositor enters into a safekeeping contract is precisely that he wishes to have nothing to beware. The deposit will be continually and fully available, thus giving him no reason to worry that there is anything awry with the contract. Furthermore, deposit insurance serves to reinforce the depositor's belief that they will immediately receive the tantundem on request. As it is clear that this cannot possibly hold for *all* depositors at *all* times, we see that caveat emptor is a difficult standard to hold a depositor.

A hires B to murder C. We posit that there is full and complete "agreement" between A and B. B never carries out this contract, so, we may ignore C, who obviously would not acquiesce. As far as A and B are concerned, then, there is complete unanimity, and full knowledge, à la Rozeff. Yet, this contract is *still* illicit. Voluntary agreement is a necessary but not sufficient condition for the legitimacy of a contract.

MacLeod (1890, 349), who Rozeff cites in support of his position, explains the nature of deposits and how they evolved historically: "It became the custom for private persons to place their Money with them for the mere purpose of security. In this case they [the money-changers] acquired no Property in the Money: but they held it subject to the directions of the depositor – the Money itself was termed a Depositum. The Banker paid no interest on this Deposit because he was not allowed to trade with it." This quote, along with several others employed by Rozeff, does not contradict our legal interpretation. It neither sustains Rozeff's perspective but rather supports our view that people made historically genuine deposit contracts and explains the true nature of deposits in contrast to loans, which MacLeod later (1890, 350 and 367-368) defines.

justification, rationalization and legalization of these actions by the governments that profited from this breach of law. This justification was in part facilitated because the fractional reserve banking system's operations were traditionally shrouded and not clearly understood for centuries. The general unawareness of the functioning of the banking system is demonstrated by that fact that only at the end of the 19<sup>th</sup> century did economists began to understand how banks could create deposits by holding fractional reserves (Schumpeter 1954, 1080-81). As recently as the 1930s, John Maynard Keynes in his *A Treatise on Money* felt it necessary to defend the idea that fractional reserve banks create deposits from loans.

Rozeff (2010) concentrates only on the first possibility – assessing fractional reserve demand deposits as fraudulent – while neglecting the eminent following cases that do not regard the existence of fractional reserve banking as necessarily fraudulent but invalid out of legal reasons. It is a severe mistake to concentrate solely on the fraud possibility, as Rozeff does, and not analyze the other legal possibilities as exposed in Huerta de Soto (2006). A fractional reserve demand deposit may be assessed from a legal point of view in several ways. These relevant legal scenarios are as follows.

First, there is the possibility that an individual or mutual mistake (*error in negotio*) exists to make the contract void even when fraud is absent. In a unilateral or mutual error one or several parties to the contract are mistaken about an essential material term. When the banker receives the money as a loan (i.e., he thinks the depositor gives him a loan), and the depositor thinks he is making a genuine deposit (i.e., that the banker will hold the deposit as a bailment), the parties are mistaken about the material terms of the contract *ad idem*. In this case, the depositor is unaware that there are fractional reserves (in the case of a monetary deposit). MacLeod (1902, 237) suggests this case in a passage that Rozeff (2010, 505) offers undermining his own case: "It is very often supposed that when a

Second, it is possible that a depositor wants to make a genuine deposit and is also aware of the bank's use of his deposited money. Hence, there is no mutual mistake – the depositor treats the money as a deposit, while the bank treats the money as a loan *and both parties know this to be the case*. Here the causes or purposes of the parties to the contract are incompatible. The goal of the depositor is to have full availability of the deposited money while the banker wants the money in order to grant a loan to a third party. As these desires are incompatible the contract is generally seen as voidable; there has been no real "meeting of the minds" in this commercial interaction. The authorization of the banker by the depositor to use the money is irrelevant as this is incompatible with maintaining full availability at all times. Depositors are either being deceived if they believe that full availability of the money exists with this type of contract, or are entering into an unenforceable contract if they recognize that the ends of both parties are contradictory.<sup>13</sup>

The case of incompatible objectives is likely relevant for many depositors in today's banking environment. One indicator to the depositor that the banker will use the money is the payment of interest. This is, as we have seen, largely incompatible with a deposit contract where the depositor pays the depository for safekeeping services. Proponents of fractional reserve banking argue that depositors should be aware of the use that bankers make of their money, and, therefore, the contract should be legitimate. This misses the point concerning the potential incompatibility of contractual

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Rozeff's reliance on MacLeod, a banker accused of conspiracy to defraud clients (Mark Blaug and Paul Sturges 1983, 259), is not surprising given that MacLeod is a main defender of the banking principle after the Peel Act. Yet, MacLeod's legal authority concerning bank contracts is dubious considering his bifurcation between loans and deposits. In one such example, MacLeod (1875, 140-142) claims that nonfungible loans do not involve a sacrifice in ownership when they are lent, while fungible goods do involve such a loss. Then he jumps to the conclusion that in the former transaction, no relationship between debtor and creditor is created, while in the latter the relationship arises. Despite stating the difference between a *depositum* and a *mutuum* continually, he shifts between these two definitions with no real justification as he endeavors to try to justify the loaning out of deposits under fractional reserve arrangements. See also MacLeod (1904, 68-70) for a similar example.

