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Are Free Market Fiduciary Media Possible? On the Nature of Money, Banking, and Money Production in the Free Market Order

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Abstract: Recent debates in monetary theory have centered on so-called free banking and the role of banks in providing money in the form of fiduciary media in a pure market economy. This paper examines how and to what extent fiduciary media can emerge in a pure market economy. Based on the theory of value, it is argued that those economists are mistaken who claim that money substitutes must in all cases be interpreted as being money titles. Those economists too are mistaken, however, who claim a large role for the circulation of fiduciary media in a pure market economy. It is argued that holding fiduciary media in one's cash balance is an entrepreneurial error, as fiduciary media by their nature do not have the qualities people demand in holding money. Money is the comparatively most certain good and the present good

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par excellence, qualities that fiduciary media do not have. Holding fiduciary media instead of money is therefore an entrepreneurial error, and like all errors in the free market, it will tend to be eliminated in the process of entrepreneurial profit and loss, leading to the virtual disappearance of all fiduciary media from the market economy.

There has in recent decades been a fierce debate among economists and monetary theorists following in the footsteps of Ludwig von Mises between the so-called free banking school, which admits a large role for fractional reserve banking in the monetary system, versus what we here will call the full-reserve school, which denies any social benefit from fractional reserve banking and the issuance of fiduciary media. A lot of the controversy has centered on whether fiduciary media—money substitutes not covered by reserves—are fraudulent or not, and therefore whether they are at all legitimate in a pure free market based on complete respect for property rights and freedom of contract.

In this article the issue of fraud will be sidestepped and the focus will be on the question of the emergence of fiduciary media in a pure market economy, where all men and institutions, and specifically all banks, are subject to "the rule of common law and the commercial codes that oblige everybody to perform contracts in full faithfulness to the pledged word" (Mises 1953, 440). In particular, there would be no legal tender laws, no deposit insurance, and no central bank acting as lender of last resort. In such a free market order, a bank that failed to honor its contractual obligations would be treated no differently from any other company or person that failed to do this.

If fiduciary media would naturally emerge in such an order, this would prima facie be evidence that they are compatible with it. Mises, despite his hostility to inflation and credit expansion of all kinds, nevertheless suggested that the use of fiduciary media would be a part of a free banking system absent government interventions (Mises 1998, 440; my italics):

> Free banking [i.e., banking subject to the commercial codes etc.] is the only method 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.

The free bankers have gone further than this and argue that the use of fiduciary media is beneficial to the economy; while the full-reserve school, pursuing the economic analysis of Mises critical of inflation and credit expansion, have often assumed the position, following the example of Murray N. Rothbard, that fractional reserve banking is a harmful institution and must be outlawed wherever it appears in the free market, since money substitutes are interpreted as titles to money and fiduciary media are by this definition necessarily fraudulent (Rothbard 2009, 2008; Huerta de Soto 2009; Hoppe 2006a, 2006b; and Bagus, Howden, and Gabriel 2015).

It is this article's contention that the full-reserve theorists are mistaken when they insist that money substitutes must be interpreted as always being money titles, as this is at odds with the theory of value. A callable loan, for instance, could become a fiduciary medium if it is judged to be just as certain and serviceable as money proper by acting individuals. The free bankers too, however, are mistaken when they claim a large role for the circulation of fiduciary media in a pure market economy. It will be shown how it is fundamentally erroneous to consider a mere unbacked claim on a person or an institution as equivalent to money. The error consists in mistaking a future good, or a claim to a future good, for a present good, and in mistaking an unsafe asset for the comparatively safest good, viz., money. As all other errors in the free market, the error of mistaking fiduciary media for fully backed money certificates will tend to be corrected in the process of entrepreneurial profit and loss, leading to the virtual elimination of all fiduciary media from the market economy.

Thus, it will be argued that the full-reserve theorists are correct in asserting that fractional reserve banking has no role to play in the free market, since only by an error of judgment would anyone accept fiduciary media as money. Rather than encouraging the use of fiduciary media, the free market and free banking would correct such errors, leading to the virtual suppression of fiduciary media.

A NOTE ON DEFINITIONS

In this paper we will take the approach to monetary theory developed by Ludwig von Mises for granted. As already noted,

Mises's influence on both free-banking and full reserve theorists is apparent, but his monetary theory is also the one that best elucidates the economic facts. Specifically, the classification of money in the narrow and the broader sense that Mises (1953, 50–59; cf. Hülsmann 2012, 33–34) pioneered in 1912 helps distinguish between fiduciary media, other money substitutes, and money in the narrow sense.

Money, taken simply, is a common medium of exchange, valued for its purchasing power. If two commodities are commonly used as money, they are valued separately according to the laws that govern the value of money; they are not somehow aggregated to form one total money supply.

Money in the narrower sense, or money properly speaking, is simply the commodity used as money. Under the gold standard, physical gold was money in the narrow sense. In the modern economy, physical cash is money in the narrow sense.[1]

Money in the broader sense is perfectly secure and instantly redeemable claims to money in the narrow sense. They can be used in commerce in exactly the same way as money is. "A claim to money may be transferred over and over again in an indefinite number of indirect exchanges without the person by whom it is payable ever being called upon to settle it." (Mises 1953, 50). The reason for this is that money is not consumed or "used up" in the way that other goods are. Simply by possessing money, the individual gains all the services that money can render, and hence fully secure and present claims to money will be deemed equivalent to money in the narrow sense. Money in the broader sense is more usually referred to as money substitutes and can be further subdivided into *money certificates* and *fiduciary media*.

