Ludwig von Mises and Contemporary Free Banking Theory

Wang Kesong

Abstract:
It has long been debated whether 100 percent reserve is an inherent requirement of a truly "free" banking system. This paper examines accordingly 1) the historical question regarding Mises's true position on free banking and 2) the theoretical claims of both Mises and contemporary free banking theorists on this issue, in light of Mises's general theory of money and banking. I argue that Mises is in fact lying on the middle ground between modern 100 percent reserve free bankers and fractional reserve free bankers. For the second issue, I argue that 1) Mises's theoretical claims on free banking are not satisfactory, 2) modern FRFB theorists' modified theory is not satisfactory, and 3) 100 percent reserve free bankers' fraud/embezzlement argument is generally correct, whereas it does not satisfactorily explain the nature of modern "demand deposits". I thus propose a modified analysis as a complement and reinforcement to their argument. I also point in my conclusion two possible ways to a resolution of modern free banking debate.

1. Introduction

Recent decades have witnessed a remarkable revival of a long-ignored research approach in monetary/banking theory. The idea of "free banking"—the application of the general principle of free trade in money and banking—greatly challenges the long-held belief regarding the alleged necessity of a centralized monetary/banking system. However, as in many other cases, controversies arise even among the proponents of this general idea: while one group seeks for an unconditional deregulation of the banking industry, another group argues in contrast the "inseparable" requirement of a "truly free" banking system, viz., 100 percent reserve legal requirement. The former group, represented by scholars such as White, Selgin, Sechrest and Dowd, is generally labelled as fractional reserve free banking (FRFB) school.[1]And the latter group, including a number of Austrian economists influenced by Murry Rothbard such as Hans-Hoppe, Hülsmann and Huerta de Soto, can be labelled as 100 percent reserve free banking school.[2] The crux of debate is: theoretically, does "free banking" require 100 percent deposit banking, or does it allow or require fractional reserve banking?

In this free banking debate, both the two-sides are not only advancing their views at theoretical level, but also at historical level seeking and analyzing precedents for their own scenario of "free banking." Very interestingly, they both have found in one person the role

[1] The list of this group can easily be extended, for example: Steven Horwitz, David Glasner, Leland Yeager, Richard Timberlake, etc.

[2] For other Austrian economists in favor of this theoretical position, see: Joseph Salerno, Walter Block, Robert Murphy, David Howden, Phillip Bagus, etc.

of forerunner: the great Austrian economist Ludwig von Mises. Argument thus also arises to ask historically, whether Mises was in favor of 100 percent deposit banking imposed by law or fractional reserve laissez-faire banking.

The whole paper is outlined as follows. Part two goes through a brief retrospect of Mises's monetary and banking theory. A thorough understanding of his theory indicates the general conclusion that free banking is an ultimate solution for Trade Cycles that resulted from (over-)issue of *fiduciary media*, viz., bank-notes/deposits unbacked by real reserves, through the channel of bank credit. Part three examines Mises's changing ideas on the practical issues that are related to the urgent requirement of limiting the power of the banks in credit expansion. These issues concern the extent to which fiduciary media can be treated as justifiable, 100 percent reserve as merely a political prescription or essential feature of a sound monetary/banking system, and the efficacy of free banking system in preventing Trade Cycles. To trace the evolution of Mises's ideas on these issues are important, for his ideas directly shaped the sphere of contemporary free banking debate and are closely related to the controversies of debating two-sides. Part four and five briefly reviews the contrasting theoretical claims of FRFB school and 100 percent reserve free banking school. Part six offers a general critique of the theories of free banking that have been discussed so far. Part seven concludes with two proposals to a possible resolution of modern free banking debate.

2. Ludwig von Mises on Money and Banking

a. Money, Banking and Trade Cycles

It is necessary to highlight the two major contributions of Mises on Money and Banking. First, in his masterpiece *The Theory of Money and Credit*, Mises successfully applied the newly developed Subjective Value Theory to the theory of Money and gave a satisfactory explanation of its exchange-value. Second, starting from a comprehensive classification of different monetary objects, Mises completed a logically consistent theory of money/banking and pioneered a new Trade Cycle theory. Here we mainly address his second contribution.

Mises's new classification ([1952] 2009, 50–67) starts from a clear demarcation between 1) money "in the narrower sense", or money proper, and 2) money substitutes. In the former case, monetary objects possess an independent exchange-value derived directly from the subjective valuation of individuals. However, "When an indirect exchange is transacted with the aid of money, it is not necessary for the money to change hands in hands physically". In practice, indirect exchange is often instead completed through the transference of some *perfectly convertible and secure claims* to an equivalent sum of money proper, immediately payable on demand. Money substitutes, viz., bank-notes, current deposit accounts, and sometimes Token coins, insofar as no doubts arise from public concerning the unconditional redeemability of them, will be tendered or accepted in reality just the same as the sums of money proper to which they refer. It is this fact ensures issuing-banks a privileged position and enables them "to put money substitutes in circulation without maintaining in readiness the sum that would be necessary to keep the promise of immediate conversion that they present". Those money substitutes not covered by real money reserves are called fiduciary media, in contrast to those money substitutes backed by full reserves, namely, money-certificates. "The very nature of fiduciary media", according to Mises, is to impose upon "those who issue them the obligation to pay a sum of money which they cannot command."

