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Bagus, Philipp and Howden, David

2012

This article can be cited as: Bagus, Philipp, and David Howden. 2012. "The Continuing Continuum Problem and Future Goods." *The Journal of Business Ethics* 106(3): 295-300.

It can be found at: http://www.springerlink.com/content/65706k561k137207/

The Continuing Continuum Problem of Deposits and Loans

Philipp Bagus
Universidad Rey Juan Carlos
Applied Economics I Department
Paseo Artilleros s/n.
Madrid, 28032, Spain
philipp.bagus@urjc.es

David Howden
St. Louis University – Madrid Campus
Department of Business and Economics
Avenida del Valle, 34
Madrid, 28003, Spain
dhowden@slu.edu

Abstract: Barnett and Block (2011) argue that one cannot distinguish between deposits and loans due to the continuum problem of maturities and because future goods do not exist – both essential characteristics that distinguish deposit from loan contracts. In a similar way but leading to opposite conclusions, Bagus and Howden (forthcoming) maintains that both maturity mismatching and fractional reserve banking are ethically justified as deposit and loan contracts are equivalent. We argue herein that the economic and legal differences between genuine deposit and loan contracts are clear. This implies different legal obligations for deposit and loan contracts, a necessary step in assessing the ethics of both fractional reserve banking and maturity mismatching. While the former is economically, legally, and perhaps most importantly ethically problematic, there are no such troubles with the latter.

KEY WORDS: banking, fraud, fractional reserves, maturity mismatching, natural law, difference loans and deposits, continuum problem, claims to future goods

The Continuing Continuum Problem of Deposits and Loans

Banking practices over the past decade have increasingly caused furor due to less than satisfactory ethical practices. William Barnett and Walter Block's (2011) rejoinder in this journal's pages recognizes some key points to the issue at stake. The recent debate has sought a theoretical foundation to explain why these banking practices are ethically suspect (the interested reader may consult Barnett and Block (2009; 2011), Philipp Bagus and David Howden (2009), and XXXX (forthcoming) for the crux of the debate).[1]

Instead of arguing over some of the finer points, which we largely commend Barnett and Block for clarifying, we here focus on two large theoretical gaps of their analysis. As we both seemingly agree on much of what is at stake, rectifying these points should place us in full agreement. The two points that make their viewpoint irreconcilable with ours are the continuum of maturities that distinguishes loans from deposits, and the concept of the future good.

The Continuum Conundrum

The first issue that Barnett and Block have with our fundamental distinction of loan and deposit contracts concerns the fact that a deposit contract has no term to maturity as it is on demand. XXX even maintains that there exists "a loan with an unspecified due date, namely a demand deposit." Both Barnett and Block and XXX attack the distinction of the two types of contracts that are the basis of our analysis. We argue that deposit contracts do not have a term because the motivation of the contract is safekeeping – to have the good always and continually available

[1] Throughout this paper, unless otherwise noted, references to Barnett and Block will be to their (2011) rejoinder.

That to enter into a demand deposit must imply safekeeping is not an assumption. Instead, we argue that a legal contract exists whose primary purpose is the safekeeping and availability of the deposited goods. Such a contract lacking a maturity must be continually on demand, and hence entail a safekeeping obligation by the depository. It may be helpful to think of a continuum of "maturities", and the specific contracts that embody them. A contract of infinite maturity (i.e., one that would never require repayment) is what we commonly refer to as a "gift". A contract with a positive maturity (i.e., one that requires repayment before some future date) is that which we commonly refer to as a "loan". Finally, what of a contract of zero maturity (i.e., one that must be repaid with no notice, or, in other words, "on demand")? This is the type of contract that we commonly refer to as a "deposit". The purpose of deposit contracts is incompatible with the appropriation of the deposited goods on the part of the depositary and consequently incompatible with the practice of holding "fractional reserves". This arises as they are of zero maturity. Historically, this type of contract has been called a "deposit" (in Latin, a *depositum*) if the good is specific, and an "irregular deposit" (in Latin, a *depositum irregular*) if the good deposited is unspecific.[2]

On the contrary, in loan contracts where one party transfers the use of the good to the other party, there is always a specified and finite term limiting this use. The motivation here is the transfer of