Money certificates are claims to money that are fully backed by money in the narrow sense. E.g., a bank that held physical cash for the full amount of its outstanding demand deposits would only issue money certificates. This would clearly only be a change of the

[1] Reserves with the central bank might also be considered money in the narrow sense, despite their character as claims on the central bank, because there is no doubt that the central bank, empowered with the ability to create physical cash at will, will always be able to honor these claims. I thank an anonymous reviewer for pointing out the special case of central bank reserves.

form, not the substance, of money, and issuing money certificates would have no influence on the money supply.

Fiduciary media are claims to money that are *not* fully backed by money. Commercial demand deposits are nowadays the prime example of this, but historically private banknotes too were fiduciary media. These claims are used as if they could be instantly redeemed, but in reality the issuing bank only ever keeps reserves on hand to be able to redeem a fraction of its issue of money substitutes. Fiduciary media can take the legal form of warehouse receipts, titles to money, and callable loans, that is, instantly redeemable claims on a person or bank such as demand deposits.

Since an issue of titles to money or warehouse receipts in excess of what is kept on reserve is clearly fraudulent, this case will not be considered. This article will deal exclusively with fiduciary media in the form of callable loans. Every time the terms *fiduciary media* and *claims to money* are used, they will refer only to callable loans.

It is important to note that the individual holding a money substitute cannot tell whether it is a money certificate or fiduciary medium. This distinction can only be made on a systemic level, as an outsider looking at the economy. To the individual person holding money, the money substitute must have the status of a money certificate, he must be certain of the issuer's ability to redeem it on demand, since, as Jeffrey Herbener has noted (2002, 83), "people only demand money-substitutes, not fiduciary media, and their demand exists only when they have confidence in full redemption."

The reader will excuse this brief outline of the basic definitions in the Misesian system. Most of it should be familiar to monetary theorists, but since the argument made here hinges on a clear understanding of the relation between money and fiduciary media, it was thought expedient to include this brief synopsis.

THE FREE BANKING SCHOOL AND THE FULL RESERVE SCHOOL

There are two fundamental positions in the debate on the status of fiduciary media: the free banking school and the full reserve

school.[2] The free bankers believe that fiduciary media are a useful part of the money supply, and that no fraud is necessarily involved in issuing them. What is here termed the full reserve school is of the opposite view: fractional reserve banking is necessarily fraudulent, and not only is it not beneficial, but the use of fiduciary media is positively harmful, as it causes inflation, Cantillon effects, and the business cycle. While these controversies have a long history reaching back into the nineteenth century and the great British monetary debates (cf. Smith 1936), the current debate among modern Austrian and Austrian-inspired economists began in the wake of the contributions of Ludwig von Mises.

Murray N. Rothbard can be considered the founder of the full reserve school. He first clearly advanced the position that all fiduciary media are necessarily fraudulent, as he saw all money substitutes as titles to a sum of money (Rothbard 2008; 2005). He also categorically denied any economic advantage to society as a whole from the use of fiduciary media, and considered their use the basic cause of the business cycle as well as the problems of inflation (Rothbard 1963, 34–36). Other full reserve theorists follow this basic framework. Jesús Huerta de Soto has argued with a foundation in Roman law that money substitutes are a type of irregular deposit and therefore cannot be increased beyond the amount of money on reserve (Huerta de Soto 2009, 1–36, 119–24) and he too considers the elasticity introduced in the money supply by their use as central to understanding the problems of the business cycle. Hans-Hermann Hoppe (2006a, 2006b) clearly enunciates the Rothbardian position, for instance when he writes (2006b, 200):

> Freedom of contract does not imply that every mutually advantageous contract should be permitted. Clearly, if A and B contractually agree to rob C, this would not be in accordance with the principle. Freedom of contract means instead that A and B should be allowed to make any contract whatsoever regarding their own properties, yet fractional-reserve banking involves the making of contracts regarding the property of third parties.

While Robert P. Murphy too belongs to the full reserve school, he has avoided engaging the question of legality in his recent

[2] The full reserve school could also, following Salerno (2012b, 100), be called the neocurrency school.

contribution (Murphy 2019) and has focused exclusively on the issue of distortions introduced by fiduciary media and fractional reserve banking. Philipp Bagus, David Howden, Walter E. Block, and Amadeus Gabriel (Bagus and Howden 2010; Bagus, Howden, and Block 2013; and Bagus, Howden, and Gabriel 2015) have entered the ranks of the full reserve school as well, arguing for the impermissibility of fractional reserve banking for involving a confusion between deposits and loans.

Joseph T. Salerno (2010) and Jörg Guido Hülsmann (1996, 2003a) are also here placed in the full reserve camp, although their positions differ slightly. On the one hand, Salerno is fully in agreement with Rothbard when he says that "the 100 percent reserve requirement is not arbitrarily imposed from outside the market, but is dictated by the very nature of the bank's function as a money warehouse" (Salerno 2010, 362); on the other, he allows that in a fully denationalized system, the shares of banks or money funds that invest part of their "reserves" could become the predominant means of payment in the economy (Salerno 2010, 364). Hülsmann for his part allows for the possibility of "callable loans plus a redemption promise" (IOU + RP) circulating on par with money proper (Hülsmann 2003a). Both clearly, however, see no social benefit from stimulating the issue of fiduciary media and both think that it is a historical truth that the vast majority of actually circulating fiduciary media were and are fraudulent, which is why they are decidedly in the ranks of the full reserve school.

The free banking school takes its modern beginning from the works of Lawrence White and George Selgin (White 1995, 1999; Selgin 1988; and Selgin and White 1987, 1996) and also includes economists such as Kevin Dowd (1993), Larry Sechrest (1993), and Steven Horwitz (2000). The point at issue here, the possibility of fiduciary media in a free market, is a key component of free banking theory, and has been defended at length by the free bankers. Their basic claim is that the issue of fiduciary media can take the legal form of a loan or a note with an option clause. Historically, White (2003) has claimed that banknotes indeed took the form of a loan, not a title of ownership to underlying money. This is a strong argument against the full-reserve school's insistence on interpreting all money substitutes as ownership titles.