It was time for Mises ([1952] 2009, 261–319) to construct a completed theory of Money and Banking in which fiduciary media plays a vital role. He clearly distinguished two types of Banking Activity, viz., 1) "the negotiation of credit through the loan of other people's money" and 2) "the granting of credit through the issue of fiduciary media". These banks which do not issue fiduciary media can only *transfer commodity credit* the amounts of which cannot beyond the limits of their own funds and the amounts their clients have entrusted to them. However, these banks which issue fiduciary media can *grant/create circulation credit* easily beyond the limits of the banks' funds without any economic sacrifice. Unlike commodity credit, the process of granting circulation credit is characterized by several non-negligible features:

1) The granting of *circulation credit* does not necessarily mean *credit expansion*. "If the amount of fiduciary media previously issued has consummated all its effects upon the market, if prices, wage rates, and interest rates have been adjusted to the total supply of money proper plus fiduciary media (supply of money in the broader sense), granting of circulation credit without a further increase in the quantity of fiduciary media is no longer credit expansion".
2) Like money proper, changes in quantities of fiduciary media can greatly influence the purchasing power of Money in general and bring about the so-called Cantillon Effects and thus re-distribute the incomes and wealth in favor of those who get the additional credits first.
3) Credit expansion is *ad libitum*, viz., additional fiduciary media can be freely issued without previously having correspondent increase on the side of demand for credit. "The issuers of the fiduciary media are able to induce an extension of the demand for them".
4) Credit expansion is not limited to Central Bank. However, no private bank can successfully grant/create circulation credit insofar as those necessary preconditions have not been fully satisfied, i.e., the *unconditional convertibility* of fiduciary media is generally recognized and trusted by most majorities. Before a private bank can safely grant circulation credit, it will be forced to behave *as if* it has 100 percent reserves for all its issued money substitutes.

Of course, no credit can either be transferred or created without the soil of deposit system. The short discussion of Mises ([1952] 2009, 268–271) on deposit business implies many significant implications, and its importance is still largely ignored by some free banking theorists. A detailed investigation of Mises's writings indicates following conclusions:

1) Depositors' acceptance of convertible bank-notes/current deposit accounts does not engage in credit transaction.
2) The banks which are the most reliable ones from the point of the view of depositors, viz., those who approximate their behavior of "100 percent banking" most successfully, will at the same time be the ones which enjoy the most privileged

position in granting circulation credit.

3) Circulation credit is and can only be created *on top of* depositors' current deposit accounts, or in Mises's terminology "saving deposits". This is in sharp contrast to the "investment deposits" of depositor-loaner from which commodity credit is safely transferred to entrepreneur-borrower.
4) "In the course of time, the differences in banking technique between the two kinds of deposit [i.e., "saving deposits" and "investment deposits"] have been largely obliterated." And such confusion in modern deposit business tends to enhance the ability of the banks in granting circulation credit.

Since there are no natural limits on credit expansion, it is completely within the power of the banks to continuously reduce the rate of interest charged for loans to nearly an unlimited extent. The result, as outlined by Austrian Business Cycle Theory[3], is as follows. Continuous credit expansion will bring about discrepancy between the market rate of interest and the "natural" rate of interest. While the lower market rate of interest necessarily stimulates new investment projects and generates Boom-prosperity that characterized by a more "roundabout" process of production, the existing stock of real savings conditioned by the "natural" rate of interest will not be sufficient to sustain the more roundabout ways of production. *Malinvestment* thus occurs during the period of Boom-prosperity. Boom-prosperity will over once the banks "cease their endeavors to underbid the natural rate of interest", then the economy will go "bust" and even into "depression", because from the very start the whole Boom-prosperity is artificially stimulated without having necessary support from voluntary savings.[4]

b. Free Banking and "The Limitation on the Issuance of Fiduciary Media"

Given the potentiality of the banks to issue additional amounts of fiduciary media theoretically to an unlimited extent, the danger of Economic Crises will always remain possible if no restrictions are taken to limit the banks' granting of circulation credit. It follows that an ideal monetary/banking system must be a system under which no continuous and continual credit expansion can exist.

The theory of free banking rightly starts from consideration as such. Mises ([1949] 1998, 431–445) envisaged an free banking system that characterized by 1) the "coexistence of a multiplicity of independent banks" and 2) "several independent banks have been established in the past…(and) these banks have introduced the use of money substitutes a part of which are fiduciary media" and argued that, any individual bank which alone embarks upon an additional issue of fiduciary media will be quickly forced to abandon its expansion of credit. The logic is, since only the clients of the expanding bank will accept these additional issued bank-notes and deposits as money substitutes for the settlement of payments, those who attain additional credits can only pay the non-clients of the

---

[3] Here we mainly follow Mises's ([1952] 2009, 339-366; [1949] 1998, 535–583) formulation. For later developments of this issue, see Hayek (1935), Rothbard ([1963] 2000), Garrison (1986, 2001).

[4] It must be emphasized that early in *Nationalökonomie* published in 1940, Geneva, Mises "had already came up with a new benchmark to identify pernicious reductions of the monetary interest rate. The relevant benchmark was no longer the Wicksellian natural rate that would exist if the economy were a barter economy. It was rather the monetary interest rate that would exist in the absence of credit expansion." See Hulsmann (2007, 780)

expanding bank for real money proper. The gradual return of those additional money substitutes and loss of reserves will provide the expanding bank a *precautionary sign* and force it "as soon as possible return to a policy of strengthening its money reserve" in order to avoid insolvency. This is the "Law of Reflux" in the form of demand for convertibility[5]: "Since the overissuance of fiduciary media on the part of one bank… increases the amount to be paid by the expanding bank's clients to other people, it increases concomitantly the demand for the redemption of its money substitute."

The additional issued money substitutes can either "reflux" back to issuing-banks directly by the public in exchange for gold-species or through the inter-bank clearing at clearing house. Their difference is merely technical.