As J. W. Harris (1969, 691) concludes the argument: "If one party makes a mistake in articulating the terms of his offer and this is known, or ought reasonably to have been known, to the other party, the acceptance is no true acceptance and the mistake vitiates agreement." At the least an implicit mistake has been made if one party thinks the contract guarantees full and continual availability, and simultaneously only obliges this on a best efforts basis contingent on unknown conditions. See also Huerta de Soto (2006, 143).

To offer another proof that depositors know that their deposited money is being used and not safeguarded, defenders of fractional reserve banking invoke the phenomenon of bank runs. Rozeff (2010, 507) argues, for example, that if people did not know that bankers make use of their deposits and also believed that they held 100 percent reserves, there would be no reason to run a bank, because they would regard their money as having full and continual availability.

This nevertheless demonstrates that we face a case of incompatible aims. Indeed, the bank run indicates that at least some of the depositors are finally becoming aware of the use of their money by bankers. Yet, the genuine indignation of depositors when they find out that they do not get their money (such as was widespread in Argentina in 2001, the British example of Northern Rock in 2007, during the U.S. depression of the 1930s and the more recent Icelandic cases in 2008) shows that they think their money *should* be there, i.e., that they should always have the full availability of their deposited money.

The question is not why runs occur at all, but why they occur under the pretense of such anger and emotion when undertaken on banks as opposed to mutual funds or other investments. People do not angrily wait outside their broker's office to get the proceeds of their stock investments – they know that they are entitled to the redeemable value available whenever it can be liquidated. Bank runs occur as depositors rush to the bank as they know they will not get the redeemable value of their deposits (i.e., that value per dollar deposited that would equilibrate assets available to claims on those assets). Deposits are *only* redeemable at par value. When the dust settles, two outcomes obtain with bank runs. Either the faster runners get their deposits back in full, or each depositor receives

Indeed, as Kinsella (2003, 23) points out: "Title to something which does not exist cannot be transferred." We may ask how a bank may loan out more money than it has had deposited in its vaults. Tangible goods (like Kinsella's hamster example) make clear the error in loaning non-existent property, which brings us to ask supporters of fractional reserve banking systems: "What makes money different?"

only a fraction of the original deposit. In the latter case, notice that what they are receiving is the par value of a fraction of their originally deposited units, as opposed to a stock investment liquidated at a loss which returns a reduced value on 100 percent on each of the invested units.

If people regarded deposits more like a gamble concerning the future that entailed no obligation to maintain full availability, there would be no point in getting upset when they could not withdraw their money. When people lose money at the horse races or the casino, they react in various (negative) ways. There is, however, never any righteous indignation. Similarly, when people want to cash in their mutual funds or general investment securities that have sustained losses, customers and investors are irate and upset with the state of the market. Yet there never arises any question about the terms of the contract entered into. They are not defined ambiguously, like in the present deposit banking system.

In cases of illiquidity or insolvency, when individuals suddenly face the realization that their deposit is not fully available, the contradictory nature of the contract becomes apparent. The non-enforceable character of the two incompatible obligations becomes evident as it is now widely appreciated that it is *impossible* for the bank to meet its obligations.

Third, even if we assume that the objectives of the two parties to the contract *are compatible*, it is still impossible to carry out in a free market. Without a central bank or a government that can intervene in favor of the bank, or an institution such as the Federal Deposit Insurance Corporation, (institutions incompatible with the free market setting assessed here) it is impossible to guarantee the full availability to the depositors if the bank uses the deposited money for other, incompatible purposes. For instance, if the customer deposits 100 ounces of gold in a bank in order to maintain full and continual availability and the bank loans out 90 ounces of this gold to someone else, the

contract is impossible to fulfill at all times on demand.<sup>15</sup> As P. S. Atiyah and F. A. R. Bennion (1961, 436) make clear: "If the contract proves impossible of performance *ab initio* one of the parties may plead that it was void for mistake; if it proves impossible of performance through subsequent events it may be pleaded that the contract is frustrated."

