A CRITICAL NOTE ON FRACTIONAL-RESERVE FREE BANKING

JESÚS HUERTA DE SOTO

Over the last fifteen years there has been a revival of some of the economic doctrines of the old Free-Banking School. Supporters of this revival defend the idea that fractional-reserve free banking would not only lead to fewer distortions and financial crises than those generated by the current central banking system, but would also tend to eliminate economic recessions. We will group these theorists together under the name of the Fractional-Reserve Free-Banking School.[1] This School is formed by a coalition of theorists with heterogeneous origins.[2] Thus, its components include distinguished members of the Austrian School, such as White (1984; 1993),[3] Selgin (1987; 1988; 1994) and, more recently, Horwitz (1989; 1992; 1994), members of the English Subjectivist School, like Dowd (1989; 1993a,b), and, lastly, monetarists like Glasner (1989; 1992), Yeager (1983; 1986), and Timberlake (1984; 1987; 1989). Even Milton Friedman (Friedman and Schwartz 1986), although he cannot be considered part of this new School, has gradually been leaning towards it, mostly after his disappointment on seeing the failure of the central banks when putting his well-known monetary rule proposal into practice.

Furthermore, some modern theorists of the Fractional-Reserve Free-Banking School, led by Selgin, have proposed a theory of money supply under free banking that, using the analytical framework of monetary equilibrium-disequilibrium developed by the Monetarist and Keynesian Schools during the first third of the present

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JESÚS HUERTA DE SOTO is Titular professor of political economy, Universidad Complutense, Madrid, Spain. The author wishes to gratefully acknowledge the comments of an anonymous referee for helping to improve this article.

[1]We consider that the classification into four schools—Banking School: Free or Central *and* Currency School: Free or Central—by Vera C. Smith (1990, pp. 144–45) is more accurate and provides greater clarification than the classification into only three schools proposed by Anna J. Schwartz (1992, pp. 148–52). Given that, according to Smith, the great majority of Banking School theorists—with the sole exceptions of Tooke, Bonamy Price, Cairnes, and Collet—also defended a system of complete banking freedom, it could be considered not completely inaccurate to call the modern Free-Banking School the Neobanking School.

[2]As Laidler (1992, pp. 196–97) points out, the recent interest in free banking and the development of the Fractional-Reserve Free-Banking School stems from Hayek (1978). Before Hayek, Klein (1974) had made a similar proposal.

[3]See also Selgin and White (1994; 1996). In addition White (1993) has, in three volumes, compiled the most important works of the School.

century,[4] aims to show that fractional-reserve free banking would merely adjust the creation of fiduciary media (bank notes and deposits) to public demand for them. Thus, they argue that fractional-reserve free banking would tend to achieve a "monetary equilibrium" better than other alternative systems, as it would adapt the supply of money to its demand more efficiently.

In simplified terms, this argument is based on considering what happens if there is an increase in the demand for fiduciary media by the economic agents, assuming an unchanging supply of bank reserves of commodity money (Selgin 1988, p. 34).[5] The reasoning is that, if this occurs, the flow of the exchange of fiduciary media for the reserves of the banks will decrease, meaning that the latter will increase and the banks, eager to obtain higher profits and aware that they now need less "prudential" reserves, will expand credit and the issue of bank notes, giving rise to an increase in the issue of fiduciary media that will tend to respond and adapt itself to the *previous* increase in the demand for them. The contrary occurs in the event of a decrease in the demand for fiduciary media: the economic agents will increase the flow of the exchange of fiduciary media for bank reserves, meaning that the banks will feel their solvency threatened and will be forced to reduce credit and decrease the issue of deposits and bank notes. Thus, the decrease in the supply of fiduciary media will follow the *previous* decrease in the demand for them.

This analysis of monetary equilibrium is reminiscent of some arguments of the old Banking School concerning the needs of trade. According to these arguments, the creation of fiduciary media by private banks would not be harmful if it responded to an increase in the "needs" of the traders.[6] According to the new theory of "monetary equilibrium" in free banking, the creation of fiduciary media (bank notes and deposits) by private banks will not generate economic cycles because *it will only tend to respond to an increase in the demand for such instruments on the part of the public.* Although the embryo of this new and refined version of the "needs of trade" theory had already been set forth in White's book, *Free Banking in Britain,*[7] it was nevertheless not developed by this author, but by one of his most distinguished students, George A. Selgin. We will now make a critical study of Selgin's theory of "monetary equilibrium" under free banking and, in general, of fractional-reserve free banking.

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[4]Selgin also includes Haberler (1931), Machlup (1940), and, with qualifications, Hayek (1935) among the continental European theorists who also upheld the analytical framework of monetary equilibrium. Regarding Keynes, Selgin (1988, pp. 56 and 59) concludes that "Despite . . . important differences between Keynesian analysis and the view of other monetary-equilibrium theorists, many Keynesians might accept the prescription for monetary equilibrium offered" in his book.

[5]Ibid. (chs. 4, 5, and 6, and esp. pp. 64–69) for a detailed analysis of this theory.

[6]In fact, these and other banking doctrines had already been set forth at an embryonic stage by the anti-bullionist theorists of eighteenth-century Great Britain. See Rothbard (1995b,c,d) and Hayek (1991).

[7]According to Horwitz, White

> expressly rejects the real-bills doctrine and endorses a different version of the "needs of trade" idea. For him the "needs of trade" means *the demand to hold bank notes.* On this interpretation, the doctrine states that the supply of bank notes should vary in accordance with the demand to hold notes. This is just as acceptable as the view that the supply of shoes should vary to meet the demand for them. (Horwitz 1994, p. 169)

THE CONSIDERATION OF THE CHANGE IN THE DEMAND FOR FIDUCIARY MEDIA AS AN EXOGENOUS VARIABLE

The modern fractional-reserve free-banking theorists base their analysis on considering that the demand for money in the form of fiduciary media is a variable which is exogenous to the system and increases or decreases at the will of the economic agents. Therefore, for Selgin and White, the main virtue of the free-banking system is that it adapts the issue of deposits and bank notes to the increases and decreases in the demand for them.[8] *However, this demand would not always be exogenous to the free-banking system, but could be determined endogenously by the system itself.*

It is understandable that the theorists of the Fractional-Reserve Free-Banking School usually begin their monetary equilibrium analysis by assuming that there have been sudden variations in the demand for fiduciary media, the origin and etiology of which they rarely explain.[9] It is as if they were aware that, on the supply side, the Austrian analysis has demonstrated that credit expansion causes important distortions of the economy which seem to justify a rigid monetary system[10] that prevents the monetary expansions and contractions generated by their fractional-reserve free-banking system. On the monetary supply side, therefore, it seems that the theoretical arguments of the Austrians support the establishment of a relatively inelastic monetary system such as the pure gold standard with a 100-percent reserve requirement for bank demand deposits.[11] Consequently, it is easy to understand that anyone who wants to justify theoretically a fractional-reserve free-banking system that may

[8]"Free banking thus works against short-run monetary disequilibrium and its business cycle consequences" (Selgin and White 1996, pp. 101–2).

[9]It is curious to observe how the modern theorists of the Free-Banking School, like the Keynesians and the monetarists, seem obsessed by short-term unilateral changes in the demand for money. However, such changes historically have been produced over an economic cycle—during the last stages of booms and in crises—which almost always begins as the result of *previous* changes in the supply of new money created by the banking system. Apart from this, only exceptional disasters like wars and other catastrophes—natural or otherwise—could explain a sudden increase in the demand for money. Seasonal variations in the demand for money are comparatively of minor importance and a 100-percent-reserve free-banking system could easily adjust to them through some seasonal movements of gold and variation of prices. Moreover, for Mises, increases in the demand for money do not pose any problem of coordination, even if the banks do not try to adapt themselves by creating new credits. Thus, even in the event of an increase in savings (in other words, a decrease in consumption) which materializes entirely in an increase in cash balances—hoarding—and not in direct loans in the form of capital-goods expenditure, there will be effective saving of the community's goods and services and a process whereby the productive structure will lengthen and become more capital intensive. If this occurs, the increase in cash balances will simply give rise to an increase in the purchasing power of money and, therefore, to a decrease in the nominal prices of consumer goods and the services of the different production factors which will generate among themselves, in relative terms, the price disparities which are typical of a period in which savings grow and the structure of production becomes more capital intensive. See Mises (1998, pp. 520–23) and also the corresponding comment by Salerno (1993).