The free bankers argue that a free banking system is based on freedom of contract, and therefore interfering with and redefining contracts between banks and their customers, changing loans into warehouse receipts, would be incompatible with the system (Salin 1998) and an unwarranted imposition of the economist's own ethical judgments on other people (Rozeff 2010). Banks and their clients would be free to make whatever contracts they want, and fractional reserve banking would arise from their free agreement. Selgin (2012) and Evans and Horwitz (2012) have also answered the critiques raised by Bagus and Howden of the free banking position. Selgin in particular argues that the attempt to identify free banking theory with the real-bills doctrine is misguided and that full reserve theorists are wrong to claim that free bankers "confuse an increase in the demand for money with an increase in the overall extent of saving" (Selgin 2012, 139). Selgin here also makes the point, previously made by Hülsmann (1996, 34), that although aggregate demand for money is not the same as the public's willingness to save and invest, demand for money to hold is a kind of saving. Selgin disagrees with Hülsmann, however, as Selgin (2012, 139) argues that demand for inside money—bank liabilities—is also a supply of savings for investment, whereas Hülsmann sees it as a form of plain saving.

MONEY AND FIDUCIARY MEDIA

Clearly, the point at issue is whether callable loans can come to circulate as fiduciary media spontaneously in the free market. Issuing titles or warehouse receipts to more money than the issuer has in his reserves would be fraudulent and therefore ruled out by definition in a pure free banking system, where all must honor their contracts and banks benefit from no special privileges (Mises 1998, 437–41), but it is by no means clear that issuing callable loans would be. Although borrowing money at call and investing it in longer-term loans and securities might be seen as an extreme case of maturity mismatching, this practice is not in itself illicit (Bagus and Howden 2009). On the contrary, there seems to be nothing in this practice at odds with respect for property rights and freedom of contract. It might be a very risky kind of financial practice, and the investor in callable loans would probably expect a return

commensurate with his assessment of the risk involved; however, that does not make it illegitimate. But does it mean that such loans can come to form part of the money supply?

In order to solve this question, we will adopt Hülsmann's (2003a) idea of a callable loan plus redemption promise as our starting point.[3] Hülsmann argues that the source of fractional reserve banking is to be found in a confusion between money titles and what he calls IOUs with a redemption promise. If this confusion did not exist, the IOUs could not circulate as part of the money supply, and the only money substitutes would be money titles. However, Hülsmann does not explain in depth why callable loans could not circulate as money substitutes absent this confusion. In order to do this, fiduciary media will have to be linked back to the laws of value governing money as well as all other economic goods.

Carl Menger first described the prerequisites for a thing to become an economic good (Menger 2007, 52ff.), a description that Mises later amended in order to emphasize the subjective nature of all value and, hence, of economic goods (Mises 1998, 120–21). All that is necessary for a thing to become an economic good is that the acting individual believe that control over it will help him attain his goals; it is his subjective judgment of the suitability of a thing for satisfying his wants that confers value on a good. Man's judgment may be erroneous, and he may find from experience that he was wrong in judging a certain thing capable of helping him attain his ends, thus realizing that it was only what Menger termed an imaginary good (Menger 2007, 53–54), but until the actor in question revises his judgment, the thing in question will continue to be a good for him, no matter what the objective facts of the case may be.

Incorrect judgments are usually corrected when the actor is confronted with reality, as can easily be seen in the case of consumer goods and producer goods. For consumer goods, this happens when the individual realizes that he does not attain the end he thought he would by using it; e.g., when a man discovers that sea water is not good drinking water. For producer goods, an erroneous judgment

[3] White's (2003) criticism of Hülsmann, that banks don't promise to pay but contractually obligate themselves to pay is, for our purposes, immaterial. What matters is how these claims are appraised by the acting individuals who possess them, not their legal nature.

concerning a good will be corrected when the production process in which the good, mistakenly thought to be suitable in this production process, was employed fails or at the very least does not return a product sufficient to warrant the previous valuation of the good. In both cases, what was previously considered a good immediately loses its goods character once its employment in action proves that the actor's judgment was mistaken. Just as acting man profits from correct judgments, so he loses from incorrect ones. Entrepreneurial profit and loss is the basic mechanism that teaches man to conform his thinking and judgment to reality, as incorrect judgments and erroneous reasoning are punished and correct judgments rewarded.

The same holds true for money, although the consequences of incorrect judgments do not appear in exactly the same way. This is due to the special position of money among economic goods and the particular laws governing its value (Mises 1990). Whereas consumer goods are valued for the ends we expect to be able to achieve through their employment, and producer goods are valued for their contribution to the production of consumer goods, the medium of exchange is valued for its purchasing power. The value of money depends on the array of other goods that people expect to be able to trade each monetary unit for. It is the individual's subjective judgment of the utility of having this purchasing power available to him.

Let us assume a society employing only gold as money, with no other media of exchange in use. In this society the acting individual will only accept pieces of gold in exchange and only consider gold pieces as part of his cash balance. Mistakes in this matter are usually quickly corrected, since it is comparatively easy to recognize and verify whether a given substance is indeed gold, and since all other people too will also only accept gold as money. A man may, for instance, think that lead is just as serviceable as gold, since it is similar to it in some respects. However, he will quickly be disabused of this notion once he tries to pay with it, since nobody else shares his peculiar evaluation of lead.