However, from the point of view of Mises, the "Law of Reflux" in the form of demand for convertibility is not the only mechanism which can restrict credit expansion. In fact, Mises emphasized that this mechanism will cease to work on condition that people's confidence has already crashed:

> The laws which compelled the banks to keep a reserve in a definite ratio of the total amount of deposits and of banknotes issued were effective in so far as they restricted the increase in the amount of fiduciary media and of circulation credit. They were futile as far as they aimed at safeguarding, in the event of a loss of confidence, the prompt redemption of the banknotes and the prompt payment of deposits.
> (Mises [1949] 1998, 436)

Another fact valued by Mises as a strong restriction under free banking system is "every bank issuing fiduciary media is in a rather precarious position":

> The confidence which a bank and the money substitutes it has issued enjoy is indivisible. It is either present with all its clients or it vanishes entirely. If some of the clients lose confidence, the rest of them lose it too. No bank issuing fiduciary media and granting circulation credit can fulfill the obligations which it has taken over in issuing money substitutes if all clients are losing confidence and want to have their banknotes redeemed and their deposits paid back. This is an essential feature or weakness of the business of issuing fiduciary media and granting circulation credit.
> (Mises [1949] 1998, 436)

Thus, it is people's subjective and indivisible confidence that ultimately draws the limitation. People's confidence on the unconditional redeemability of money substitutes issued by private banks constitutes the most valuable "asset" they can possess under a free banking system. No bank which doesn't hold 100 percent reserves against its money substitutes can escape from bankruptcy on condition that people's confidence has crashed. Since a free banking system will greatly enhance the danger of destroying people's fragile confidence for the lack of Central Bank functioning as "the Lender of Last Resort", Mises

[5] The first formal expression of this law can be traced back to British Banking School, especially to Tomas Tooke (1848). Notice that there is another "*Real-bills doctrine*" that is closely related to whereas theoretically distinct from this law can be found in the writings of Banking School. For a clarification of these two concepts, see Arnon (2011, 227–229), Glasner (1992), Skaggs (1991), Laurent Le Maux (2012). It is noteworthy that Mises did not realize the difference between these two concepts in his criticisms of the Banking School.

believed, a free banking system can render enough pressures on the business of granting circulation credit: in order to avoid a loss of the "good-will" or the "brand" of the banks, "A reserve must be kept large enough to redeem all banknotes which a holder may submit for redemption…no bank can content itself with issuing fiduciary media only."

In conclusion, Mises's free banking system involves two mechanisms: 1) the Law of Reflux in the form of demand for convertibility; 2) the mechanism of Brand Extinction[6]. A general critique of Mises's theoretical claims on free banking has to wait until part six.[7]

3. From Mises Ⅰ to Mises Ⅱ: Fiduciary Media, 100 Percent Reserve, and Free Banking

This part will further investigate Mises's changing ideas on issues that are closely related to the urgent requirement of limiting the power of the banks in generating credit expansion. We shall follow the demarcation by Niles (2016) to divide the ideas of Mises into two phases: the pre-World War II views of Mises I and post-war views of Mises II. The former is mainly represented by *The Theory of Money and Credit* and the essay "Monetary Stabilization and Cyclical Policy" written before 1928; the latter is mainly represented by *Human Action* published in 1949 and the essay "Monetary Reconstruction" published in 1953 as an epilogue of *The Theory of Money and Credit*.

a. Fiduciary Media

Given the casual relationship between fiduciary media and Trade Cycles, readers may fairly conclude that it is better to eliminate fiduciary media at all. Surprisingly, quite the opposite of raising arguments against its creation, Mises I ([1952] 2009, 322–325) rather attempted to justify the history of creation of fiduciary media. His justification is presented threefold: First, there is said to be a cost–reducing effect of fiduciary media under metallic money standard. Apparently, this is an idea derived from old Smithian-Ricardian argument on the employment of a physically more convenient form of medium of exchange[8]. Second, the creation of fiduciary media is said to have an effect of "avoiding tremendous increase in the value of money proper". Mises claimed "the problem of diminishing the cost of the circulatory apparatus" under credit or fiat money standard can be understood from this perspective[9].Third, the creation of fiduciary media is said to have an effect of favoring capital accumulation.[10]

---

[6] This term is first introduced by Salerno (2012).

[7] Here it might be noted beforehand that I agree with Gertchev's comment (2012, 210) that "the self-limitation of bank credit expansion, which Mises considers to be inherent to FR free banking, is not apodictic, but rather dependable on specific actions being undertaken by the banks."

[8] This effect, however, is uniquely understood by Mises I from other perspectives: in areas where metallic money was mainly employed, 1) the development of fiduciary media can save the capital and labor which otherwise would have been diverted to the production of monetary metals of which the increase "would not have improved the position of the individual members of the community", and most importantly, 2) the pure issue of money-certificates is unprofitable from the point of view of the issuer, unless such issue is simultaneously accompanied by the issue of fiduciary media.

[9] Mises ([1953]2009, 300, 323).

[10] Mises ([1953]2009, 349–350).

It is not a suitable place to address in details the feasibility of Mises I's justifications. Here we can only afford to make several comments: although I find all these justifications fail to be the formal praxeological-catallactic claims with *a priori* validity, and most of them are barely acceptable even in light of Mises's own economic theory[11], I maintain that some of his arguments do provide us a seemingly plausible historical *conjecture* regarding why "in the progressive extension of the Exchange economy" fiduciary media has never been totally suppressed. The status of such conjecture in Mises's thoughts is very noteworthy, for even later Mises II had refrained himself from justifying fiduciary media on a pure catallactic ground, he still insisted that fiduciary media is evolved naturally out of regular business of banking[12].

Of course, it remains an open issue for economic historians to argue whether Mises's interpretation is feasible[13]. However, I also maintain that, no matter what conclusions may be drawn from research projects of the history of fiduciary media, they can never be the only decisive criterion by which we judge the appropriateness of fiduciary media. Even if in our conjecture fiduciary media was to some extent justifiable for some utilitarian reasons, we still cannot assert with apodictic certainty that these reasons will remain the same valid in the future. Most importantly, historical conjecture can never be a substitute for the theoretical conclusion that creating additional fiduciary media will bring about Trade Cycles. It follows that regarding the normative problem of whether in the future we should totally abandon fiduciary media, weights must be put carefully between theory and history if we prepare to solve it on a utilitarian ground.

b. 100 Percent Reserve

It is exactly consideration of the danger of credit expansion let both Mises I and Mises II reject the idea of creating additional fiduciary media.