[10]Hayek (1967, p. 108) wrote that, in order to be neutral, "the supply of money should be invariable." Remember also that Hayek's goal in *Prices and Production* was "to demonstrate that the cry for an 'elastic' currency which expands or contracts with every fluctuation of 'demand' is based on a serious error of reasoning" (1931, p. xiii).

[11]Skousen notes how a 100-percent free-banking system and pure gold standard is more elastic than Hayek's proposal and does respond to the "needs of business": price deflation would stimulate new gold discoveries and would eventually cause an expansion in the gold-money supply without creating a boom-bust cycle. Skousen (1990, p. 359) concludes that "based on historical evidence, the money supply (the stock of gold) under a pure gold standard would expand between 1 to 5 percent. And, most importantly, there would be virtually no chance of a monetary deflation under 100-percent gold backing of the currency."

give rise to significant increases and decreases in the supply of fiduciary media must inevitably resort to the monetary demand side of the problem, in the hope of being able to show that, when these modifications in the fiduciary media supply occur (and they will, in a fractional-reserve free-banking system), it is because they always satisfy *prior* and entirely independent variations in the demand for them. Thus, a hypothetical "monetary equilibrium," which existed previously and had been altered by an exogenous variation in the demand for fiduciary media, would be reestablished.

However, the evolution of events may often be different from what these theorists indicate. It could begin, not with autonomous or original movements in the demand for fiduciary media, but rather in the manipulation of the monetary supply (credit expansion) which, to a variable extent, all fractional-reserve free-banking systems can generate autonomously and exogenously. These increases in credit expansion will distort the productive structure and provoke an economic cycle which leads to sudden variations in the demand for money and fiduciary media, especially during the last stages of each boom and during the periods of crisis and recession.

It is true that, if there exist many free banks that are not supported by a central bank, credit expansion will cease long before it would in an environment in which the central bank orchestrated and drove it, and also used its liquidity to support any banks which might be in danger. This is the main argument in favor of fractional-reserve free banking originally developed by Parnell (1827) and also later considered as a *second-best* by Mises.[12] However, it is one thing to affirm that completely free banking will limit the credit expansion *earlier*, and quite a different one to say that in no case will the credit expansion generated by a fractional-reserve free-banking system distort the productive structure because it will only tend to reestablish a hypothetical "monetary equilibrium." In fact, Mises himself makes it very clear that *all* credit expansion distorts the productive system, thus rejecting the essence of the modern theory of monetary equilibrium. Mises states that "the notion of 'normal' credit expansion is absurd. *Issuance of additional fiduciary media, no matter what its quantity may be, always sets in motion those changes in the price structure the description of which is the task of the theory of the trade cycle*" (Mises 1998, p. 442; emphasis added).[13]

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[12]"Mises's support for free banking is based in part on his agreement with Cernuschi, who (along with Modeste) believed that freedom of note issue would automatically lead to 100-percent reserve banking" (Selgin 1988, p. 62) and that Mises "believed that free banking will somehow lead to the suppression of fractionally-based inside monies" (ibid., p. 164). A different interpretation of Mises's position has been given by White (1992, pp. 517–33). Salerno criticizes White for defending the thesis that Mises was the prototype of the modern Fractional-Reserve Free-Banking-School theorists without realizing that Mises always criticized the essential positions of the Banking School and that, if he defended free banking, it was as an indirect procedure for attaining the final goal of a banking system with a 100-percent reserve requirement. Salerno concludes that

> To the extent that Mises advocated the freedom of banks to issue fiduciary media, he did so only because his analysis led him to the conclusion that this policy would result in a money supply strictly regulated according to the Currency Principle. Mises's desideratum was to completely eliminate the destructive influences of fiduciary media on monetary calculation and the dynamic market process. (Salerno 1993, pp. 137ff. and 146)

[13]Mises adds that "Free banking . . . would not hinder a slow credit expansion" (1998, p. 443). We think that Mises was, in *Human Action*, probably too optimistic when evaluating the role of free

The theory of monetary equilibrium under fractional-reserve free banking does not recognize that the *supply of fiduciary media can generate, to a large extent, its own demand.* In other words, the modern free-banking theory shares the essential error of the old Banking School which stems, as Mises showed, from not having realized that the credit demand from the public is a magnitude which depends precisely on the banks' willingness to lend. Thus, banks which are not too concerned about their future solvency are in a situation where they can expand credit and place new fiduciary media in the market simply by reducing the interest they ask on the new loans they create and making easier the other contractual conditions they normally require for granting their new credits.[14] Moreover, the increase in money to which the credit expansion gives rise tends, at least during an initial period, to increase the demand for fiduciary media. In fact, those economic agents who are not entirely aware that an inflationary process of expansion has commenced will see how the prices of certain goods and services start to rise relatively faster and, maintaining the hope that these prices will have to return to their "normal" level, will probably decide to increase their demand for fiduciary media. To quote Mises again, while the first stage of this inflationary process lasts,

> the prices of many goods and services are not yet adjusted to the altered money relation. There are still people in the country who have not yet become aware of the fact that they are confronted with a price revolution which will finally result in a considerable rise of all prices, although the extent of this rise will not be the same in the various commodities and services. These people still believe that prices one day will drop. Waiting for this day, they restrict their purchases and concomitantly increase their cash holdings. (Mises 1998, pp. 427–28)

Therefore, it is not only that the banks of a real fractional-reserve free-banking system can initiate a credit expansion unilaterally; also, over significant periods of time, the increase in the supply of fiduciary media can produce an increase in its own demand, which will last until the public understands and begins to distrust the situation of economic boom and realizes that there is going to be a general price rise. Afterwards, during the last stages of the boom and when confidence is shaken during the recession, people can also tend to increase their demand for bank money.

We may conclude that if the origin of the changes in the demand for money is in the free banking supply of fiduciary media, the essential foundation of the theory of monetary equilibrium under fractional-reserve free banking, according to which the supply of fiduciary media simply adjusts itself to the demand for them,

banking in limiting credit expansion. Mises in 1924, however, with the second German edition of his book *The Theory of Money and Credit* already had stated that "it is clear that banking freedom *per se* cannot be said to make a return to gross inflationary policy impossible" (1981, p. 436).

[14] See Mises (1998, pp. 439–40):

> The Banking School failed entirely in dealing with these problems. It was confused by a spurious idea according to which the requirements of business rigidly limit the maximum amount of convertible banknotes that the bank can issue. They did not see that the demand of the public for credit is a magnitude dependent on the banks' readiness to lend, and that the banks which do not bother about their own solvency are in a position to expand circulation credit by lowering the rate of interest below the market rate. . . . Lowering the rate of interest is tantamount to increasing the quantity of what is mistakenly considered as the fair and normal requirements of business.

disappears. In fact, it could be the demand for fiduciary media which, at least for significant time periods, tends to adjust itself to the greater monetary supply generated by the banks in the form of credits.

Possible Sources of Unilateral Credit Expansions in Real Fractional-Reserve Free-Banking Systems

There are several reasons that may make it possible for a real fractional-reserve free-banking system to generate credit expansions that do not correspond to previous variations in the demand for fiduciary media.

First, the analysis of monetary equilibrium in a free-banking system shares many of the limitations of the traditional neoclassical analysis which, in both the microeconomic and macroeconomic fields, merely explains how a hypothetical final state of rest of the social processes (monetary equilibrium) is reached as a result of the strictly maximizing behavior of the economic agents (private bankers). The Austrian economic analysis, on the other hand, places the emphasis on the dynamic entrepreneurial process that is continually taking place in the market, rather than on equilibrium. Each entrepreneurial act serves to coordinate and establish a *trend* towards equilibrium which, however, is never reached because, during this process, new information is continually generated by the entrepreneurs and other changes in market circumstances occur, making it impossible to attain. Applying this well-known theoretical scheme of the dynamic entrepreneurial process studied by the Austrians to the model of monetary equilibrium, it is clear that, in a real fractional-reserve free-banking system, a perfect adjustment between the issue of fiduciary media and the demand for them, included so mechanically in the model, cannot be accepted, except in a very imperfect and, at most, approximate way.