Because money is only ever exchanged, appraisals of a commodity in its role as money are never confronted with reality in the same way as evaluations of producer and consumer goods are. Whether a given commodity (or claim) is considered part of the money

supply depends on how it is judged by people in the community. To continue with the example of a man who thinks lead and gold are interchangeable, if his trading partners disagree with this judgment, he will quickly realize that he was in error and that lead is not in fact gold. However, if other people accept lead as gold, lead becomes part of the money supply for as long as this mistaken judgment is not corrected. For as long as no one notices the difference between lead and gold, the money supply is increased by the addition of a quantity of lead. Widespread entrepreneurial error has led to a mistaken expansion of the money supply. Since money, titles, and claims to money are only ever exchanged and never consumed, the holders of money are never confronted with the same kind of test as owners of producer and consumer goods are. Erroneous judgments may therefore persist for longer here than in other areas of economic life. There are, however, powerful incentives at play to verify and certify the money commodity one accepts in exchange and holds in one's cash balance. Nobody has an interest in receiving false coins or bad checks in exchange for their goods, since that would mean a heavy loss of purchasing power once the mistake is discovered. The precious metals gold and silver were selected as money to a large extent because it is comparatively easy to distinguish them from other materials (Menger 2009; and Selgin and White 1987, 440–42).

Claims to money obey the same laws of value: if they are perfectly secure and safe, they will be valued as money. In the normal course of affairs, we would expect a loan to be valued according to its maturity and its safety. Both of these factors would impose a discount, as individuals would tend to judge a loan, even if instantly redeemable, as less valuable than actual possession of the amount of money in question. This is so, since, objectively, such loans can never be as secure as money proper or fully secured money certificates—there is always some uncertainty attached to them.[4] However, as just argued, the primary factor in establishing a thing as a good is the subjective judgment of individuals, and there is nothing to stop people from subjectively deeming callable loans on a par with money certificates. Therefore, they may gain the status of fiduciary media and constitute part of the money supply

[4] The only exception would be the case where the debtor kept on hand full reserves at all times.

without any fraud or other violation of property rights having been committed. So long as claims to money are considered perfectly secure and instantly redeemable, they can perform all the functions of money in the narrow sense. Says Mises (1953, 267):

> The fact that is peculiar to money alone is not that mature and secure claims to money are as highly valued in commerce as the sums of money to which they refer, but rather that such claims are complete substitutes for money, and, as such, are able to fulfil all the functions of money in those markets in which their essential characteristics of maturity and security are recognized.

There is thus no logical barrier to the acceptance of callable loans as money substitutes, since this depends on the judgment of the people receiving and holding money—on their recognizing "their essential characteristics of maturity and security," whether those characteristics truly exist or not.

That said, this does not mean that such loans will constitute money substitutes for any length of time. First of all, the community as a whole has to accept the claim in question as a money substitute. One individual may have no doubts on the matter, as he trusts the issuing bank implicitly; but he cannot force other people to accept the claims at par value, and until they are widely considered money substitutes, they will continue to trade at a discount to money in the narrow sense. Although the clients of the same bank may treat their claims on it as equivalent to cash in their mutual exchanges, those outside the bank's orbit may have no interest in holding claims on it as part of their cash balance.

Secondly, a claim's character as a money substitute depends on there never being any doubt as to its safety and to the ability of the issuing institution to redeem it in full without delay. What the issuer requires to maintain his credit is a special kind of goodwill, without which the fiduciary media he has issued will immediately lose their character as money. Mises explained this very lucidly (1998, 442):

> What makes a banknote a money-substitute is the special kind of good will of the issuing bank. The slightest doubt concerning the bank's ability or willingness to redeem every banknote without any delay at any time and with no expense to the bearer impairs this special good will and removes the banknotes' character as a money-substitute. We may assume

> that everybody not only is prepared to get such questionable banknotes as a loan but also prefers to receive them as payment instead of waiting longer. But if any doubts exist concerning their prime character, people will hurry to get rid of them as soon as possible. They will keep in their cash holdings money and such money-substitutes as they consider perfectly safe and will dispose of the suspect banknotes. These banknotes will be traded at a discount, and this fact will carry them back to the issuing bank which alone is bound to redeem them at their full face value.

Only if the public thinks the bank's money substitutes are fully secure will they accept them at par with money, and only thus can they gain any circulation at all. Yet since fiduciary media in the form of loans are inherently less certain than money or true money titles, accepting them on par with money constitutes an entrepreneurial error no less than in the other cases of mistaken identity detailed above. The status of any claim as a fiduciary medium is therefore inherently perilous on the free market. As soon as the slightest doubt arises as to the issuer's ability to redeem them in full and without delay—as soon as he loses the goodwill of the public—all his circulating notes will lose the character of money substitutes, trade at a discount to money, and return to the issuer. This process will continue until the issue of fiduciary media has been eliminated and the claims to money issued are again deemed to be fully backed.

UNCERTAINTY AND MONEY

In order to understand more fully the error involved in holding fiduciary media, it must be asked exactly why people choose to hold some of their wealth in the form of money. Here the role of uncertainty is crucial. Uncertainty is here used in the sense of Mises (1998, 105–18) and Knight (1921) and distinguished from calculable risk. It is concerned with what Mises (1998, 110, 111) called case probability:

> Case probability means: We know, with regard to a particular event, some of the factors which determine its outcome; but there are other determining factors about which we know nothing … Case probability is a particular feature of our dealing with problems of human action. Here any reference to frequency is inappropriate, as our statements always deal with unique events which as such—i.e., with regard to the problem in question—are not members of any class.