The 100 percent reserve plan proposed by Mises is characterized by two features. First, such plan is "marginal", because it only applies to those additionally created fiduciary media and does not apply to those already created in the past. Second, it is proposed by Mises as his political prescription under certain historical and political contexts. I agree with Cachanosky (2009) and Niles (2016) that it is wrong to attribute 100 percent reserve free banking claim to Mises. To support a suppression of additional issue of fiduciary media when there already has been the problem of over-issue is one thing, to establish a free banking system characterized by 100 percent reserve requirement is another.

With a gradual transition of the world from pre-World War II Gold-exchange standard to the post-war Bretton Woods System and the progressive attenuation of gold as an anchor for money, Mises was more and more worried about the danger of fiat-money and gradually strengthened his position on a return of Gold-species standard, and the first step

---

[11] For example, the so-called second and third effect directly contradicts other Mises's correct conclusions, viz., "a larger stock of money with relatively lower purchasing power functions the same with a smaller stock of money with relatively higher purchasing power", and "additional capital can be accumulated only by saving". These conclusions can be undoubtedly deduced from the nature of money and capitalist production. For a comprehensive criticism of Mises's justifications above, see Gertchev (2004).

[12] See Mises I ([1952] 2009, 271–275, 322–325) and Mises II ([1949] 1998, 432, 788).

[13] I.e., both Rothbard ([1983] 2008, 90–94) and Huerta de Soto (2006, 37–111) interpret fiduciary media as the product of government intervention in their revisionist history of fiduciary media.

towards this objective is to unconditionally abandon any attempt to further expand circulation credit. Strictly following the correct political prescription indicated by 100 percent "marginal" reserve plan therefore is of higher priority in views of Mises than the question of establishing an ideal monetary/banking system. Early in 1928, Mises ([1928] 1978, 149) had already concluded: "Under present circumstances, it is out of the question, in the foreseeable future, to establish complete 'free banking'."

c. The Efficacy of Free Banking

Although Mises's theory indicates that free banking can restrict credit expansion, it is another question to ask whether it can restrict credit expansion *effectively*. Especially, a careful examination of Mises's formal discussion on the two mechanisms does not give us a clear clue regarding whether those expanding banks can stop expanding credit *right before all its disastrous consequences become apparent.* Complicating the whole issue, in writings of Mises I and Mises II we only find very different positions: in a short section entitled "Free Banking", Mises I ([1928] 1978, 123–125) suggested us that there is *some period of time* before the private commercial banks start to "extremely" restrict the issue of fiduciary media, and during which all the disastrous consequences of credit expansion might possibly be unavoidable; until Mises II, however, he explicitly changed his early ambiguous position.

> Free banking is the only method available for the prevention of the dangers inherent in credit expansion. It would, it is true, not hinder a slow credit expansion, kept within very narrow limits, on the part of cautious banks which provide the public with all information required about their financial status. But under free banking it would have been impossible for credit expansion with all its inevitable consequences to have developed into a regular-one is tempted to say normal-feature of the economic system. Only free banking would have rendered the market economy secure against crises and depressions.
> (Mises [1949] 1998, 440)

There is no ambiguity in his words: free banking is perfectly efficient in preventing Economic Crises. Notice that in this context Mises II did not expect the disappearance of "slow" credit expansion—this is the result of not completely prohibiting the business of issuing fiduciary media. However, he insisted that a "large" scale of credit expansion will never occur. It is here an implicit distinction between "Fluctuations" and "Economic Crises" is presupposed: while 1) any credit expansion will necessarily bring about Trade Cycles the explanation of which is the task of Austrian Business Cycle Theory, only 2) over-expansion can result in severe depressions and crises.

No matter how vague such distinction is, it must be largely dependent on the frequency and severity of Trade Cycles. Nevertheless, the lack of clear-cut criteria in distinguishing these two categories still leaves us to question, is it really the case that free banking can perfectly prevent all the disastrous consequences of credit expansion from occurring? Mises tried to assure us that under free banking the creation of fiduciary media can at the same time be preserved and be extremely restricted to a very limited range. Such claim seems to be too optimistic.

4. FRFB and the Theory of Monetary Equilibrium

Apparently, the less satisfactory discussion of Mises only results in more quibbles. Siding with 100 percent reserve free banking school seems to be inevitable for anyone who holds a more skeptical point of view on the efficacy of free banking *per se*. As for those less skeptical of later Mises's assertion, the aim is to provide a solid theoretical justification for both the free banking and preservation of fiduciary media. Modern FRFB theorists therefore develop their own theory of monetary equilibrium and employ it in defense of a fractional reserve free banking system.

In eyes of modern FRFB theorists, Boom-Bust Cycles described by ABCT is only one of the manifestations of a bigger economic coordination problem "Monetary disequilibrium". And the merit of FRFB is to bring about "the state of affairs" at which "there is neither an excess demand for money nor an excess supply of it at the existing level of prices", that is, "monetary equilibrium".

How could such ideal status of "monetary equilibrium" be approximately reached under FRFB? Point is the "Law of Reflux". Although in Mises's formulation it functions merely as a mechanism of restricting over-issue, its full insights are only to be revealed in the advanced restatement of modern FRFB theorists: the "Law of Reflux" will ensure the banks have no control over the supply of money (substitutes); change in supply of money (substitutes) under FRFB is demand-accommodating.[14]

The process of correcting excess demand or excess supply of money through the "Law of Reflux" can be outlined as follows: if there is a rise/fall in the demand for holding money substitutes of one individual bank, there will be less/more chances of those money substitutes entering the adverse clearing system, and the issuing bank with a positive/negative net clearing balance will find it profitable to expand/restrict its issue of money substitutes through the channel of credit; if there is a general rise/fall in the total demand for holding money substitutes of all the issuing banks, FRFB as a whole with a decrease/increase in gross clearings at the existing level of reserve stocks will find it profitable to expand/restrict the issue of money substitutes until the desired level of precautionary reserves again match the given stock of reserves[15]. The better such elastic adjustments are in accordance with changes in people's demand for holding money substitutes, the more probable the profit-maximizing fractional reserve banks to operate at one unique reserve level.