[2] Leland Yeager (2010) suggests that such definitions are an imposition of a preferred meaning onto a word and that these definitions shift the argument to one about names, classifications and definitions. We maintain that there exists a certain contract with a certain legal nature that arises to meet a defined need. The name given to this contract is of secondary importance. As definitions arise from convention, we prefer the traditional word attached to such a contract, namely a "deposit" (an alternative term would be "bailment"). Similarly, a different goal, such as to purchase a good, can also be defined by a contract, with the legal implications thereof explicated. Although the specific name we attach to such a contract does not aid nor impair its analysis, it is helpful (though not essential) to use conventional terminology such as a "purchase contract" or "sales agreement". Such usage does not assume anything of the specific contract itself, but enables the analysis of the implications of such an arrangement.

the availability of the lent good for the term. Barnett and Block raise the important question about the continuum of maturities, by asking:

> [W]hat is the relevant time period that separates a loan from a deposit? For example, A wishes to establish an account with B in which A turns money over to B with the expectation that B will later on return it to A. If the term of the contract requires that A, upon making a demand for the return of his funds, may be required to wait before they are returned, does this render the contract a time deposit? Suppose the waiting period to be 1 seconds [*sic*.]? 5 seconds? 10 seconds? What is the maximum period of contractually allowed delay between demand and return that still qualifies the relation as a deposit and not a loan?... Therefore, we conclude that distinguishing between demand deposits and time deposits, insofar as maintaining that it is fraudulent to borrow short and lend long if a particular type of financial transaction is referred to as a demand deposit but not fraudulent if it is referred to as a time deposit, is inapposite. (p. 230)

What is the minimum amount of time that a good can be lent for before it becomes a deposit? Here, Barnett and Block force us to deal with a very pertinent question. We see the continuum problem not as being fundamentally theoretical in nature but as of a practical problem for the legal system (and its conventions) to deal with.[3] As Murray N. Rothbard (2001, pp. 264-265) has pointed out about the continuum problem in economics:

[3] This is not to imply that economic science can separate practical from theoretical problems. The whole corpus of economics deals with theoretical issues, but their relevance is only gained through application in the external world; problems of practical importance are linked to theoretical issues (Rothbard 2001, p. 616).

> The human being cannot see the infinitely small step; it therefore has no meaning to him and no relevance to his action. Thus, if one ounce of a good is the smallest unit that human beings will bother distinguishing, then the ounce is the basic unit… If it is a matter of indifference for a man whether he uses 5.1 or 5.2 ounces of butter, for example, because the unit is too small for him to take into consideration, then there will be no occasion for him to act on this alternative.

We maintain that the same is true for law and ethics, i.e., that infinitely small steps are not taken into account, thus there is no continuum problem.

Take the following example: *E* exchanges $1 against 1 pound of butter from *F*. *E* goes home and uses a hyper-precise scale to measure his purchase, finding that he received only $0.\overline{99}$ pounds of butter from *F*. Strictly speaking, we might say that this is obvious fraud, since he received less than the contracted 1 pound of butter. Barnett and Block could rightly point to a continuum problem: Where does "1 pound of butter" start?

Most legal conventions would *probably* regard $0.\overline{99}$ pounds of butter as equivalent to "1 pound of butter", even though we cannot say so apodictically. Nevertheless, we do not have to prove such an event a priori. Faced with such a case, a judge would maintain, in all likelihood, that there was no fraud involved: that the two quantities are legally equivalent. Conventions or judges will decide in a free society what the relevant steps are.

The same is true for the distinction of demand deposits and loans. A contract with a "term" (or

"waiting period") of 0.001 seconds, 1 second or 100 seconds until a depositor receives his funds will probably be regarded as equivalent to a demand deposit. In modern banking there is almost always some amount of waiting, even on demand deposits, before the depositor can access his money. Cashiers and ATMs require time to verify that the account holder is the proper owner of the account; time is taken to move funds from a safe location (a vault, locked drawer, etc.) and into the possession of the depositor. These "waiting periods" are not negations of the fact that deposits must be instantly available – they are physical constraints imposed on us by nature, or conditions of action, so to speak. When assessing deposit contracts the important issue is that during such a waiting period (however small) between when a depositor requests his funds and they are delivered to him, the bank continually honors the original goal of the depositor: the safekeeping and full availability of the funds (Bagus and Howden 2011).