In real life, many banking entrepreneurs, each of whom has his own personal alertness, subjective interpretation of the information from the external world (including the evaluation, optimistic or otherwise, of the evolution of economic events, of what may be considered to be a prudent level of reserves and of his own solvency) and entrepreneurial creativity, will make day-to-day decisions on the volume of fiduciary media to be issued in an environment of ineradicable uncertainty. It is obvious that many errors will be committed during this entrepreneurial process in the form of unilateral issues of fiduciary media that distort the real productive economy. The truth is that errors will tend to be discovered and eliminated, but only over a prolonged process, which may last a longer or shorter time, during which certain volumes of fiduciary media will be produced by error and will cause *real* damage to the productive structure. If to this we add the intimate relations that exist between the supply of fiduciary media and the demand for them by the public, mentioned under the preceding heading, we can understand the great problem posed in order to reach monetary equilibrium in the real world of fractional-reserve free banking: the banking entrepreneurs, through a trial and error process, will try to adapt their issue of fiduciary media to a demand that, first, they do not know and, second, tends, in turn, to vary as a consequence of the inevitable errors committed by the bankers in the form of "undue issues" of fiduciary media during the adjustment process. It is debatable, and will depend, above all, on the historical circumstances in each particular case, whether, in fact, the bankers' entrepreneurial process of coordination will converge in the direction of some equilibrium; but what cannot, in our opinion, be denied is that, at least during the coordination process, errors will be committed, fiduciary media

will be unduly issued in the form of a credit expansion, and the productive structure will be distorted, as shown by the Austrian theory of economic cycles (Hülsmann 1996, esp. pp. 40–41).

The same may be said, in the second place, with regard to the possibilities of the "in-concert" expansion of fiduciary media arranged *simultaneously* by a larger or more reduced group of bankers, or with regard to the chances that mergers or acquisitions take place among the free banks, in order to "pool" and better manage the "prudential" reserves they hold, thus increasing their capacity to create fiduciary media in order to raise their profits (Laidler 1992, p. 197). Unless the advocates of a free-banking system wish to avoid the adoption of those types of entrepreneurial strategies by applying strict antitrust legislation in the banking industry (which we doubt), it seems possible that this kind of phenomenon will often commence in a fractional-reserve free-banking system. In relation to the prearranged expansion, Selgin argues that the "spontaneous in-concert expansions will be self-correcting" because the growth in total clearings will increase the *variance* of clearing debits and credits (Selgin 1988, p. 82). However, apart from the fact that, in his model, Selgin always assumes a fixed amount of banking reserves and that a number of authors doubt that this mechanism is effective (Schwartz 1993, p. 3), even if, for dialectical purposes, we suppose that Selgin is right, it may again be argued that the adjustment would never be perfect or immediate and that, during their readjustment and coordination process, in-concert expansions and mergers might facilitate the unilateral issue of significant volumes of new fiduciary media which might give rise to an economic cycle.

Finally, in the third place, a fractional-reserve free-banking system leads to unilateral increases in the issue of fiduciary media that do not correspond to previous increases in the demand for them when an increase in the global stock of commodity money (gold) used by the banks as prudential reserves takes place. If we remember that, historically, the worldwide stock of gold has increased at an annual rate of between 1 and 5 percent (Skousen 1990, ch. 8, pp. 269 and 359), it is clear that a free-banking system could permit, even if it were only as a consequence of the annual worldwide gold production, a significant growth (also between 1 and 5 percent annually) in the issue of fiduciary media that does not originate from an increase in the demand for them.[15]

We may, therefore, conclude that, even in a fractional-reserve free-banking system, significant inflationary processes[16] and serious economic crises[17] may take place.

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[15]The possibility of greater credit expansions induced by commodity-money supply shocks should not be discarded either, although Selgin (1988, pp. 129–33) tends to minimize its importance.

[16]We should remember (note 13 above) that, for Mises, "It is clear that banking freedom *per se* cannot be said to make a return to gross inflationary policy impossible," especially if an inflationary ideology prevails in the economic world:

> Many authors believe that the instigation of the banks' behavior comes from outside, that certain events induce them to pump more fiduciary media into circulation and that they would behave differently if these circumstances fail to appear. I was also inclined to this view in the first edition of my book on monetary theory. I could not understand why the banks didn't learn from experience. I thought they would certainly persist in a policy of caution and restraint, if they were not led by outside circumstances to abandon it. Only later did I become convinced that it was useless to look for an outside stimulus for the change in the conduct of

THE THEORY OF "MONETARY EQUILIBRIUM" IN FRACTIONAL-RESERVE FREE BANKING IS BASED ON AN EXCLUSIVELY MACROECONOMIC ANALYSIS

Attention should be drawn to the fact that the modern analysis of monetary equilibrium in a fractional-reserve free-banking system ignores the *microeconomic* effects which arise from the increases and decreases in the supply of fiduciary media generated by the banking system. In other words, even accepting, for dialectic purposes, that the origin of all evil is, as the fractional-reserve free-banking theorists assume, unexpected changes in the demand for bank money by the economic agents, it is evident that the fiduciary media supply generated by the banking system to accommodate these changes in the money demand do not arrive instantaneously at the precise economic agents whose valuations in respect to holding new fiduciary media have been modified. They rather flow into the market through very specific points and in a very precise way: step-by-step in a temporal process and in the form of credits granted by reducing interest rates and received, in the first place, by certain entrepreneurs and investors who thus tend to initiate new investment projects which distort the structure of production.

It is not surprising, therefore, that the modern theorists of the Fractional-Reserve Free-Banking School tend to ignore some essential elements of the Austrian theory of economic cycles. This Austrian theory is difficult to fit into their analysis of the issue of fiduciary media in a fractional-reserve free-banking system. This is because they normally take refuge in an exclusively macroeconomic analysis and use instruments which, like the equation of exchange or the concept of price level, tend precisely to conceal the important microeconomic phenomena which take place in an economy when there is credit expansion and the amount of fiduciary media changes (variation in relative prices and intertemporal discoordination).

In normal market processes, the supply of consumer goods and services tends to vary in accordance with the demand for them and the new production of these types of goods tends to reach precisely the consumers whose subjective valuation of them has increased. However, the situation in relation to fiduciary media is very different: the supply of fiduciary media generally does not go immediately and *directly* into the pockets of the economic agents whose demand for them may have increased, but reaches them after a long process, having previously passed through the pockets of many other economic agents, distorting the whole productive structure during this long transitional phase.

When the fractional-reserve free bankers create new fiduciary media, they do not hand them directly to the economic agents that feel a greater demand for bank

> the banks. . . . We can readily understand that the banks issuing fiduciary media, in order to improve their chances for profit, may be ready to expand the volume of credit granted and the number of notes issued. What calls for special explanation is why attempts are made again and again to improve general economic conditions by the expansion of circulation credit in spite of the spectacular failure of such efforts in the past. The answer must run as follows: according to the prevailing ideology of businessman and economist-politician, the reduction of the interest rate is considered an essential goal of economic policy. Moreover, the expansion of circulation credit is assumed to be the appropriate means to achieve this goal. (Mises, 1978, pp. 135–36)

[17] "Crises have reappeared every few years since banks began to play an important role in the economic life of people" (ibid., p. 134).

money. They grant credits to entrepreneurs, who receive and *invest them entirely* without taking any account at all of the proportion at which the final holders of the new fiduciary media desire to consume and invest. And thus, it is very possible that, if social preferences on consumption and investment have not changed, the new fiduciary media created by the banks to offset the already increased demand for bank money, will at least be partially *used to increase consumer goods* expenditures, forcing the relative prices of these types of goods to rise. As Hayek says,

> so long as any part of the additional income thus created is spent on consumers' goods (i.e., unless all of it is saved), the prices of consumers' goods must rise permanently in relation to those of various kinds of input. And this, as will by now be evident, cannot be lastingly without effect on the relative prices of the various kinds of input and on the methods of production that will appear profitable. (Hayek 1976, p. 378)