When dealing with uncertainty, acting man does not have recourse to the methods of actuarial science and numerical evaluation of risks. Rather, like the historian, he must use his specific understanding of what is unique and relevant in each event or class of event he is considering (Mises 1998, 58; cf. 2007):

> Understanding is not a privilege of the historians. It is everybody's business. In observing the conditions of his environment everybody is a historian. Everybody uses understanding in dealing with the uncertainty of future events to which he must adjust his own actions. The distinctive reasoning of the speculator is an understanding of the relevance of the various factors determining future events…. Acting man looks, as it were, with the eyes of a historian into the future.

Since there is always some uncertainty about the future, acting man cannot plan his actions completely and allocate all his income to purchases of consumer and producer goods. By keeping some cash on hand, acting man is better able to provide for unforeseen contingencies in the future. His degree of felt uncertainty is therefore at the root of his demand for money.

Free bankers seem to downplay the importance of uncertainty in explaining the demand for money. White (1999, 15–16, 54ff.) does not mention it in his discussion of par acceptance of bank money, and Selgin (1993, 354, 362) impatiently dismisses the idea that uncertainty could have any role in evaluating money and money substitutes, claiming that the historical record contradicts that idea. When Selgin discusses the role of trust in driving demand for money, he is exclusively talking about demand for banknotes relative to demand deposits, not demand for money proper versus money substitutes (Selgin 1988, 109). This is in clear contradiction to Mises's basic insight that we would only hold money under conditions of uncertainty (Mises 1998, 414, 415):

> Where there is no uncertainty concerning the future, there is no need for any cash holding. As money must necessarily be kept by people in their cash holdings, there cannot be any money…. On the market there is always change and movement. Only because there are fluctuations is there money. Money is an element of change not because it "circulates," but because it is kept in cash holdings. Only because people expect changes about the kind and extent of which they have no certain knowledge whatsoever, do they keep money.

The fundamental reason for demanding and holding any money at all is that money is the most certain good. By holding money we avoid all the uncertainties affecting particular consumption goods and investment opportunities. Consumer goods are either immediately consumed or, in the case of durable consumer goods, can only be used for a few specific purposes. Durable goods are not as readily exchangeable as money and are furthermore subject to specific price risks concerning their specific market. Investment in producer goods has the same disadvantages, while investment in financial assets—shares, bonds, etc.—might be more liquid. Yet both of these are still subject to greater uncertainty and greater risk of loss than simply holding money. When people add to their cash balances instead of buying consumer or producer goods, they are thus essentially investing in reducing felt uncertainty, since money is the comparatively most certain good—its future purchasing power is less uncertain than the prices of consumer and producer goods.

This can be further elucidated by considering the quality of money (Bagus 2009, 2015): Money of high quality is such as can be expected to maintain a stable or increasing purchasing power in the future, while money of lower quality is that which is expected to lose purchasing power. On a gold standard, for instance, money production will be constrained by the same factors that constrain the production of other goods, namely the law of costs (H. F. Sennholz 1975, 47–48). Additional money will only be produced if there is a sufficient return, that is, a sufficient spread between the quantity produced (gold ounces) and expenditures (in gold ounces) (Hülsmann 2003b).

It is therefore possible to forecast with some accuracy the future evolution of gold's purchasing power, and it is reasonable to expect it to be stable or even increase slightly, since gold production generally only increases in response to increases in the purchasing power of the monetary unit. Fiat paper money, on the other hand, is completely subject to the policies of the issuing institution, which may have to serve political interests at odds with sound monetary policy, and which may be guided according to erroneous economic principles. Even a relatively sound central bank is always at risk of being taken over by more inflationary leaders, which introduces an element of uncertainty that simply does not exist in the case of commodity money. Similarly, in the case of claims on banks there

is an added element of uncertainty, since the holder of claims on the banks has to trust that the banks will always want to and be able to redeem the claims. Although this may be true under normal circumstances, it is precisely under unusual, unforeseen circumstances, when the holders of money might need their claims, that the banks are likely to default on their promises.

This is not to say that money is a certain good in some absolute sense. This would be patently false, since the purchasing power of money is always changing as conditions in the various goods markets change. Rather holding money is the comparatively most certain way of holding one's wealth. Holding any money at all, then, is fundamentally a hedge against uncertainty (Rothbard 2009, 264–65), and adding to one's cash balance is therefore best understood as an investment in reducing one's felt uncertainty (Hoppe 2012; cf. Hicks 1935, 7–9), as money provides the service of immediately available purchasing power for whatever unforeseen purchases one will make in the immediate future (Hutt 1956).

Money, as the comparatively most certain good, can be seen as at one end of the spectrum of investment possibilities when considering their risk or uncertainty. Consequently, a man who, wanting to add to his cash balance, increases his holding of fiduciary media, is fundamentally in error: he wants to reduce the uncertainty of his investments by increasing his cash balance, but fiduciary media are precisely *not* the most certain investment option; they are claims on other people, whether individuals or institutions such as banks. As such, they are always liable to the risk of default and nonpayment. Wanting to increase his certainty by increasing his holding of fiduciary media, the individual in fact renders himself liable to lose all if the issuing institution suspends redemption.

THE CONFUSION OF DEMAND FOR MONEY WITH SUPPLY OF CREDIT

Money, in addition to being the comparatively most certain good, is also a present good. In fact, according to Rothbard it is the present good par excellence (2009, 375). People demand money in order to be able to spend it immediately on other goods. However, one of the main claims of the free bankers is that issues of fiduciary

media are an efficient way to regulate the money supply in order to compensate for changes in the demand for money and thereby avoid monetary disequilibrium (Yeager 1997, 93–94). Not only are they more flexible than production of commodity money, but an increase of fiduciary media is an increase in the supply of loanable funds, and this means that there is more money available for investment when banks extend their issues of fiduciary media to meet an increased demand for money.