There is yet a fourth possibility. The contract that involved the transfer of the money might be neither a deposit nor a loan. Rather, it would be an aleatory contract: a contact where the performance of one or both parties depends on a particular future event. An example is gambling or betting. If we apply this case to a fractional reserve contract, the person who transfers the money to a "bank" (or "casino" for that matter) gets paid for this transfer interest and receives the option to get the money back, provided the "bank" can do so. Both parties are aware of the fact that the bank uses the money for its own purposes. The "depositor" would not have the availability of the money but the right to ask for the money and the bank would try its best to give it to the "depositor" (Hülsmann 2000, 108). The "depositor's" motivation for entering the contract would not be to maintain full availability of the money, but rather to invest it. Hence, the purposes of the two parties to the aleatory contract are compatible and possible to carry out. It then becomes a question of probabilistic forecasting if the bank will have the money and be willing to return the money when the "depositor" asks for it. Many members of the Rothbard school (Huerta de Soto 2006, 42, 712; Hülsmann 2003)<sup>16</sup> have acknowledged the possibility of aleatory contracts.<sup>17</sup>

Selgin (1988, 67) invokes the law of large numbers to counter this argument. Yet, when the money is loaned out it cannot be available at all times, for instance, when *all* depositors demand their money simultaneously. A fatal error results as the law of large numbers relies on a stable and quantifiable risk measure to determine an appropriate and prudent reserve ratio. Redemption rates are not phenomena that allow them to be insured against, but instead fall into the realm of a future uncertain outcome that must be viewed as fundamentally uninsurable (Huerta de Soto 2006, 295, 385; Hoppe, 2007). Moreover, credit expansion itself tends to cause these massive redemption demands by engendering an artificial boom that is inevitably followed by a recession (Huerta de Soto 2006, Ch. 3; Hayek, 1931)

Hülsmann (2003) does not use the term "aleatory contract" but calls the contract an IOU with a redemption promise. Implicitly, members of the Rothbard School seem to doubt its empirical importance on a free market, because they regard the purpose of a bank deposit as maintaining full availability to overcome uncertainty, which is the prime function of money. Hoppe (1994, 71) states that such aleatory instruments would be similar to "lottery tickets" thereby fulfilling different functions than money. In any case, the term "fractional reserves" then becomes a misnomer for such an agreement as for "lottery tickets" the issue of holding "reserves" that are fractional or full does not arise.

Yet, this possibility seems to be contrary to the function of money. Money's primary role arises due to the uncertain nature of future obligations, and the amount of money held is determined primarily by the degree of felt uncertainty (Mises 1998, 249; J. C. Gilbert 1953). Contracting money to be held dependent on an uncertain event is fundamentally at odds with the *raison d'être* that money serves. Savers do not hold deposits based on a probabilistic reckoning of their future needs. The uncertainty prevailing concerning future contingencies leads them to seek an assured method to provide for these unknown future events if they arise. Demand deposits, as we have outlined, serve this exact purpose.

In sum, while aleatory contracts are legitimate, they represent separate cases than both deposit and loan contracts and generally fall outside the scope that either encompasses. At the same time, depositors hold cash balances owing to the uncertainty of the future. Deposit contracts allow money balances to mitigate this uncertainty, without the need to safeguard personally the currency units in question. Aleatory contracts depend on an unknown future event to determine what the final contractual obligation will be and hence, fall largely outside the scope of the role that cash holdings serve.

#### Conclusion

Critiques of the Rothbard School on fractional reserve banking fail on several accounts. First, they generally ignore that the Rothbard School acknowledges that aleatory contracts are legitimate and possible in the financial sphere when there is no doubt concerning their nature and outcomes. A more pressing empirical question would be whether those kinds of contracts would be relevant to a free market banking system, and more pertinently, whether an aleatory contract may be applied to a good that exists to remove uncertainty, i.e., money.

Secondly, and more importantly, these critiques fail mainly because they take the naïve view that any voluntarily agreed upon contract is necessarily valid. However, legal principles that evolved over centuries in both common and civil law contradict this "anything goes" mentality. Modern fractional reserve demand deposit contracts can be regarded as void on the grounds of fraud, mutual mistake, incompatible causes or the impossibility of fulfillment in the absence of the special legal privileges granted to or by a central bank.

Third, a failure to analyze the legal nature or essence of the relevant concepts, such as "deposits" and "loans" leads to erroneous conclusions. Redefining words or the use of malleable subjective definitions creates unnecessary confusion. Law is not a wholly subjective discipline. There exist long established and evolved objective legal principles and concepts.

In sum, fractional reserve free-bankers operate with an incomplete and erroneous analytical framework within an ethical and legal vacuum that leads them to an unsatisfactory and simplistic analysis of fractional reserve banking. An interdisciplinary analysis of fractional reserve banking such as Huerta de Soto (2006) that incorporates comprehensive historical evidence with economic and a legal analyses proves to be far more enriching and insightful.

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