The theory of monetary equilibrium does not merely suggest that under FRFB there might be a long-run stability of price level, however. For modern FRFB theorists have in a long time maintained that Austrian Business Cycle theory is but one wing of general coordination failures that manifest a systematic deviation from the Say's Law: excess supply of money means relatively scarce real savings and malinvestments, and excess

---

[14] See Dowd (2015) and Selgin (1988, 54). Such restatement, however, does not essentially different from the original doctrine of British Banking School on the endogeneity of money, see Arnon (2011, 209–247), Huerta de Soto (2006, 675–706).

[15] See White (1999, 64–67) and Selgin (1988, 64–69).

demand for money, which in their opinion is tantamount to voluntary savings[16], means relatively abundant real savings and insufficient investments. Contrary to the conclusion of Mises, "no ill consequences result from the issue of fiduciary media in response to a greater demand for balances of inside money [money substitutes]." The concomitant movement of credit in response to an increase in the demand for money substitutes corrects the excess real savings and the fall of "natural" rate of interest that would otherwise have caused "stagnation" at the existing level of market rate of interest—a scenario that is said to be Keynesian, while an adverse movement corrects the fall of market rate of interest that would otherwise have been resulted from the "over-issue" at the existing level of "natural" rate of interest—which is said to be the Austrian scenario.[17]
The theoretical claims above will be critically examined in part six.

5. 100 Percent Reserve Free Banking: towards an ethical and legal refutation of fractional reserves

It should be clear that modern fractional reserve banking is a shell game, a Ponzi scheme, a fraud in which fake warehouse receipts are issued and circulate as equivalent to the cash supposedly represented by the receipts.
Rothbard ([1983]2008, 97)

It seems at first glance that such claim is untenably radical and incompatible with Mises's visible utilitarian appreciation of fiduciary media. However, it indeed wouldn't take an effort to show that such claim can be justly deduced from Mises's own discussion of the nature of fiduciary media. The simply but clear logic is: fiduciary media represents claims to *non-existing* money proper and involves obligation to pay a sum of money which the issuers can never command, and therefore it is a fraud; also, because such claims are not debt claims, not equity claims, but claims to *present goods* owned by depositors, claims to *non-existing-present* goods necessarily mean that the original present money proper, which otherwise should have been kept fully available to depositors in the same quantity and quality at any moment, were appropriated by the person (i.e., private banks) to whom they have been entrusted, that is, embezzlement.
Here we can only briefly note the *a priori* ethical principle defended by Rothbard ([1982] 2002, 3–61) from Thomist-Lockean Natural Law tradition: based on the initial principle of self-ownership and the second principle of original appropriation/homesteading, the only ethical way of transferring private property that originally transformed by each self-owned individual through production is voluntary exchange. Anyone who "aggresses against the person or other produced property of another" without engaging in voluntary exchange is simply a criminal. Rothbard also emphasized that fraud is an actual physical aggression, for it involves the appropriation of someone else's property without his consent.
As one of the most famous students of Rothbard, Hans-Hoppe (1994, 1998) bases his

[16] See Selgin (1988, 54), "to hold inside money is to engage in voluntary saving."
[17] See selgin (1988, 56), White and Selgin (1996), especially Sechrest ([1993] 2008, 45–56).

refutation on his unique approach of "argumentation ethics": the creation of fiduciary media is intrinsically self-contradictory and thus as such cannot be argumentatively justified, for the creation of fiduciary media causes only the paradoxical situation that the existing and unchanged stock of money proper is claimed by more than one party at the same time. This, however, is incompatible with the general principle of property that "two individuals cannot be the exclusive owner of one and the same thing at the same time."

Besides the attempts of refuting fiduciary media on ethical ground, a parallel refutation is also generated from the legal perspective. By developing Rothbard's argument on "bank-notes or deposits are bailments"[18], Huerta de Soto (2006, 1–37, 115–167) distinguishes two different types of contract: 1) loan contract and 2) deposit contract/*depositum*. Depending on the fungibility of present-existing goods either loaned or deposited, each type of contract can be further divided into 1-a) *Commodutum*, viz., the loan and lending of a car; 1-b) *Mutumm*, viz., the loan and lending of wheat, oil, or money proper; 2-a) "regular" deposit contract, viz., the custody or safekeeping of a painting; 2-b) "irregular" deposit contract, viz., the custody or safekeeping of oil, wheat, or money proper. Given the intrinsically incompatible natures of loan contract and *depositum*, to loan a part of money proper that is deposited in the "irregular" deposit contract, in other words, to create fractionally covered deposit accounts, would legally constitute a violation of the basic obligation of "irregular" deposit contract and therefore the crime of embezzlement. As for the creation of unbacked bank-notes, it simply "implies counterfeiting and the crime of fraud."

Although I find no essential problems in the arguments above, I maintain that the nature of modern fractional reserve "demand deposits" cannot be simply equalized to a "bailment" or "irregular" *depositum*. It will be shown in the next part that a modified analysis of the nature of modern "demand deposits" can be provided as complementary to 100 percent reserve free bankers' arguments without violating the conclusion.

6. FRFB or 100 Percent Reserve Free Banking? A General critique

Should we side with later Mises II and modern FRFB theorists to believe that, the "Law of Reflux" is strong enough to prevent Economic Crisis (not "fluctuations")? George Selgin (1988, 41–47) is very confident and provides a thorough defense of its validity. Before we examine his theoretical claims, an overall criticism of the "theorem" of impossibility of Economic Crisis under FRFB will be posted at first. My proof of the whole criticism can be summarized as follows:

a. Because 1) credit expansion is *ad libitum* and 2) the disastrous results of credit expansion manifest themselves only *ex post*, *ex ante* no one can foretell which scale of credit expansion would be over-expansion.
b. And because 3) a span of time must elapse before the "Law of Reflux" corrects credit expansion, the only restriction which can be functioning *ex ante* is the mechanism of brand distinction.
c. However, for exactly the reason of 2), profit-maximizing bankers' fear of brand

---

[18] See Rothbard ([1962] 1991,45–48; [1983]2008,85–90; 1992, 97–98).

distinction will be greatly reduced, that is, they will tend to underestimate the risk of brand extinction and behave more reckless in credit expansion.

d. Over-expansion therefore can happen under FRFB.