Who does it fall on to answer the relevant question: Is the intention of the person to have full availability or does he want to transfer the availability of the good for a certain time (i.e., make a loan)? It falls on judges to decide in each case in a free society. For "terms" so short that they are seen as equivalent to deposits, the purpose of the contract is safekeeping and all legal obligations for deposits will apply. Consequently, the legal system has to determine if a certain contract was designed to conceal a deposit or whether it is a genuine loan. Conventions and legal norms that develop in an evolutionary process described by Bruno Leoni (1961) or Friedrich A. von Hayek (1973) would deal with the important continuum question. The legal system as a solution to the continuum challenge should be readily acceptable by Barnett and Block – after all, they endorse such recourse in Barnett and Block (2008).[4]

[4] This is not to imply that every historically evolved event can be considered just. There are historical cases of fractional reserve banking coming into existence by the misappropriation of genuine deposit contracts (Huerta de

There is place for such conventions even in a world abiding by natural law (as in Rothbard 1982). Not every norm or judgment can be designed in advance. Take the homesteading principle. Libertarians in the Lockean/Rothbardian tradition agree that people can homestead unowned resources by mixing one´s labor with them. Rothbard (1982, p. 34) states that transforming nature "into a more useful shape" is homesteading. But what counts as transforming exactly? Is it sufficient to walk around the property? Or to mark corners to define the boundary's outline? Or must the land be tilled? Or is it necessary to build a fence surrounding the property, to fully separate it from property which you clearly did not homestead? Perhaps it is sufficient to merely bounce one´s sound waves (by saying "this is my land") off its surface.

We are faced with a continuum problem asking the question: where does homesteading start? In a free society, conventions would determine the exact norms of homesteading. Although they can vary from one society to another and from one time to another, they cannot be unambiguously removed. We maintain that the same holds true for the continuum question posed by Barnett and Block. Where is the point where the "waiting period" becomes so long that the contract can no longer be considered equivalent to a deposit and thus becomes a loan contract? This depends on conventions. Consequently, there remains a clear distinction between the two types of contracts with their essential elements of safekeeping versus the transfer of availability.

Soto 2009). Moreover, not every historically evolved occurrence is consistent with the fundamental principles of law. Huerta de Soto (2009), Bagus and Howden (2009) and Bagus *et al*. (forthcoming) show that a fractional reserve deposit contract involves a legal contradiction, and is hence an invalid contract (even if it is understood and voluntarily agreed upon by both parties).

Barnett and Block, by raising the continuum conundrum, invoke a philosophical vagueness-type argument concerning the nature of *all* concepts. After all: "*No* concept, not even those of mathematics, is absolutely precise; and some of the most important for everyday use are extremely vague" (Charles S. Peirce 1906, p. 376).[5] The illustration of the continuum of maturities in the deposit/loan contracts is just one example of the near-universal phenomenon of vagueness. Yet, we maintain, loans are not deposits, and deposits are not loans. A loan that shares properties with a deposit (such as a loan with a maturity of one second), represents a borderline case. The existence of these borderline cases does not invalidate the distinction of the concepts at hand. They do create the necessity of a well-functioning legal system to adjudicate these cases as they arise.

On the Existence of the Future Good

The other critical area where Barnett and Block blur the crucial distinction between loans and deposits is the concept of the future good. We previously clarified that one distinction between loans and deposits is that in a loan a present good (money today) is exchanged against a future good (money in the future) (Bagus and Howden 2009). There is no such exchange of present against future goods in a deposit contract. Barnett and Block attempt to blur the line between the two types of contracts by stating that: "Apart from, perhaps, science fiction, there are, at any given time, that is, at all times, no such things as 'future goods'" (p. 230).

[5] We thank John Welch for alerting us to this passage, and the application of Charles Peirce's work to the issue at hand. Ludwig von Mises (1951, pp. 128-30) discusses the issue of vague concepts in economics. Specifically, he critiques the idea of excess profits as being separable from legitimate profits. There is *no* way to distinguish between different levels of profits, nor to make value judgments of them. There *is* a way that we can distinguish between concepts such as deposit and loan contracts, which remain vague only in practice and not in theory.

We must admit that our worthy adversaries are correct in one strict sense. There exist no future goods today.

The precise (and clarifying) expression would be: In a loan contract, present goods are exchanged for *claims on* future goods. As Rothbard (2001, p. 144) states: "In a credit transaction, a present good is exchanged for a *future good*, or rather, a *claim on a future good*." On the contrary, exchanging "the deposit of a commodity for a warehouse receipt [generates a] claim to a present good" (Rothbard 2001, p. 146).[6] By adding "claim on", the clear distinction between loans and deposits remains. Depositors gain a claim to a present good (the deposited money is as "present" as money in one´s own pocket), while creditors gain a claim to a future good.