Hayek further clarifies our position when he concludes that

> All that is required to make our analysis applicable is that, when incomes are increased by investment, the share of the additional income spent on consumers' goods during every period of time should be larger than the proportion by which the new investment adds to the output of consumers' goods during the same period of time. And there is of course no reason to expect that more than a fraction of the new income [created by credit expansion], and certainly not as much as has been newly invested, will be saved, because this would mean that practically all the income earned from the new investment would have to be saved. (Ibid., p. 394)[18]

In order to illustrate our argument, we will assume that there is an increase in the demand for fiduciary media without any variation in the proportion in which the economic agents wish to consume or invest.[19] If these conditions exist, the economic agents will be forced to reduce their monetary demand for consumer goods, to sell bonds and investment assets and, above all, to decrease their reinvestment in the different stages of the process of production, until they are able to accumulate the higher volume of bank money desired. We assume that the time preference has not varied, using Hayek's well-known triangular diagrams (Hayek 1967, pp. 32-62; Skousen 1990, pp. 133-214) to describe the changes that have taken place in the productive structure. We see, in Figure 1, how the increase in the demand for fiduciary media causes the hypotenuse of the triangle to move to the left, which indicates that there is a lower monetary demand for consumption and investment, although the proportion between them remains intact. In this figure, area A represents the new "hoarding" of fiduciary media by individuals.

The essential conclusion of the theory of monetary equilibrium in a fractional-reserve free-banking system is that the banks will respond to the increase that takes place in the demand for fiduciary media by expanding them by an identical volume (represented by area A) to that which will leave the productive structure intact, as shown in Figure 2.

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[18]This seems to be the extreme case of the increase in saving, all of which materializes in new holdings, of bank money used by Selgin and White to illustrate their theory. See Selgin and White (1996, pp. 104-5).

[19]This hypothesis is perfectly possible, as Selgin and White (ibid., p. 104) themselves recognize when they say that "An increase in *savings* is neither necessary nor sufficient to warrant an increase in fiduciary media."

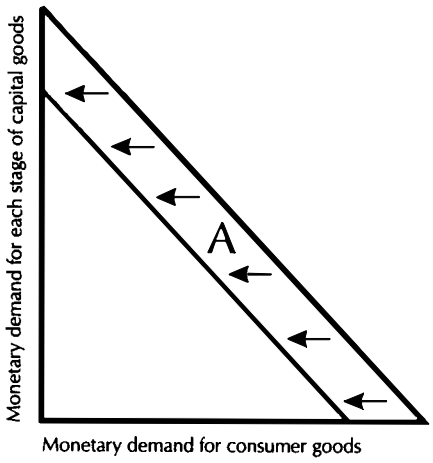

Figure 1

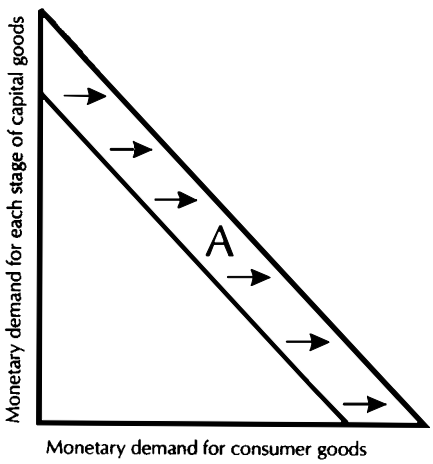

Figure 2

However, it should be remembered that the new volume of fiduciary media created by the banks is not delivered directly to its final users (the economic agents who increased their stock of bank money by the amount of A in Figure 1), but is, at first, granted as loans to the entrepreneurs who spend the whole of the volume represented by area A on investment goods, giving rise, at the beginning, to a productive structure like the one shown in Figure 3.

However, this more capital-intensive structure cannot be maintained in the long term since, once the newly-created fiduciary media reach their final users (who already have accumulated the new banking money they wanted from the beginning, shown in Figure 1), they spend them, under our hypothesis, on consumer and investment goods in a proportion identical to that shown in Figures 1 and 2. If we place Figure 3 on top of Figure 2 (the result is shown in Figure 4), it is easy to observe the distortion that takes place in the productive structure. The shaded area B represents the investment projects undertaken erroneously as a consequence of the fact that the whole new credit issue made by free banking in order to offset the previous increase in demand for fiduciary media is used for investment.[20] The shaded area C (with a surface equal to B) represents the part that the *final* holders of fiduciary media spend on the goods closest to consumption. This leaves the productive structure in the same proportions as in Figure 4, but only after the painful and inevitable readjustment indicated in the Austrian theory of economic cycles, which the fractional-reserve free-banking system has been unable to avoid, has taken place. We may conclude that, in this case, to the contrary of what Selgin and White suggest,[21] even though the increase in fiduciary media is exactly matched by a previous increase in the holdings of fiduciary media by the economic agents, it sets in motion the Austrian business cycle.

[20]Selgin and White (1996, p. 94) implicitly acknowledge this when they say that "Benefits accrue to bank borrowers who enjoy a more ample supply of intermediated credit, and to everyone who works with the economy's consequently larger stock of capital equipment."

[21]"We deny that an increase in fiduciary media *matched by an increased demand to hold fiduciary media* is disequilibrating or sets in motion the Austrian business cycle" (ibid., pp. 102–3).

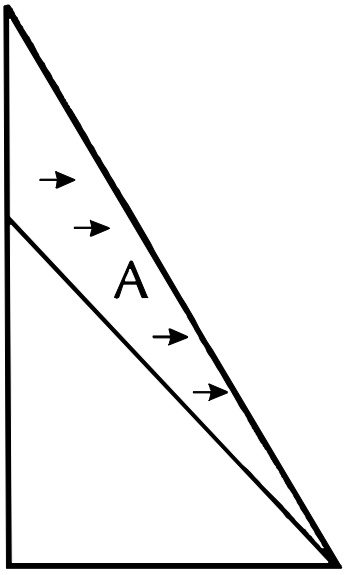

Figure 3

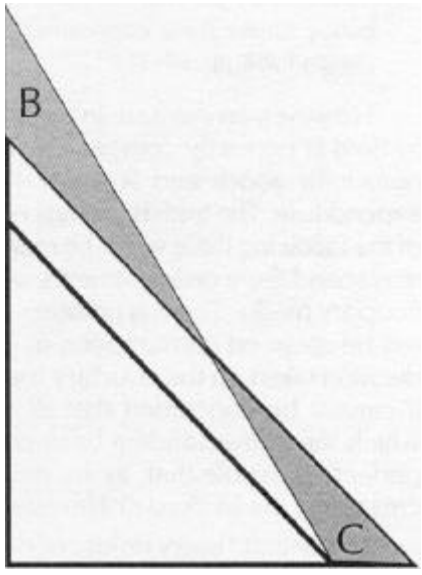

Figure 4

THE POSSIBLE CONFUSION BETWEEN THE CONCEPT OF SAVING AND THE CONCEPT OF DEMAND FOR MONEY

The attempt to recover at least the essence of the doctrine of the "needs of trade" and demonstrate that fractional-reserve free banking will not give rise to economic cycles has led Selgin to defend a somewhat similar thesis to that set forth by John Maynard Keynes when he discussed bank deposits. We should remember how, for Keynes, the man who holds the additional money corresponding to the new bank credit is said to be *saving:*

> Moreover, the savings which result from this decision are just as genuine as any other savings. No one can be compelled to own the additional money corresponding to the new bank-credit, unless he deliberately prefers to hold more money rather than some other form of wealth. (Keynes 1936, p. 83)

Selgin's position seems to be parallel to that of Keynes when he considers that the public demand to hold cash balances in the form of bank notes and deposit accounts simultaneously reflects the desire to offer short-term "loans" for an identical amount through the banking system. The only difference between the two authors on this matter is that Selgin (1994, p. 54) seems to limit his conclusion to "adjustments in the supply of loanable funds, meant to preserve monetary equilibrium." In fact, Selgin affirms that