Step a and c is straightforward, while Step b is less obvious. To make this point clear, it must be stressed out that the "Law of Reflux" is intrinsically a mechanism *ex post*, viz., after there has already been credit expansion. It can provide bankers a precautionary sign *ex ante* only on condition that the previous round of credit expansion has insofar not resulted in Economic Crisis. Of course, if there is no time-lag between every round of credit expansion and its corresponding correction, *mutatis mutandis*, the "Law of Reflux" can work instantaneously, then *by definition* FRFB is in a monetary equilibrium. However, this is simply not the case. To deny the proposition that the work of "Law of Reflux" must take some period of time would simply invalidate the whole theoretical debate surrounding the efficacy of FRFB, for anyone who tries to defend or rebut the validity of FRFB in correcting credit expansion must in their common question setting presupposes the *existence* of distinction between the problem of credit expansion and the mechanism which corrects it, that is, presupposes the *existence* of time-lag between these two notions.[19]

The "Law of Reflux" *ex post* therefore indicates that, it can be too late for this mechanism to be a brake for Economic Crisis. It will work and provide us a precautionary sign for next credit expansion, so long as previous credit expansion was seemingly safe. However, it is just logically impossible for us to use *this* precautionary sign to judge beforehand the feasibility of previous credit expansion. The road towards an *ex ante* knowledge regarding where to safely stop credit expansion is thus necessarily barred. The only thing we can rely on *ex ante* to prevent Economic Crisis is our fear of it. Our argument therefore strongly justifies earlier Mises I's skepticism.

Now we can examine Selgin's defense. His justification mainly rests on the assumptions of (a) "that the total demand for bank notes is determinate, and that surplus notes are parted with; (b) that most of these surplus notes end up in possession of banks other than their own issuers; (c) that banks return their rivals' notes for redemption *immediately*; and (d) that a preponderance of the notes that enter the clearing mechanism following overexpansion by any bank will be notes of the over expanding bank." While we can safely accept the first assumption, the second and third assumption in general is subjected to and thus rebutted accordingly by our time-lag argument. As for the fourth assumption, which is specifically termed as the mechanism of "note-brand discrimination", our major criticism is that it is merely a psychical assertion. Even if we accept its existence, it simply has nothing to do with our criticism here. The "note-brand preference" of individuals is a hypothetical conjecture which may manifest itself only at the very moment we ask for redemption, while the time-lag argument maintains the actual existence of certain time-lag before we ask for redemption.[20]The most important attempt to justify the theorem of

---

[19] Besides the formal proof here, we know empirically that it is quite unlikely for us to rush into the banks to ask for redemption at every time we get additional purchasing powers. Even under FRFB, we will possibly hold them until we are certain that they will in the future be refused as means of payment. The rival banks might be in a privileged position in judging whether they should seek for redemption, nevertheless this also does not mean that they are bound to do so immediately.

[20] For other economic reasons regarding why the competitive banks may possibly not return their rivals' notes immediately, see Bagus and Howden (2010, 2011). For inter-bank loan market as a potential escape

impossibility of Economic Crisis under FRFB, therefore, falls into ground.

How about Modern FRFB theorists' unique claim that FRFB can correct excess demand for money which otherwise could have resulted in the so-called Keynesian "stagnation"?[21] To fully explore this theoretical claim requires almost an independent paper. Here we can only afford to make two comments. First, although this idea indeed can find its origin in the writings of Strigl (1934, appendix), Hayek ([1935] 1967,118–125) and other members of "the fourth generation of the Austrian school"[22], this simply does not apply to the case of Mises. It is noteworthy that not only had Mises ([1928] 1978a, [1946] 1978b, [1949] 1998, [1953] 2009) never discussed the idea of "compensating" credit expansion, there is but also one independent section ([1949] 1998, 564–568) which can be interpreted as his explicit refutation of it. A further investigation regarding the contrasting Wieserian / Bohm-Bawerkian approach within Austrian School might be necessary in clarifying such theoretical divergence.

Second, a careful investigation of Mises's writings on Trade Cycles immediately suggests that temporary deviations from the Say's Law can only be due to reasons on the supply side of money, viz., when there is either an additional creation of fiduciary media or an intentional contraction of the existing stock of money. Without deliberate inflationary expansion and deflationary contraction of loanable funds from the supply side, the market rate of interest will necessarily correspond to the height conditioned by people's *a priori* time preference, that is, the supply of loanable funds will always correspond to the available stock of real savings. Mises's Trade Cycle Theory is perfectly compatible with his *a priori* Time-Preference interest theory, for market rate of interest is ultimately subjected to and can thus only deviate temporarily from the height which corresponds to people's time preference for being artificially manipulated. It follows that there is no reason to assume that in the absence of artificial manipulation, the market rate will not adjust itself accordingly when people change their time-preference and make voluntary savings.[23]

The whole theory of monetary equilibrium is therefore unsatisfactory. However, some quibbles regarding the arguments of 100 percent school are still left to be addressed. These quibbles start from White and Selgin's (1996) counter-argument regarding Rothbard and Huerta de Soto's bailment/ "irregular" *depositum* interpretation of modern fractional reserve bank-notes/deposits. They argue instead that such bank-notes/deposits are merely "callable loans" from depositors.