In the free banking system, an increased demand to hold money is met by an increased issue of fiduciary media in order to maintain monetary equilibrium. The substitution of fiduciary media for commodity money means that

> every increase in real money demand becomes a source of loanable funds to be invested by banks, whereas under a pure commodity-money regime an increase in money demand either leads to further investments in the production of commodity money, or, if the supply of commodity money is inelastic, to a permanent, general reduction in prices…. Thus, fiduciary issues made in response to demands for increased money balances allow Ruritania to enjoy greater capitalistic production than it could under a pure commodity-money regime. (Selgin 1988, 22)

This position is also common among economists outside the free banking school (e.g., Sanches 2016; and Mishkin 2019, chap. 9) and can seemingly be traced back to John Stuart Mill, who argued that banks of deposit make the "idle" capital of depositors to be employed through lending out the majority of their deposits (Mill 1909, bk. 3, chap. 11, § 2).

There are two problems with this view: first, the assumption that the supply of commodity money could not change fast enough to accommodate changes in the demand for money, or that, failing that, price changes could not adjust the stock of money to the new demand; and second, the idea that demand for money in the form of money substitutes is the same as supplying credit to banks is a fundamental error. The demand for money, no matter what form that demand may take, is very different from demanding financial assets. The demand for financial assets is always the supply of a present good in exchange for future goods, whereas the demand for money is always demand for a present good. Money and financial assets are two different things, and they serve different functions in the economy.

To briefly address the first problem, there is no reason to consider the supply of money fixed, but more fundamentally, there is no reason to assume that an increased demand for money has to be compensated in any way by an increase in supply. An increase in the demand for money necessarily implies a decreased demand schedule for nonmonetary goods and an increased supply schedule for nonmonetary goods and services (the inverse of an increased exchange demand for money).[5] An increase in the demand for money would therefore naturally lead to lower prices as the change in the market data works itself out in a step-by-step process (cf. Hayek [1937] 1989, 19–25). In the short run there may be instability and a prolonged adjustment period caused by "sticky" prices, as entrepreneurs may at first be unwilling to adjust their prices downward. However, the process of entrepreneurial profit and loss will quickly overcome this as those entrepreneurs who make the necessary price adjustments profit at the expense of those who are reluctant to do so: the longer an entrepreneur refuses to sell his inventory at the market price, the greater his loss will be. Sticky prices are at most a problem of short-term adjustment.

In any event, should the demand for money increase, the purchasing power of money will increase through the process just described, and under a gold or other commodity standard this will stimulate the production of money (White 1999, chap. 1; and Herbener 2002). This may be a slower response to changes in demand for money than issuing fiduciary media, but that does not mean that the money supply could not adjust in the absence of fractional reserve banking. An increase in the demand for money might be caused by economic expansion, as savings, investment, and population growth increase productivity. As more goods are offered on the market (an increase in the exchange demand for money), money prices of goods fall and the purchasing power of the monetary unit increases. As the purchasing power of the monetary unit increases, entrepreneurs can afford to invest more in the production of commodity money, e.g., by mining gold where it was previously too expensive to do so or by prospecting for new gold mines. It might even be said that a pure commodity standard

[5] On exchange demand and reservation demand for money, see Rothbard (2009, 137–42, 756–62) and Salerno (2015).

would mirror a "productivity norm" (Selgin 1997) in regulating the supply of money over the long term: economic expansion would stimulate money production, while economic contraction would shift the monetary commodity into nonmonetary employment. The way it has been presented here, however, this process is nothing but an implication of the traditional currency principle as articulated by Mises and his epigones. Monetary equilibrium thus does not depend on the issue of fiduciary media.

The second and more serious problem with free banking theory is the confusion of demand for money with a supply of savings that can be lent out. In the free banking system, the issuance of new money in response to an increase in demand for money takes the form of loans. As Selgin (1988, 22) puts it, "every increase in real money demand becomes a source of loanable funds to be invested by banks." Increased demand for money is taken for an increase in the supply of credit. It is here immaterial that the new loans are of very short, i.e., instant, maturity (Hülsmann 1996, 20; and Machlup 1940); the new loans serve as a source of credit no matter their duration. The argument in favor of free banking is that holding money is a form of saving, and that it is therefore legitimate to transfer these savings from savers to investors by means of fiduciary media. It may be granted that increasing one's cash balance can in certain circumstances be considered increasing savings, but it does not follow from this that more credit should be extended.

Holding any kind of asset instead of using it amounts to savings investment (Hülsmann 1996, 34), as it necessarily means that resources are allocated to an expected future need instead of being consumed in the present. This is also true of money: if people reduce their consumption in order to increase their cash holdings, this is a form of saving. This does not, however, mean that additions to people's cash balance are available to be invested; rather, they constitute a peculiar form of investment. Following Bagus and Howden (2010, 41), we may say that there is a continuum of investment projects of different duration. Investment in cash balances is peculiar in that money is the present good par excellence (Rothbard 2009, 375), and increasing one's cash balance therefore does not liberate resources for more roundabout projects—quite to the contrary, as it is possible that increased demand for money reflects decreased demand for investments of longer duration. We

may call it monetary or cash balance saving to distinguish it from both plain saving and capitalist saving.[6]

It does not matter for our point whether the increased demand for money takes the form of increased demand for money substitutes. Money substitutes are just as much a present good as money proper. According to Mises (1953, 266),

> The peculiar attitude of individuals towards transactions involving circulation credit is explained by the circumstance that the claims in which it is expressed can be used in every connexion instead of money. He who requires money, in order to lend it, or to buy something, or to liquidate debts, or to pay taxes, is not first obliged to convert the claims to money (notes or bank balances) into money; he can also use the claims themselves directly as a means of payment. For everybody they therefore are really money-substitutes; they perform the monetary function in the same way as money; they are "ready money" to him, i.e., present, not future, money.