> to hold inside money is to engage in voluntary saving. . . . Whenever a bank expands its liabilities in the process of making new loans and investments, it is the holders of the liabilities who are the ultimate lenders of credit, and what they lend are the real resources they could acquire if, instead of holding money, they spent it. When the expansion or contraction of bank liabilities proceeds in such a way as to be at all times in agreement with changing demands for inside money, the quantity of real capital funds supplied to

> borrowers by the banks is equal to the quantity voluntarily offered to the banks by the public. Under these conditions, banks are simply intermediaries of loanable funds. (Selgin 1988, pp. 54–55)[22]

However, an increase in the balances of fiduciary media that the public wishes to hold is perfectly compatible with a simultaneous increase in the demand for consumer goods and services if the public decides to decrease its investment expenditure. The truth is that any economic agent may use his money balances in any of the following three ways: he may spend them on consumer goods and services; he may spend them on investments; or he may hold them in the form of cash balances or fiduciary media. There is no other alternative. The decision as to the proportion that will be spent on consumption or investment is different to and independent of the decision taken on the fiduciary media and cash balances one wishes to hold. Thus, it cannot be concluded that all money balances are equivalent to "savings" to which the corresponding bank credits and investment should correspond, as it is perfectly possible that, as we have seen before, part of the new fiduciary media created by the banks is not invested but consumed by the final holders.

To say that "every holder of demand liabilities issued by a free bank grants that bank a loan for the value of his holdings" (Selgin 1987, p. 440) is the same as saying that any creation of bank money in response to an increase in the demand for fiduciary media implies, ultimately, the *a posteriori* grant of a loan for the same amount to the bank. However, the bank generates credits from nowhere and offers purchasing power to the entrepreneurs, who receive it without taking any account at all of the real desires for consumption and investment of the economic agents who, in the final analysis, will become the ultimate holders of the fiduciary media it creates. And thus it is very possible that, as we have already seen, if social preferences on consumption and investment have not changed, at least part of the new fiduciary media created by the banks will ultimately be used to increase consumer goods expenditures, forcing the relative prices of this type of goods to rise.

Normally, the fractional-reserve free-banking theorist considers that all notes or deposits issued by a bank are *financial assets* which means a *loan*. Juridically, there are serious problems with this idea, which we will explain later. Economically, this implies that bank money is a *financial asset* that represents the voluntary saving of an economic agent who *lends* present goods (generally money) in exchange for future goods (generally also money).[23] However, *money is in itself a present good*

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[22]Selgin's thesis reminds us of the tautological identification of savings and investment which underlies Keynes's works and, according to Benjamin Anderson, is the equivalent of considering inflation identical to savings:

> One must here protest against the dangerous identification of bank expansion with savings, which is part of Keynesian doctrine. This doctrine is particularly dangerous today, when we find our vast increase in money and bank deposits growing out of war finance described as "savings," just because somebody happens to hold them at a given moment of time. From this doctrine, the greater the inflation, the greater the savings! (Anderson 1976, pp. 391–92)

Selgin (1988, p. 59) himself acknowledges that Keynesians "who do not regard the liquidity trap as an important factual possibility would probably accept it [Selgin's framework of monetary equilibrium] as entirely adequate."

[23]How can it be conceived that a bank note or bank deposit, which is money, constitutes a financial asset and, therefore, represents, in turn, for the holder, the delivery of present money to a third party in exchange for future money? The conception of bank money as a financial asset clearly

that is perfectly liquid (O'Driscoll 1986) and holding fiduciary media balances gives no indication of the behavior of the economic agent who owns the money in relation to the proportion in which he wishes to consume or invest. For the overall banking system, the total stocks of fiduciary media are not *financial assets*, as *they are not normally withdrawn* from the system, but rather circulate indefinitely, passing from hand to hand, since they are money (or better, a perfect *money substitute*). On the contrary, a financial asset represents the delivery of present goods in exchange for future goods which must always be returned on a *certain future date* (even if it is after a short time period) and its creation results from a real and previous increase in saving by the economic agents. Furthermore, the financial asset is generally a certificate that represents that, today, present money has been renounced in exchange for obtaining a higher amount of money tomorrow. If the financial asset itself is considered, in turn, to be converted into money, an inflationary duplication of payment means would be created from nowhere without the need for any actual saving.

New savings always requires a decrease in the rate of real consumption that has existed (i.e., a sacrifice). It is not the difference between real consumption and the hypothetical "potential" consumption which could be enjoyed if all the fiduciary media balances were spent on consumer goods. Selgin appears to uphold the second idea when he proposes to change Machlup's definition of "created credit" because the latter considers, in our opinion correctly, that there is "created credit" whenever the expansionary granting of credits can provide a purchasing power that has not previously been sacrificed from consumption (i.e., saved) by anybody, even if, as we have shown, the creation of credit tends to compensate for a previous increase in the demand for fiduciary media. Credit should always come from *previous* saving if it is not to distort the productive structure. If this consumption sacrifice has not taken place, but rather the investment is financed by a newly-created credit, the structure of production can, as we know, become distorted.[24]

Some Comments on the Historical Illustrations of Fractional-Reserve Free-Banking Systems

Fractional-reserve free-banking theorists have been putting significant intellectual effort into illustrating the essential elements of their theory with real historical cases. So far, some 60 specific historical cases in which a fractional-reserve banking system was developed with a considerable amount of freedom have been identified and studied in a variable degree of depth (Dowd 1993b, pp. 39–46). The general conclusion (Schuler and White 1992, p. 198) usually drawn from these historical studies is that "bank failure rates were lower in systems free of restrictions on capital, branching and diversification (e.g., Scotland and Canada), than in systems restricted in

shows that duplicate payment means are created from nowhere: the money which is lent to, enjoyed and held by a third party, and the financial asset that the loan represents and which, in turn, is *also* said to be money.

[24]See Selgin (1988, p. 184). In the example of our diagrams, for Selgin, the entire surface A of our triangle would be "transfer credit" because it is "credit granted by banks in recognition of people's desire to abstain from spending by holding balances of inside money" (ibid., p. 60), whereas, for me (and Machlup) at least surface B would represent "created credit" as the economic agents have not restrained their consumption by the volume represented by surface C.

these respects (England and the United States)." In fact, even if it is accepted that a free-banking system may give rise, *in relative terms*, to fewer banking crises than those which have arisen in some central bank systems, for the purposes of the present article, this conclusion is practically irrelevant for the following reasons.

First, the historical studies made to date, instead of concentrating on an analysis of whether the free-banking system avoided unilateral credit expansions, artificial booms and economic recessions, have, in practice, been limited to studying whether bank panics were more or less frequent and serious than in a central bank system (which is, obviously, a very different matter). We explained above the theoretical reasons why we believe that a real fractional-reserve free-banking system may give rise to significant processes of unilateral expansion of fiduciary media and how the fact that the new creation of bank money is always injected into the market in the form of credits, regardless of the desires of the economic agents to consume and invest, distorts the productive structure and gives rise to cycles of boom and recession. Although there is still a long way to go in the field of historical research into the cyclical impact of fractional-reserve free banking, there are a number of studies that analyze real fractional-reserve free-banking systems with no (or very few) legal restrictions, central bank or institutional barriers. All of them seem to confirm the thesis that fractional-reserve free-banking systems can generate important credit expansions able to provoke economic recessions. Thus, Carlo M. Cipolla has made a study that interprets the economic crisis of the second half of sixteenth-century Italy, in which the expansion of bank money played a leading role (de Soto 1996, pp. 62-63; Cipolla 1990). And even the Scottish fractional-reserve free-banking system was subject to recurrent phases of credit expansion and contraction, which led to the corresponding economic cycles of boom and recession, at least over the years 1770, 1772, 1778, 1793, 1797, 1802-1803, 1809-1810, 1818-1819, 1825-1826, 1836-1837, 1839 and 1847 (Checkland 1973). Likewise, there are traces of similar phenomena in the remaining cases of fractional-reserve free-banking systems which have existed historically.[25]