The distinction becomes important when discussing the determination of property rights. In Bagus and Howden (2009) we analyzed the legal and ethical obligations of both monetary loan and deposit contracts. There exist important legal and economic differences between the two types of contracts which attach great importance to concept of the "claim to a future good", as outlined in Jesús Huerta de Soto (2006, chap. 1, and esp. 13-20).

Most importantly, the causes or motivations for the contracts differ radically. In a deposit contract, the depositor wants to maintain the availability of the good at any (and every) moment.

[6] Indeed, Rothbard (2001, chap. 7 and *passim*) structures the pricing of all goods as a product of the discounted value of some "future good", not yet in existence but expected to be. Barnett and Block have endorsed, in varying degrees and both together and separately, the concept of the "future good" for categorizing types of both exchanges and goods. See, for example, Barnett and Block (2005; 2007) and Hans Hermann Hoppe *et al*. (1998). Their rejoinder contains a self-citation to Barnett and Block (2007, p. 134n16) to argue against the existence of future goods, yet the cited passage contains no more substantiating evidence to that end besides the statement: "[T]he category 'claims on future consumers' goods' is so broad as to be almost meaningless."

The essential element of the contract is the safekeeping of the deposited good. The obligation of the depository is to hold the deposited good and maintain its availability for the depositor, thus implying a 100 percent reserve ratio. As the full availability remains with the depositor, an appropriation of the money by the depository is fraudulent and unethical.

The motivation in the case of a loan contract is quite different. Here the transfer of the good for a specific period to the borrower is the essential contractual element. It is the obligation of the borrower to return the money (not the same specific notes but their future equivalent, i.e., a *tantumdem*) with the agreed upon interest payment at the end of the contract's term. There are no grounds for legal recourse by the lender, provided that the borrower fulfills this obligation *at the contract's maturity*.

Barnett and Block focus only on an overrepresentation of property rights in the case of the loan contract. As the same time, they (like XXX (XXX)) conflate the two different kinds of contracts (deposit and loan).[7] Barnett and Block focus solely on the case of fraud, when both parties know that they are dealing with a genuine deposit contract. In banking activity however, some people may be aware that a bank uses the deposited money (as is arguably the case of many depositors today). We argue that this special case is also unethical. The contract is invalid as the purposes of

[7] Both Barnett and Block and XXX may have fallen prey to fractional reserve banking supporters' misuse of the terms "loan" and "deposit", as they take deposit as a synonym for loan. Barnett and Block rightly claim that positive laws in the U.S. and elsewhere support their view, while XXX reckons that the law is evidence in support of his argument that deposits are loans. Yet the issue at stake is not whether positive laws are correct or not. We are concerned with the ethics of the practice, which may be judged independently of the prevailing law of the jurisdiction. By decree a government can say that a deposit is a loan, a gift, a marriage or any other kind of contract, yet this does not change the underlying goals, structure and obligations of the deposit to those of another contract.

the contracting parties are incompatible and impossible to fulfill.[8]

As a last defense, Barnett and Block (p. 235) take recourse in money's fungible nature. They maintain that fungibility masks the underlying reality of loans, and that we have been misled by this fact in our analysis. Yet, our rich legal analysis finds that fungibility is a key to the specifics of the monetary loan contract. In loans for specific goods the borrower does not destroy the good. For instance, if we borrow a car or a painting from a friend, we are (usually) obliged to return it to him in the same condition at the contract's maturity. In loans of fungible goods the use or destruction of the good is one of its essential elements. For instance, when we borrow two ounces of cooking oil or two eggs from our neighbor, we are allowed to use (destroy) the good. This is the purpose of the loan of fungible goods. It makes no sense to return the burned oil or eaten eggs after cooking (nor, we suppose, would the lender appreciate these goods to be returned). We have to return the same quality and quantity of the fungible good (the *tantundem*) at the end of the (at least implicitly) stipulated term. The same is true with money. A borrower uses (destroys) the money and returns at the end of the term not the same money units but others of equal quality and quantity.