Although it is true that legally and formally fiduciary media take the form of credit claims, the "lender," the holder of the claim, has not surrendered control of any present good. He has engaged in what Mises calls a claim transaction, not a credit transaction; he has exchanged a present good (money) for a claim to a present good (a claim to money). Only because he considers the claim completely certain and instantly redeemable is it equivalent to him to money in the narrow sense. If the issuing bank does not keep full reserves, therefore, the holder of the bank's notes makes an entrepreneurial error: he thinks he owns a certain, present good, when in fact he only has an uncertain claim to a partly present, partly future good. If such error becomes widespread and many people are willing to hold fiduciary claims in their cash balance, banks can engage in credit expansion leading to inflation and initiating a business cycle.[7] Since the business cycle must result in a bust, the banks' shaky position will inevitably become apparent. The more they expand their fiduciary issues, the less credible their promise to pay in full on demand becomes. The result is bank runs when the banks' special goodwill evaporates and all the holders of fiduciary media try to exchange

[6] Cf. Mises (1998, 527–28) for the distinction between plain and capitalist saving.

[7] Cf. Hüslmann (1998) on error as the root of economic cycles.

them for money in the narrow sense. The error that initiated the business cycle—mistaking a fiduciary claim to a future good for a present claim to money—is then realized, claims on the banks lose their status as money substitutes and the resulting deflation helps purge the economy of the malinvestments of the boom (Rothbard 2009, 1008–10; cf. Mises 1998, 565; and Salerno 2012a).

It follows from this insight that the doctrine that increased demand for money liberates resources for investment is fundamentally wrong. Contra Selgin and Mill, the demand for fiduciary media in no way constitutes a supply of loanable funds. What the acting individual wants in holding fiduciary media is control over present goods (Rothbard 2009, 800ff.), not future goods, and he therefore does not invest in a longer production structure when he increases his cash balance.[8] Demand for money is not the same as supply of loans, but by mistaking fiduciary media for money certificates, the individual unwittingly extends credit; he means to increase his holding of money, a present good, but he commits an error and in reality acquires a claim to a future good. As with all errors of judgment, it is liable to be corrected by the mechanism of profit and loss. Specifically, the individual may find one day that he cannot redeem his claims at par, or someone else has realized this already, and as the issuing institution has lost the good will of the market, the claims now circulate at a discount and are no longer part of the money supply. This is the mechanism of "brand extinction" identified by Salerno (2012b, 112–15; cf. Mises 1998, 431ff.) as the primary limitation on the issue of fiduciary media: long before a bank's reserves are depleted through the principle of adverse clearing, holders of its notes and deposits will have lost confidence in it and no longer value its liabilities as part of their cash holding. These liabilities would therefore trade at a discount, and return to the issuing bank in the hope of an arbitrage profit. This would make a bank run inevitable, but only after the claims in question have already lost their status as money substitutes (Salerno 2012b, 113).

[8] This is not meant to imply that increasing one's cash balance necessarily shortens the production structure. If the cash balance is increased by reducing consumption, it may be that the production structure is actually lengthened. See on this point Mises (1998, 518–20).

It is also possible for entrepreneurial error to take another form, as the acting individual may recognize that fiduciary media are not in reality secure claims to cash but may judge holding them a safe investment anyway, as other people are willing to accept them as money. Since he recognizes their defects, he may very well think himself able to profit from using fiduciary media, e.g., from interest payments on demand deposits or through access to easy credit, while still being able to realize his assets before they lose their money character thinking that he will always be able to get rid of them at par—or at least do so before the rest of the populace panics and a bank run develops. Fiduciary media and fractional reserve banking are fundamentally unstable institutions however, and always liable to collapse. Although individual entrepreneurs may benefit from fiduciary issues, just as individual investment projects may be completed in the boom phase of the business cycle, on a systemic level there is no escape from the result of error: depression and a purge of fiduciary media.

In the free market, where no special privileges protect banks and no legal tender laws can compel the public to accept claims on banks as money, the dangers inherent in issuing fiduciary media would be apparent to bankers as well as to the general public. Again, according to Mises (2006, 125): "[A]s soon as bankers recognized the dangers of expanding circulation credit, they would have done their utmost, in their own interests, to avoid the crisis. They would then have taken the only course leading to this goal: extreme restraint in the issue of fiduciary media."

The nature of fiduciary media is simply incompatible with the aim people have in holding money: having access to a presently available, safe medium of exchange.[9]

[9] That is not to say that people could not demand fiduciary media for other reasons, but then it would by definition not be demand for money. E.g., if a person holds a callable loan to earn interest, and if he does not consider it part of his cash balance, then this demand would not be demand for money but demand for a claim to a future good. In this case, the holder really is supplying savings for investment. The lines between demand for money and demand for investments are often blurred in modern financial practice, but conceptually the two kinds of demand are quite distinct.

A CRITIQUE OF THE THEORY OF "MONEYNESS"

Part of the disagreement over the nature of money may stem from a basic error in the free bankers' conception of what money is. Their conception of money can be termed the theory of "moneyness." The origin of this theory seems to be F. A. Hayek's remark that he would rather conceive of money as an adjective rather than a noun (Hayek 1990, 56; italics in original):

> I have always found it useful to explain to students that it has been rather a misfortune that we describe money by a noun, and that it would be more helpful for the explanation of monetary phenomena if "money" were an adjective describing a property which different things could possess to varying *degrees*.