Second, the fact that the historical studies seem to indicate that, in fractional-reserve free-banking systems, there were fewer bank panics than in the systems with a central bank does not mean that the former were totally free from bank crises. Selgin (1993, p. 27) himself gives at least three significant cases: those which took place in Scotland in 1797, in Canada in 1837, and in Australia in 1893. And although, as said above, the relevant issue for our purposes is the volume of credit expansion and the general cycles of boom and recession induced by the banks in the economic system, rather than bank crises and panics *per se*, there are a number of institutional reasons that, in addition to the "lower" expansionary

[25]Thus, for example, Selgin, discussing the period of fractional-reserve free banking in Chile from 1866 to 1874, states that it gave rise to an "era of remarkable growth and progress, free of monetary crisis." And he adds that, during this period, "Chile's railroad and telegraph systems were developed, the port of Valparaiso was enlarged and improved, and fiscal revenues increased by one-quarter." All these phenomena suggest, according to the Austrian theory of economic cycles, that, during these eight years, there was a period of acute credit expansion, as Rothbard (1989) points out. Selgin, however, considers that the subsequent serious bank crisis was not due to the fractional-reserve free-banking system but to the fact that the government maintained an artificial parity between gold and silver which, as gold was undervalued, meant a massive exit of the gold reserves from the country. See Selgin (1990, pp. 5-6, p. 7 n. 3).

capacity of a free-banking system in comparison with a central bank system, may help to explain this result. Thus, Rothbard (1995a, p. 491) indicates how, in the case of Scotland, the banks had "promoted" the use of their notes in economic transactions to such an extent that almost nobody demanded they be paid in gold and anyone who occasionally requested cash at the cash desk of their bank received general disapproval and was subject to pressure from the bankers, who usually described this behavior as "disloyal" and threatened to make it more difficult for the customer to obtain credits in the future.[26]

In any case, I do not think that the elimination of bank crises is the definitive historical criterion for evaluating which banking system is the best. If this were the case, even the fractional-reserve free-banking theorists would have to admit that the ideal banking system is a 100-percent gold reserve free-banking system, since Selgin (1993, p. 2) himself recognizes that "a 100-percent reserve banking crisis is an impossibility."

Third, there is an unquestionable historical fact: *none* of the 60 cases of fractional-reserve free banking has survived. All of them have been replaced by central bank systems, most of them during the period (from the second half of the nineteenth century to the beginning of the twentieth century) in which the world lived in a situation of relative *laissez-faire* and had not yet inclined towards the high level of economic intervention characteristic of the present century. The fact is that knowledge of *human nature* allows us to explain, to a great extent, the reasons why fractional-reserve free banking has given rise to the central bank systems with heavy intervention that we know today. Once the 100-percent reserve free-banking principle was violated and abandoned, and given the systematic *temptations* to which the different economic, social, and political agents were submitted, the results were practically irresistible. Some of these economic agents, the bankers, succumbed by abusing their capacity to issue fiduciary media, even though this threatened their own solvency. The depositors then, enthusiastically made deposits, with interest, until their bank went bankrupt, when they make a tremendous fuss and demand the help and intervention of the government. Above all else, the government, always trying to obtain easy and painless funding, found the mythical "philosopher's stone" that they have so long looked for through controlling and manipulating fractional-reserve banking. And

[26]Rothbard also argued that the fact that, in relative terms, there were fewer bankruptcies of banks in the supposedly free Scottish fractional-reserve banking system than in the English system does not in any way mean that the Scottish system was *superior*. In fact, bankruptcies of banks have been almost completely eliminated under the present systems based on a central bank and this does not mean that they are superior to a free-banking system subject to the law, but rather the contrary. The existence of bank bankruptcies, far from indicating that the system works badly may be a sign of the healthy social process of economic reaction that takes place in the market against the aggression implied by the privileged practice of banking with a fractional reserve. Thus, where there is a fractional-reserve free-banking system and bank bankruptcies and suspensions of payments do not occur regularly, one inevitably suspects that there are institutional reasons which protect the banks from the normal consequences of practicing their activity with a fractional reserve and which are able to play a role similar to the one currently played by a modern central bank. In short, the alleged historical case is not be a truly free-banking system and, therefore, its supposed greater stability could not be considered as a historical illustration to support the conclusions of the theory of monetary equilibrium under free banking (Rothbard 1988). Rothbard's thesis appears to be confirmed by Raymond Bogaert (1968, p. 392 n. 513) when he points out how, of the 163 banks known to have emerged in Venice since the end of the Middle Ages, there is documentary proof that at least 93 of them went bankrupt.

finally, businessmen, economic theorists, and general public, for centuries, have succumbed to the expansionary and inflationary ideology of fractional-reserve banking. In an interesting summary chart, Dowd (1993b, pp. 40–45, 46) describes the *dominant* reasons (bank crisis, theory-ideology, and seigniorage) that ended with each of the known fractional-reserve free-banking systems and concludes that "of course, free banking was not perfect; in a world populated by imperfect people, no institution can be."[27] I would say, rather, that, given the imperfection of human beings and their abandonment of the most elementary moral and legal principles which should guide their actions (among which I include the need to practice free banking with a 100-percent reserve ratio), the evolution of historical events to date in the banking field should not come as a surprise to anyone.

THE JURIDICAL ARGUMENTS

The analysis of banking issues must be essentially multidisciplinary because there is an intimate theoretical and practical connection between the juridical and economic aspects of all social processes in general and those related to banking in particular.[28] According to the juridical tradition of continental Europe which originated from Roman law, the task of the classical jurist is a true *art*, aimed at seeking and finding the essence *(das Wesen)* of the juridical institutions that emerge from the network of social interactions. In this task, jurists never entertain the intention of being "original," "imaginative," or having "bright ideas," but rather of "serving a certain number of *fundamental principles*, which is, as Savigny pointed out, the merit of their greatness" (Iglesias 1972). Their basic undertaking is to *discover* the universal legal principles which are inherent in the logic of human relations and immutable, although it is true that, as a consequence of social evolution itself, the need often arises to apply these intrinsically immutable principles to new situations and problems that social evolution creates. In this continual task of exegesis and refinement of general legal principles, the jurists not only apply the logic of their discipline to the different cases they analyze, but also often receive important aid from other disciplines that, like economic theory and history, can illustrate the fields of social interactions that are functioning with an imperfect or contradictory juridical foundation.

One of the most relevant cases which shows how a confused and contradictory juridical foundation can give rise to serious historical cases of discoordination and social damage is fractional-reserve banking. This originates and develops as a result of the wish to merge two contracts, the deposit contract and the loan contract, which, like water and oil, are essentially incompatible with each other.

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[27]It must be acknowledged that, in most cases, all these causes have coincided. This was the case, for example, in Chile, where the *bad apples* or unscrupulous bankers went into alliance with the politicians, and the latter, in turn, exploited the system for fiscal purposes. See Selgin (1990, pp. 5–7).

[28]The multidisciplinary nature of the critical analysis of the fractional-reserve free-banking system and, therefore, the importance of the juridical considerations, together with the economic ones, has also been brought into relief by Block (1988, pp. 24–32). Block also points out that it is very curious to note that none of the theorists of the modern Free-Banking School have made any systematic critical analysis of the proposal to establish a banking system with a 100-percent reserve. In fact, apart from some isolated comments by Horwitz, the Fractional-Reserve Free-Banking School theorists still have not tried to show why a banking system with a 100-percent reserve would not guarantee "monetary equilibrium" free from economic cycles. See Horwitz (1989, pp. 431–32, n. 18). The possible criticisms of a 100-percent reserve free-banking system have been handled systematically and refuted by Hülsmann (1996, pp. 10–17).

Table 1
Essential Differences between Two Radically Different Contracts

Demand Deposit of Money	Loan of Money
Economic Differences	
1. Present goods are not exchanged for future goods.	1. Present goods are exchanged for future goods.
2. There is complete and continuous availability in favor of the depositor.	2. Availability is fully transferred to the borrower and lost by the lender.
3. There is no interest, since present goods are not exchanged for future goods.	3. There is interest, since present goods are exchanged for future goods.
Legal Differences	
1. The essential element that prevails is the *custody* or holding of the *tantundem* (i.e., equivalent in quantity and quality) that constitutes the depositor's basic motivation.	1. The essential element is the transfer of the availability of the present goods in favor of the borrower.
2. There is no term for returning the deposit and the contract is, rather, "at demand."	2. The contract requires a *term* be fixed for return of the loan and calculation and payment of interest.
3. The depositary's obligation is to keep the *tantundem* available to the depositor at all times (100-percent reserve ratio).	3. The borrower's obligation is to return the *tantundem* when the term expires, also paying the agreed interest.