Although our analysis applies to the general case of maturity mismatching, Barnett and Block confine themselves to a special category thereof: lending money for a longer maturity than it is borrowed for (borrowing short and lending long). Thus, they find that the practice allows for an oversubscription of property rights as depositors have a claim to their deposited funds at the

[8] Interestingly, at least one of the authors of Barnett and Block (2009; 2011) must agree with us that cases of "deposit" contracts where both the depositor and depository agree that the depository can make use of the "deposited" funds for loan activities is illegal (see Bagus *et al*. forthcoming).

same time as the party that borrowed the funds claims them. If borrowing short and lending long is bad because of a supposed overrepresentation of property rights, one might ask if borrowing short to invest long is also bad, since making a loan is an investment. Take the following example: *B* borrows $100 for one year from *A* to invest in an investment project (paying *C*) that is expected to bring him $50 profits each year for the next 10 years. Is that not also illegitimate from Barnett and Block´s perspective? After all, *B* will not have the $100 given to *C* to pay back *A* at the end of the first year, and likely will not until the second year. Granted *B* might roll-over the loan with *A* or borrow money from someone else, but this does not make a difference from Barnett and Block´s point of view. From their point of view there seems to necessarily be a crisis at the end of the first year and *B´*s behavior is criminal.

Another example: *B* borrows $100,000 from *A* for 20 years to invest in a project that will not bring him any cash flow at all. He buys a house from *C* to live in lasting 50 years. This might save *B* paying rent of $4,000 per year. Must this behavior not be criminal as well? *B* borrowed from *A* for 20 years and invested in something that brings him no money back (but does save him $80,000, ignoring discounting). *B* might have an income of $20,000 per year or he could borrow from someone else when the loan comes due after 20 years. However, it seems to us that Block and Barnett must regard this type of activity as fraudulent because *B* will not get the $100,000 back from *C* before 20 years. We see no categorical difference between *B* investing the money he got from *A* for 1 year in a loan to *C* or in a project of a longer term. Thus, it seems to follow from Barnett and Block´s analysis that all such activities are criminal and should be prohibited in a free society, reducing mutually beneficial exchanges and disrupting intertemporal coordination. Here we agree with XXX who also points to the possible difficulties to finance long-term

projects if the borrowing short and lending long is prohibited. In our view, the issue of bonds and equity would play a much greater role in a 100 percent commodity standard monetary system.

The paradoxical alliance of Barnett and Block (2009) and free bankers

Unfortunately, we fear that Barnett and Block's arguments are counterproductive against their proclaimed goal, namely: "[T]o drive a stake through the heart of the intellectual case for [fractional reserve banking]. We believe in 'piling on': exposing every flaw in this pernicious and immoral practice" (pp. 232).

By raising the continuum question, the claim that there is no clear distinction between loans and deposits despite all the evidence otherwise, they make a case similar to that used in the defense of the very practice they aim to expose: fractional reserve banking. Indeed, supporters of fractional reserve banking may use an analogous argument. They could claim that self-renewing loans of one second would be equivalent to a deposit and therefore the obligations for loans also apply to these "deposits". In fact, fractional reserve bankers such as Lawrence White (2007) claim that demand deposits (or "checking accounts" by his terminology) are callable loans "at least to all appearances", and therefore the appropriation and use of the deposited money is legitimate.[9]

[9] Selgin (2010) provides an interesting piece of history, providing evidence that Goldsmiths in 17th century London offered contracts that were neither demand deposits nor loans. These contracts were akin to aleatory contracts, whereby a financial institution promises its best to return an invested sum on demand (Bagus and Howden 2009). Lacking a full guarantee of return, these promises trade at a discount to money (i.e., they would become a type of money substitute). While Selgin provides evidence that the Goldsmiths offered such contracts, he maintains that Goldsmiths did not pioneer fractional reserve banking. Selgin's empirical evidence that Goldsmiths offered a third contract distinct from the two we posit that are legally permissible is not irreconcilable with our own view.. Indeed, Selgin's work would only be problematic if it could be shown that: 1) people who agreed to these contracts wanted

The following syllogisms portray the similarity of the approaches of Barnett and Block and fractional reserve bankers, such as XXX, in contrast to our approach.

A fractional reserve banking argument in favor of maturity mismatching:

1. Loans and deposits represent equivalent contracts (due to deposits having an unspecified maturity).
2. The same legal obligations apply (to return the contracted money when asked for).
3. Fractional reserve banking, and hence maturity mismatching, are legitimate.

The Barnett and Block argument against maturity mismatching:

1. Loans and deposits represent equivalent contracts (due to the continuum conundrum).
2. The same legal obligations apply (to not loan out the contracted money for a longer term than the contract's maturity).
3. Fractional reserve banking, and hence maturity mismatching, is illegitimate.

In distinction, we argue that:

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to maintain the full availability of their money, *or* 2) if these historical instances were used to argue for the legitimacy of the fractional reserves demand deposit.