White and Selgin's rebuttal is unsuccessful. Neither does it resolve the fundamental difference between loan contract and *depositum*, i.e., whether there is a forego of present goods in exchange for future goods, nor does it convincingly justify their implicit assumption that *depositum* has nothing to do with a proper analysis of modern deposit business. Nevertheless, they rightly point out that not all the money proper handed over to the banks represent depositors' demand for the service of safekeeping or custody. A proper interpretation of modern "demand deposits" therefore must be, as rightly noted by

---

for private banks from the clearing of the "Law of Reflux", see Gertchev (2012).

[21] Selgin (1988, 59) explicitly announces that "Despite these important differences…many Keynesians might accept the prescription for monetary equilibrium offered in this chapter."

[22] For a great introduction, see Selgin (1988, 56-60).

[23] For further criticisms, see Davidson (2012), Bagus and Howden (2011, 2012).

Mises ([1952] 2009, 269–270), something in between: it is a hybrid of (callable) loan contract and "irregular" *depositum*.

However, how could these two intrinsically distinct contracts be intertwined into one "demand deposits" which are tendered and accepted normally as money? The answer for this puzzle can be found in Carl Menger's discussion of "imaginary good".

> A special situation can be observed whenever things that are incapable of being placed in any kind of causal connection with the satisfaction of human needs are nevertheless treated by men as goods. This occurs (1) when attributes, and therefore capacities, are erroneously ascribed to things that do not really possess them, or (2) when non-existent human needs are mistakenly assumed to exist.
> (Menger [1871] 2007, 53)

The moneyness of Modern "demand deposits" is grounded on everyone's subjective belief on its *unconditional* redeemability. Such belief is not shattered by their implicit knowledge that the banks will invest parts of their "demand deposits", rather is it enhanced for the existence of "the Law of large numbers." However, as a hybrid of loan contract and "irregular" *depositum*, it does not, and cannot possess the capacities/attributes to provide everyone with *unconditional* availability of present money proper. Worse than that, it promises depositors, despite their original purpose when they demand deposits, the impossible thing: to *simultaneously* satisfy everyone's demand for future goods *and* promise them unconditional redeemability. Therefore, modern "demand deposits" is basically one kind of "imaginary good." Its moneyness is based on the public's illusion. It promises the services which by its very nature can never provide.

Is modern "demand deposits" a fraud or embezzlement? Yes. Since no single contract can provide *simultaneously* the services which can only independently offered by either loan contract or "irregular" *depositum*, modern "demand deposits" deceives those who demand loans/future goods by promising them unconditional redeemability for present money proper. Their decision making in investment is distorted, because "demand deposit" as such is said to be completely risk-free. It also deceives those who simply demand safekeeping services and appropriates *their* money proper for other usages the proceeds of which are very uncertain. What those depositors demand is a preparation for uncertainty, not uncertainty itself.[24]

7. Conclusion

Is Mises a 100 percent reserve free banker or a fractional reserve free banker? Our investigation indicates that truth for this long-standing controversy is in fact lying on the middle ground: Mises is not a 100 percent reserve free banker, however his reason for supporting free banking is 100 percent reserve free bankers'. With slight modification, our conclusion reinforces Salerno's conclusion (2012) on Mises as a "currency school free banker": Mises advocated free banking as the most suitable means for achieving the goal of *extremely restricting* the issue of additional fiduciary media.[25] Our investigation also

---

[24] On this point, see Lachmann ([1956]1978, 43), Bagus and Howden (2013).

[25] Salerno's original sentence is "Mises advocated free banking as the most suitable means for achieving

suggests that Mises is fully justified as the forerunner of both 100 percent reserve free banking school and FRFB school, although I maintain that siding with FRFF School would inevitably engage in a great deal of loss of the fundamental insights of Mises's theory.

Where will free banking go in the future? The result of our examination appears to be that a resolution between the two-sides is quite unlikely to be found. From my point of view, there might be two possible ways to a resolution. The first way is to side with Hayek (([1933] 1966, 189–190) to doubt the necessity of totally suppressing Trade Cycles[26]. The second one takes into account the possibility of "spontaneous" realization of 100 percent banking, viz., under FRFB those banks which maintain 100 percent reserves may possibly triumph over those banks operating under fractional reserves, for 1) fractionally backed notes/deposits with a risk of default would circulate at a discount against genuine money-certificates and thus in the long-run must be demonetized[27], and 2) those truly default fractionally backed notes/deposits will disappear in the recurrence of Business Cycles. After countless sufferings and pains, people may finally learn from past mistakes and gradually transform a FRFB system into a 100 percent reserve system without the need of any government mandated 100 percent reserve reform plan.[28]

---

the goal of *completely suppressing* the issue of additional fiduciary media". [emphasis added]

[26] The idea of "beneficial" Trade Cycles, however, suffers harsh criticisms. See Block and Garschina (1996)

[27] See Hulsmann (2003).

[28] For example, see Rothbard ([1962]1991,69–70; [1983]2008,263–264) and Huerta de Soto (2006, 788–805).

Bibliography

Arnon, Arie. 2011. *Monetary Theory and Policy from Hume and Smith to Wicksell: Money, Credit, and the Economy*. Cambridge: Cambridge University Press.

Bagus, Philipp, and David Howden. 2010. "Fractional Reserve Free Banking: Some Quibbles." The Quarterly Journal of Austrian Economics 13(4): 29–55.

———. 2011. "Unanswered Quibbles with Fractional Reserve Free Banking." Libertarian Papers 3, 18.

———. 2013. "Deposits, Loans and Banking: Clarifying the Debate." The American Journal of Economics and Sociology 72(3): 627–44.

Block, Walter, and Kenneth M. Garschina. 1996. "Hayek, Business Cycles and Fractional Reserve Banking: Continuing the De-Homogenization Process." Review of Austrian Economics 9, no. 1: 77-94.

Cachanosky, Nicolas. 2011. "Mises on fractional reserves: a review of Huerta De Soto's argument." New Perspectives on Political Economy 7(2), 203–230.