Whenever it is attempted to violate or force together general legal principles, which are incompatible, there arise many harmful consequences that were not initially foreseen, some of which have been discussed from the economic point of view in the preceding pages.[29] The essential differences between contracts (which differ radically) for the irregular deposit of money (as a fungible good) and the loan of money are summarized in Table 1, which helps us to understand the juridical issues and problems which may arise from the contracts on which fractional-reserve banking is based.[30]

Thus, in the first place, it should be noted that the practice of banking with fractional reserves involves a logical impossibility from the juridical point of view. In fact, whenever a bank grants loans against money which has been deposited with it *at demand*, an ownership of money that did not previously exist is created from nowhere for an amount identical to that which has been loaned by the bank. The depositor *holds* his money in the form of a deposit and it forms part of his money balances. Simultaneously, the person receiving the loan from the bank receives an amount of money which, in turn, becomes part of his cash balances. This result shows an extremely serious juridical irregularity as contracts, at most, can only be the materialization of a cross transfer of properties *(do ut des)* but cannot create property *ex nihilo*. In fact, a new amount of physical money (e.g.,

[29]Furthermore, that this whole controversy about fractional-reserve free banking is taking place is also an indication that something strange is happening to the juridical foundation of this institution.

[30]These problems have even been handled by European case law on several occasions during this century. See the rulings cited in de Soto (1995, pp. 29–32; 1998, pp. 16–17).

gold) has not been created but both actors (the depositor and the borrower) think and act as if they owned the same physical gold. This result, at least in the initial stages of the formation of the modern banking system, arose as a consequence of the undue appropriation and fraud committed by many bankers who used money given to them as deposits for loans.[31]

Once the bankers obtained from the government the *privilege* of acting on the basis of fractional reserves, their criminal status disappeared, at least from the standpoint of positive law. But this privilege in no way endows the monetary bank deposit contract with an adequate juridical foundation. On the contrary, this contract appears, on most occasions, as a contract which is null and void, from the point of view of general legal principles, since the *predominant purpose* of one of the parties, the depositor, is to make a deposit, while the other party, the depository banker, receives it as a loan. And, according to most standard legal principles, when each of the participants in an exchange believes that he is making a different contract, that contract is null and void. If this juridical theory of the *predominant subjective purpose*[32] of the contract (main *causa* of the contract in Roman Law) is applied to the millions of bank contracts currently in force, it would be very easy to see how the immense majority of the depositors think that they have, in fact, made a contract in which the nature of a deposit predominates, in order for such a deposit to form part of their money balances which can be transformed into currency at any time. On the contrary, the bankers receive the money as a loan, as demonstrated by the fact that they, in turn, hand it over to their borrowers, who thus increase their money balances. I think that nobody can deny the serious juridical ambiguity of the bank demand-deposit contracts which have been made to date.[33] They are called "deposits" commercially and contractually and, in fact, this name corresponds to the real main purpose which the banks' clients intend to attain. However, the bankers receive the deposits and use them as if they were loans which, as we have seen in Table 1, are radically different contracts.[34] Furthermore, it is clear that, if the majority of depositors cheat themselves (or are cheated) with

[31]The legally-invalid (i.e., criminal) historical origin of fractional-reserve banking seems to me to be unquestionable. With regard to the dual economic availability of the same amount of money generated from nowhere by fractional-reserve free banking, see Hoppe (1994, p. 67).

[32]The subjectivist conception on which Austrian economic theory is based is completely parallel to the legal point of view set forth, which considers, above all, the different causes or purposes of the parties in order to make one kind of contract or the other. This subjectivist approach (typically Austrian) is neglected by Selgin when he criticizes Mises's distinction between time liabilities and demand deposits because, according to Selgin, "Mises confuses a difference of degree [the duration of 'call loans' is unspecified] with one of substance." However, Mises's distinction is entirely correct because from the *subjective* point of view of bank clients, there is an extremely important difference of *substance*: whereas demand deposits are considered as perfect money substitutes, time liabilities are true loans that imply the loss of money available to the clients during its maturation period. See Selgin (1988, p. 62).

[33]The great Spanish jurist Felipe Clemente de Diego (1936, pp. 370–71) described this type of contract as *monstrous* or a *juridical abortion*, since it includes causes or purposes of the parties which essentially contradict each other.

[34]As a general rule, the bankers, in the contracts, general conditions, and forms of the transactions they enter into, never explain the exact nature of the contract, the obligation of holding and custody that they acquire, or whether or not the depositor has authorized them to invest the funds deposited. Everything is usually expressed vaguely and confusedly and, therefore, it is no rash allegation to suggest that the real contractual consent of the depositors is lacking.

regard to the true nature of the contract they make and, moreover, are tempted by the promise of interest[35] or the provision of free-banking services, it cannot be accepted that the fact that this type of transaction is carried out massively is a *prima facie* demonstration that shows or reveals the public's real preference for this type of contract, or much less that it is socially necessary.

Third, even if the two parties, the depositors and the bankers, coincided exactly in the belief that the predominant purpose of the transaction was a loan (which is not certain to have been the case for the majority of people), the juridical nature of the monetary bank-deposit contract would not be resolved. This is the case because, from a juridical point of view, it is impossible that the banks can comply with the obligation to return the deposits they have received for an amount in excess of the reserves they hold. This impossibility is, furthermore, aggravated to the extent that the practice of fractional-reserve banking can generate banking crises and economic recessions which endanger the public's confidence in the banks. And contracts which are *impossible* to put into practice under certain circumstances are also null, according to general legal principles. Only by maintaining a 100-percent reserve which guaranteed that the supposed "loans" granted (by the depositors) may be repurchased (by the banks) at any moment, or through the existence and support of a central bank which provided all the liquidity necessary in moments of difficulty, could these hypothetical "loan" contracts with a covenant for the repayment of their *nominal* value at any moment be made *possible* and, therefore, valid.

Fourth, even if it is argued that the impossibility of compliance with bank-deposit contracts of money only occurs every certain number of years for some specific banks, their legal nature would still not be solved, because the practice of fractional-reserve banking is a *breach of public order* and is damaging to third parties.[36] In fact, fractional-reserve banking, as it generates expansionary credits without the support of real savings, distorts the structure of production and leads the entrepreneurs who receive the loans, deceived by the greater ease of the credit conditions, to undertake investments which, in the final analysis, will not be profitable. When the inevitable economic recession arrives, their investment projects will have to be interrupted and liquidated, with a high cost from the economic, social, and personal points of view, not only for the entrepreneurs and investors themselves, but also for the rest of the economic agents involved in the market process (workers, suppliers, consumers, depositors, bankers, etc.). We cannot, therefore, accept the argument that, in a free society, the banks and their clients should be free to establish the contractual covenants they consider most

[35]The fact that the depositors sometimes receive interest does not in any way change the essential purpose of the deposit (holding or custody of the money). "Nobody says no to a bit of luck" and, therefore, the *ingenuous* depositor to whom interest is offered will accept it immediately if his trust in the banker is maintained. The receipt of interest *contra naturam* (i.e., against the essential nature of the deposit contract) does not detract from the basic cause of the contract (continuous availability of the cash balance) or convert it into a loan. It merely shows that the banker is making undue use of the money deposited with him. The interest on deposit contracts is an advantage *contra naturam* which greatly reminds us of the advantages which confidence tricksters use to tempt the victims of their confidence tricks, who always fall into the trap as a result of their illegitimate desire to obtain something that is not appropriately theirs.

[36]Few criminal acts of negligent driving cause accidents or damages to third parties but, all of them are offenses since they imply a breach of public order.

fitting.[37] Actually, when mutually satisfactory agreements between two parties are made with damages to third parties and therefore, constitute a breach of public order, the corresponding "contracts" are entirely null and void.