1. Loan and deposit contracts represent legally distinct concepts.

2. Different obligations apply to either type of contract.

3a. Fractional reserve banking is *il*legitimate (as it violates the safekeeping obligation of the deposit contract).

3b. Maturity mismatching is legitimate (as it does not *per se* violate the obligation of loan contracts – to return a tantundem after a specified period)

Barnett and Block, in striving to show the illegitimacy of the banking practice of maturity mismatching, are actually undermining the strongest case against fractional reserve banking. The essential differences between loan and deposit contracts and their distinct obligations – holding a full reserve of deposited money to meet redemption demands versus returning a tantundem at the end of a loan's maturity – explain the specific and unique ethical cases of each practice. Fractional reserve banking violates a depositor's full availability of his money and thus, creates an ethical dilemma. Maturity mismatching involves no such oversubscription of property rights, nor does it imply a violation of depositor's rights (as it does not involve deposited money, but rather makes use of a loan). Fundamental legal principles show that the obligation in a loan contract is to return the good (or its tantundem) at the end of the stipulated term (or before the contract's termination). The practice of maturity mismatching does not impede the fulfillment of this obligation. The obligation in a genuine deposit contract is to safe keep the tantundem. This obligation rules out the tandundem´s appropriation during the duration of the contract, thereby invalidating the holding of only fractional reserves against demand deposits.

References

Bagus, P., and D. Howden: 2009, 'The Legitimacy of Loan Maturity Mismatching: A Risky, but not Fraudulent, Undertaking', *Journal of Business Ethics* **90**(3), 399–406.

Bagus, P., and D. Howden: 2011, 'The Economic and Legal Significance of "Full" Deposit Availability', working paper.

Bagus, P., D. Howden and W. E. Block: forthcoming, 'Deposits, Loans and Banking: Clarifying the Debate', *American Journal of Economics and Sociology*.

Barnett, W., and W. Block: 2005: 'Money: Capital Good, Consumers' Good, or (Media of) Exchange Good?, *The Review of Austrian Economics* **18**(2), 179-94.

Barnett, W., and W. Block: 2007: 'Saving and Investment: A Praxeological Approach', *New Perspectives on Political Economy* **3**(2), 129-38.

Barnett, W., and W. Block: 2008: 'Continuums', *Etica & Politica* **10**(1), 151-66.

Barnett, W., and W. Block: 2009: 'Time Deposits, Dimensions and Fraud', *Journal of Business Ethics* **88**(4), 711-16.

Barnett, W., and W. Block: 2011, 'Rejoinder to Bagus and Howden on Borrowing Short and Lending Long', *Journal of Business Ethics* **100** (2), 229-38.

Hayek, F. A.: 1973: *Law, Legislation and Liberty: Volume 1- Rules and Order*. Chicago: University of Chicago Press.

Hoppe, H.-H., J. G. Hülsmann, and W. Block: 1998, 'Against Fiduciary Media, *Quarterly Journal of Austrian Economics* **1**(1), 19-50.

Huerta de Soto, J.: 2006, *Money, Bank Credit and Economic Cycles*. Auburn, AL: Ludwig von Mises Institute.

Leoni, B.: 1961, *Freedom and the Law.* Princeton, N.J.: D. Van Nostrand Company.

Mises, L. v.: 1952 [1951], 'Profit and Loss', in *Planning for Freedom*, 3rd edition. South Holland, IL: Libertarian Press. pp. 108-50.

Peirce, C. S.: 1955 [1906] 'The Concept of God', in J. Buchler (*ed*.) *Philosophical Writings of Peirce*, New York: Dover Publications. pp. 375-79.

Rothbard, M. N.: 2001 [1962], *Man, Economy, and State*. Auburn, AL: Ludwig von Mises Institute.

Rothbard, M. N.: 1998 [1982]. *The Ethics of Liberty*. New York: New York University Press.

Selgin, G.: 2010. 'Those Dishonest Goldsmiths' (April 14, 2010). Working Paper. Available at SSRN: http://ssrn.com/abstract=1589709

White, L. H.: 2007, 'Huerta de Soto's Case Against *Fractional Reserves*', *Free-Market News* Network *(08 Jan)*.

Yeager, L. B. (2010). Bank reserves: A dispute over words and classification. The Review of Austrian Economics, 23(2), 183-191.

XXX. forthcoming. A comment on Block and Barnett on time deposit and Bagus and Howden on loan maturity mismatching.