Davidson, Laura. 2012. "Against Monetary Disequilibrium Theory and Fractional Reserve Free Banking." The Quarterly Journal of Austrian Economics 15, no. 2: 195–220.

Dowd, Kevin. 2015. "Free Banking." Part II, Essay IV in The Oxford Handbook of Austrian Economics, ed. Peter J. Boettke and Christopher J. Coyne. Oxford: Oxford University Press.

Gertchev, Nikolay. 2004. "Dehomogenizing Mises's Monetary Theory." Journal of Libertarian Studies 18, no. 3: 57–90.

———. 2012. "The Inter-Bank Market in the Perspective of Fractional Reserve Banking." Ch.10 in *Theory of Money and Fiduciary Media: Essays in Celebration of the Centennial*, ed. Jörg Guido Hülsmann. Auburn, Ala.: Mises Institute

Glasner, David. 1992. "The Real-Bills Doctrine in the Light of the Law of Reflux." HOPE 24(4): 867–94.

Hayek, Friedrich A. [1933] 1966. *Monetary Theory and the Trade Cycle*. Clifton, N.J.: Augustus M. Kelley. Original German 1929.

———. [1935] 1967. *Price and Production*. Clifton, N.J.: Augustus M. Kelley

Hoppe, Hans-Herman. 1994. "How Is Fiat Money Possible? — or, The Devolution of Money and Credit." Review of Austrian Economics 7(2): 49–74.

Hoppe, Hans-Herman. Jörg Guido Hülsmann, and Walter Block. 1998. "Against Fiduciary Media." The Quarterly Journal of Austrian Economics 1, no. 1:19–50.

Hülsmann, Jörg Guido. 2003."Has Fractional-Reserve Banking Really Passed the Market Test?" The Independent Review, v. VII, n. 3, Winter 2003, pp. 399– 422

———. 2007. *Mises: The Last Knight of Liberalism*. Auburn, Ala.: Ludwig von Mises Institute.

Huerta de Soto, Jesús. 2006. *Money, Bank Credit and Economic Cycles*, trans. Melinda A. Stroup. Auburn, Ala.: Ludwig von Mises Institute. Original Spanish 1998.

Lachmann, L.M. [1956] 1978. *Capital and its Structure*. Kansas City: Sheed, Andrews and McMeel.

Le Maux, Laurent. 2012. "The Banking School and the Law of Reflux in General." History of Political Economy 44(4): 595-618.

Menger, Carl. 2007. *Principles of Economics*, trans. James Dingwall and Bert F. Hoselitz. Auburn, Ala.: Ludwig von Mises Institute.

Mises, Ludwig von. [1928] 1978a. "Monetary Stabilization and Cyclical Policy." Pp. 51–152 in *On the Manipulation of Money and Credit*. Bettina Bien Greaves, trans. Percy L. Greaves, Jr., ed. Dobbs Ferry, N.Y.: Free Market Books.

— — — .[1946] 1978b. "The Trade Cycle and Credit Expansion: The Economic Consequences of Cheap Money." Pp. 189–198 in *On the Manipulation of Money and Credit*. Bettina Bien Greaves, trans. Percy L. Greaves, Jr., ed. Dobbs Ferry, N.Y.: Free Market Books.

———. [1949] 1998. *Human Action: A Treatise on Economics*. Scholar's Edition. Auburn, Ala.: Ludwig von Mises Institute.

———. [1953] 2009. *The Theory of Money and Credit*, trans. H.E. Baston. Indianapolis, Ind.: Liberty Classics. Original German 1912.

Nile, Raymond C. 2016. "The Unresolved Problem of Gratuitous Credit in Austrian Banking Theory." Review of Austrian Economics 30(1): 83–105.

Rothbard, Murray N. [1962] 1991. *The Case for A 100 Percent Gold Dollar*. Auburn, Ala.: Ludwig von Mises Institute.

———. [1963] 2000. *America's Great Depression*, 5th ed. Auburn, Ala: Ludwig von Mises Institute.

———. [1982] 1998. *The Ethics of Liberty*. New York University Press, 1998, 2nd edition with an introduction by Hans-Hermann Hoppe; originally published Atlantic Highlands, NJ: Humanities Press, 1982.

———. [1983] 2008. *The Mystery of Banking*, 2nd ed. Auburn, Ala: Ludwig von Mises Institute.

———. 1992. "Aurophobia: or Free Banking on What Standard?" Review of Austrian Economics 6, no. 1: 98–108.

Salerno, Joseph T. 2012. "Ludwig von Mises as Currency School Free Banker." Ch.5 in Theory of Money and Fiduciary Media: Essays in Celebration of the Centennial, ed. Jörg Guido Hülsmann. Auburn, Ala.: Mises Institute.

Sechrest, Larry J. [1993] 2008. *Free Banking: Theory, History, and a Laissez-Faire Model*. Auburn, AL: Ludwig von Mises Institute.

Selgin, George A. 1988. *The Theory of Free Banking: Money Supply under Competitive Note Issue*. Totowa, N.J.: Rowman and Littlefield.

———.2011. "Mere Quibbles: Bagus and Howden's Critique of the Theory of Free Banking." Social Science Network. Working Paper Series, April 4, 2011.

Selgin, George A. and Lawrence H. White. 1996. "In Defense of Fiduciary Media, or, We Are Not Devolutionists, We Are Misesians!" Review of Austrian Economics 9, no. 2: 83–107.

Skaggs, Neil T. 1991. "John Fullarton's Law of Reflux and Central Bank Policy." HOPE 23 (3): 457–80.

Strigl, Richard von. *Capital and Production*, M.R. and H.H.Hoppe, trans., J.G. Hülsmann, ed. Auburn, Ala.: Mises Institute, 2000.

Tooke, Thomas. 1848. *A History of Prices and of the State of the Circulation*, 1839–1847. Vol. 4. London: Longmans.

White, Lawrence H. 1999. *The Theory of Monetary Institutions*. Malden: Blackwell Publishers.