Hoppe (1994, pp. 70–71) explains that this type of contract damages third parties in three different ways: first, to the extent that the credit expansion increases the monetary supply and decreases the purchasing power of the monetary units of the other holders of money balances, part of the value their monetary units would have if the credit expansion had not occurred, is expropriated; second, the depositors in general are damaged because, as a consequence of the credit expansion process, the probability that, in the absence of a central bank, they will be able to recover their monetary units intact decreases; and, if a central bank exists, to the extent that, although the return of their nominal deposits might be guaranteed, the purchasing power of their monetary units will be significantly reduced; and, third, the greatest damage produced is to the rest of the borrowers and economic agents in the form of generalized malinvestment, financial crisis, unemployment, and significant unrest, stress, and human suffering.

Any manipulation of money, which is the *generalized* means of exchange accepted in society, always implies, in accordance with the very definition of the concept of money, that unidentified third-party participants are affected. We are, of course, not talking about the so-called pecuniary externalities which are transferred in the market through the price system as a result of changes in subjective valuations and in human actions subject to general legal principles. On the contrary, we refer to serious social interferences which originate from the irregular juridical foundation of bank demand-deposit contracts which make possible the anomaly of multiplying the amount of money, regardless of the wishes of the parties, without any saving taking place or anything new having occurred.[38] In fact, economically speaking, the effects of the credit expansion are, from a *qualitative* point of view, identical to those of the criminal forgery of coins and bank notes which are dealt with, for example, in articles 283–90 of the Spanish Criminal Code.[39] Both of them imply the creation of money, the redistribution of income in favor of a few people to the detriment of the other citizens, and the overall distortion of the productive system. However, from a *quantitative* point of view, only a credit expansion is able to expand the monetary supply by a sufficient volume and at a rate capable of feeding an artificial boom and causing a recession. In comparison with the credit expansion of fractional-reserve free banking and the

[37]Thus, similarly, a contract between a member of the Mafia and a professional killer can be: (a) completely voluntary, and (b) based on a perfect agreement in relation to the legal nature of the covenant. However, even in an entirely free libertarian society, it is a contract totally null and void because it is damaging to a third party (the potential victim).

[38]We do not agree with Selgin and White's (1996, pp. 92–93) comments.

[39]"The following will be sentenced to imprisonment for a period between twelve years and a day and twenty years, with loss of civil rights for the duration of the sentence: (1) Those who manufacture false money," art. 283 of the Spanish Criminal Code. It should be noted that, in a credit expansion, as in the case of the forgery of money, the social damage is very much diluted and, therefore, it will be very difficult for this offence to be prosecuted as a result of evidence brought at the request of the damaged party. For this reason, the offence is described in terms of the conduct (forgery of bank notes) and not in terms of the identification of the specific personal damages to which it leads. The same procedure will have to be followed if, at any time, it is decided to apply the same treatment as a criminal offense to the creation of money by the banks.

monetary manipulation of governments and central banks, the criminal forgery of money is child's play and almost imperceptible.

The above considerations have had their influence on some modern fractional-reserve free-banking theorists, who have proposed, in order to guarantee the stability of the system, that the banks should establish a *safeguard* clause on their notes and deposits, informing their clients that the bank may decide, at any time, to suspend or defer the return of the deposits or the payment of the corresponding notes in cash.[40] It is clear that the introduction of this option clause goes against the nature of the concept of money, the essence of which is precisely the availability of perfect, i.e., immediate, complete and totally unconditional, liquidity at any moment. The option clause means that the depositors and noteholders, in crisis conditions, can be converted into compulsory lenders, rather than continuing as depositors holding perfectly liquid monetary units or perfect money substitutes. Thus, the traditional deposit contract would be converted into a peculiar form of random contract or lottery, in which recovery of the corresponding deposits would depend on the luck, influence, and other specific circumstances of each moment. No objection can be raised to the fact that certain parties decide to make such an irregular random contract. But, to the extent that in spite of the existence of this clause and the *perfect* knowledge of its implications by all the participants (bankers and their clients), they and the rest of the economic agents would behave as if they considered, from the subjective point of view, that for practical purposes their demand deposits are perfectly liquid, then the banking system could identically create credit expansions. The option clauses, therefore, would not avoid the reproduction of the processes of expansion, crisis, and economic recession which the practice of fractional-reserve free banking can create. The option clauses at most can protect the banks, but not society or the economic system, from the damages produced by the successive phases of credit expansion, boom, and recession. Thus, the option clauses argument is only a *last line of defense* that in no way solves the problem that fractional-reserve free banking can produce very serious systematic damages to third parties which constitute a breach of public order.

It is surprising that, in spite of all the foregoing arguments, most of the Fractional-Reserve Free-Banking School theorists, instead of proposing the abolition of fractional-reserve banking, only propose the elimination of central banks and the complete privatization of the banking system, without making any reference to what would be the best solution to all the economic and juridical problems discussed in this article: a free-banking system with a 100-percent reserve requirement. It is true that this privatization would tend to put an earlier stop to the almost unlimited abuses that the monetary authorities commit today in the financial field, but it does not prevent the possibility that abuses could also be committed (on a smaller scale) in the private field. This is similar to the situation that would arise if governments were allowed to systematically kill, steal, or commit any other crime. The social damage that this would generate would be tremendous, in view of the

[40]These "option clauses" were already in force in the Scottish banks from 1730 to 1765 and reserved the right to temporarily suspend cash payment of the notes they had issued. Thus, referring to bank panics, Selgin (1994, p. 1455) says that "Banks in a free-banking system might however avoid such a fate by issuing liabilities contractually subject to a 'restriction' of base money payments. By restricting payments banks can insulate the money stock and other nominal magnitudes from panic-related effects."

enormous power and monopolistic nature of the State. And without any doubt, the privatization of these criminal activities (eliminating the systematic practice of them by the government) would tend to "improve" the situation appreciably: at least the great criminal power of the State would disappear and private economic agents would be allowed to develop prevention and defense procedures against these crimes. However, the privatization of criminal activities is not the final solution to the problem they pose and they would only be completely eliminated if they were put down by all possible legal means, even if they were committed by private agents in an entirely private environment. In fact, all central banks, all the present tangle of banking legislation, and all the economic problems which may be generated by fractional-reserve free banking could be solved through a simple article in the Criminal Code of the future Libertarian Society which would say the following: "Any banker who appropriates the money deposited with him at demand for his own benefit and does not maintain a 100-percent reserve in relation thereto at all times shall be punished by imprisonment and obliged to indemnify the victims."[41]

The traditional form in which the controversy between the supporters of central banks and those of fractional-reserve free banking is posed is essentially erroneous. In fact, the advocates of fractional-reserve free banking do not realize that their proposal unleashes an almost unavoidable trend towards the emergence, development, and consolidation of a central bank. The credit expansion that can be generated by any fractional-reserve banking system gives rise to reversion processes, in the form of possible banking crises and economic recessions, which almost inevitably cause the affected citizens and bankers to demand the intervention of the government, as well as the state regulation of the activity. Furthermore, the bankers themselves soon discover that they reduce the risk of insolvency if they reach agreements among themselves, merge, and even demand the creation of a lender of last resort (central bank), which provides them with the necessary liquidity at times of adversity and institutionalizes and officially orchestrates and coordinates the growth of the credit expansion. Finally, governments cannot avoid the temptation to use this enormous power to create money permitted by fractional-reserve banking for their own benefit.

We can, therefore, conclude that the practice of fractional-reserve banking is the main factor responsible for the emergence and development of the central bank. For this reason, the theoretical and practical discussion should be raised, not in traditional terms, but between the only two feasible alternatives, radically opposed to each other, which are: either a free-banking system subject to traditional legal principles (i.e., with a 100-percent reserve ratio), in which all transactions in which a fractional reserve is established, be they "voluntary" or otherwise, are considered illegal and a breach of public order; or a system which allows the practice of fractional-reserve banking, from which a central bank will inevitably emerge as a lender of last resort and controller of the whole financial system. These are the only two theoretically and practically viable alternatives.

[41] A similar conclusion is reached by Rothbard (1995e, pp. 80–81).

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