Hayek attributes the term to Fritz Machlup, although it is not clear that he meant by it exactly what Hayek and the free bankers do (Machlup 1970, 220, 225). Be that as it may, we cannot subscribe to the idea that "moneyness" is really a characteristic possessed by all goods to different degrees (Horwitz 1990, 462–63; cf. White 1989, 203–17). By this theory, "moneyness" is simply a characteristic of a good or a claim that may explain its value along with other characteristics. Thus, money in the sense of cash is high in "moneyness"—it may very easily be exchanged for other goods—but does not have an interest yield, while a bond may not be as high in "moneyness" but to compensate for this offers an interest yield. In this way, all financial assets may be placed on a "moneyness" continuum from cash to bonds.

There are several problems with this theory. It is not clear how "moneyness" can be conceived of if it is not already known what money is. In order to appraise a claim as worth one hundred dollars, for instance, it must already be known what a dollar is. When a good or claim's moneyness is evaluated, what is really occurring is what Mises calls appraisement (1998, 328–30): evaluating what the good will sell for on the market. This estimate can either be in terms of money or in terms of other goods, but it is manifest that when discussing moneyness, the theorists in question discuss the value of claims *in terms of money*. They therefore assume the existence of money and simply assume that other claims share a degree of moneyness.

The core problem is a confusion of Mises's distinction between money and money substitutes, on the one hand, and the concept of secondary media of exchange on the other (Mises 1998, 459–63). What is described as "moneyness" is really best understood in terms of Menger and Mises's concept of marketability: the ease and speed with which a good can be sold without discounting its expected market price. Money proper is the marketable good par excellence, while some other goods and claims high in marketability may be more easily marketable than other goods, but their degree of marketability is still much less than that of money. As a consequence, such goods and claims' price is expressed in and fluctuates in terms of money. This is why Mises says that these goods and claims have a high degree of *secondary* marketability—because their marketability is secondary to that of money, the existence of which is the condition sine qua non of the advanced exchange economy, where highly liquid claims can emerge.

The distinction between secondary media of exchange and money substitutes is crucial (Mises 1998, 459–63). The latter are complete substitutes for money in the narrow sense, as they can perform all the functions of money and each unit is evaluated on a par with the monetary unit—banknotes and transferable demand deposits are the best examples of this. The precise legal nature of such claims is not essential, however: the crucial consideration is that they are deemed to be always redeemable in money at par. Secondary media of exchange, on the other hand, are not money substitutes, as it is not certain that they can be transformed into money at par or at a set ratio. They are, however, always highly sought after and can therefore easily be sold at their expected market value. In other words, they are very liquid—they have a high degree of secondary marketability, in Mises's terms—and may therefore supplement market actors' cash holdings, as they help economize on the holding of money in the narrow sense. In the "moneyness" view, on the contrary, the distinction between secondary media of exchange and money substitutes is obliterated. All the goods and claims used in exchange are simply placed on a continuum, with cash at one end and very liquid claims such as government bonds at the other end, with no regard paid to the essential difference in the nature of these economic goods.

By holding secondary media of exchange, economic actors economize on the need to hold cash. Assuming that the secondary

media are financial assets of some kind, the cost saving can be expressed as the interest payment received on the financial assets that substitute for money. Callable loans, bills of exchange, and other financial instruments and claims have been employed in this role, and this extra demand for these claims will tend to raise their price, lower their yield, and stimulate their issue by expanding the market for them. This, however, does not change their goods character into that of money substitutes, and it is unlikely that they will jump this divide. After all, the issuers of secondary media are in precisely the same difficulty as we detailed above in the case of callable loans: they will have to invest the borrowed funds in order to make a return and pay interest on the outstanding claims, leaving them unable to at all times "redeem" the claims at par.[10] The fact that these secondary media are heterogeneous, different products, and thus require a separate evaluation in each case, is also significant, as it imposes a cost on their use as secondary media of exchange. There is no such cost attached to holding money and money substitutes.[11]

CONCLUSION

This article has examined the question of fiduciary media and their possible existence on the purely free market. Although this paper disagrees with Rothbard and the full reserve school when they claim that all money substitutes have to be interpreted as money titles, the conclusion reached agrees with their perspective. Fiduciary media will have virtually no role to play in a free market. Elaborating the suggestion first made by Hülsmann (2003a), it has been argued that fiduciary media can only come into existence due to entrepreneurial error: specifically, due to individuals erroneously judging an uncertain claim to future money as a certain claim to present money.

[10] "Redemption" is here just a metaphor, as there is no legal obligation to redeem in the case of secondary media.

[11] Perhaps the main secondary medium used today is US Treasurys. The fact that these do not trade at par and are not considered part of the money supply indicates that even in the absence of the problem of heterogeneity, secondary media cannot jump the gap and become money substitutes.

Like all errors on the market, this erroneous judgment and its consequences will tend to be temporary, ephemeral, and self-correcting as the reality of the situation asserts itself. Since there are no institutions on the free market that will systematically spread the errors leading to the rise of fiduciary media, these will tend to only circulate locally and for a short time, as people unfamiliar with the claims in question will not accept them in lieu of money. In the same way, the societal consequences of fractional reserve banking—malinvestment, inflation, and so on—will also be very limited in scope.

The confusion of loans for money is the root cause of dysfunction in the contemporary monetary system. This has been known for a long time – as the great English banker Thomson Hankey (1873, 29) wrote:

> Ready money is a most valuable thing, and it cannot from its very essence bear interest; every one is therefore constantly endeavouring to make it profitable and at the same time to retain its use as ready money, which is simply impossible. Turn it into whatever shape you please, it can never be made into more real capital than is due to its own intrinsic value, and it is the constant attempt to perform this miracle which leads to all sorts of confusion with respect to credit.

Mises (1953, 409) wrote that "the development of the fiduciary medium must necessarily lead to its breakdown." We hope here to have shown that on a free market, with no privileged banking system, this breakdown will come quickly, before the fiduciary medium has gained widespread currency.

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