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**THE ENDOGENOUS STABILITY OF FREE BANKING  
CRISIS AS AN EXOGENOUS PHENOMENON**

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**Abstract**

This article studies the main aspects of free banking to put forward the argument that such a system is endogenously stable and that financial crisis is an exogenous phenomenon. In support of this conclusion, it analyzes the cases of bank runs, concerted expansion and how free banking would affect business cycles according to different schools of thought. The article concludes that money can efficiently be a market phenomenon outside the state.

It is an extraordinary truth that competing currencies have until quite recently never been seriously examined. There is no answer in the available literature to the question why a government monopoly of the provision of money is universally regarded as indispensable [...]. Nor can we find an answer to the question of what would happen if that monopoly were abolished and the provision of money were thrown open to the competition of private concerns supplying different currencies.

Friedrich A. von Hayek (1976 [2007]; pp. 26-27)

## Introduction: Where Did the Free Banking Debate Go?

Until Hayek's *Denationalisation of Money* (1976), there was little discussion on free banking in contemporary economics. This, however, was not always the case. We can find some implicit exposition, for example, in Adam Smith's *Wealth of Nations* (Book II Chapter II) and in Mises' *The Theory of Money and Credit* (1912), as well as the old debate in the nineteenth century between the Currency School, Banking School and the Free Banking School.

When Hayek debated with Keynes during the 1930s the free banking alternative was not raised as the debate took place in the context of the Great Depression and was not grounded on purely theoretical considerations. It is not that in his arguments Hayek accepted the need for a monetary authority, as he acknowledged that that was the context of the debate.

When Hayek later moved to the University of Chicago in 1950, he shifted his subject of study to institutional and epistemological problems, and Milton Friedman filled

his place as a protagonist in the business cycle debate.<sup>1</sup> This, however, was more than just a change of names; it also implied a methodological move. Friedman employed the Keynesian tools to build his counter-arguments. This was the meaning of Friedman's statement that "[i]n one sense, we are all Keynesians now; in another, nobody is any longer a Keynesian."<sup>2</sup>

One of the outcomes of this development was the casting aside of the free banking alternative. The need for a monetary authority was no longer questioned; the discussion turned on what central banks should do rather than whether they should be there in the first place.<sup>3</sup> Hayek and Friedman agreed that the crisis was not a market phenomenon, but while, for Hayek, the cause was an over-expansion of the money supply through the financial market by the Fed, for Friedman the cause was the opposite, a failure to expand the money supply when it was most needed.<sup>4</sup>

There are, nevertheless, some studies related to free banking, especially those by Vera C. Smith (1936) and Murray N. Rothbard (1964). It was Hayek's *Denationalisation of Money* (1976), however, the one that revived the interest in free

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<sup>1</sup> This does not mean that Hayek did not get involved in the subject at all. His articles on monetary policy were reprinted in his *Studies in Philosophy, Politics and Economics* (1967) and in *New Studies in Philosophy, Politics and the History of Ideas* (1978).

<sup>2</sup> Quoted by Mark Skousen in Skousen, M. (1998). Milton Friedman, Ex-Keynesian. *The Freeman*, 48 (7). For the mis-quotation of Friedman's expression, see *We Are All Keynesians Now* in TIME (December 31, 1965) and Friedman's response letter in TIME (February 4, 1966).

<sup>3</sup> For an evolution of Friedman's standing regarding the role of a central bank against free banking, see Selgin (2008).

<sup>4</sup> This is also the reason why Austrians studies the twenties and Monetarism the thirties to explain the Great Depression.

banking, even though he proposes currency competition rather than free banking as it was understood by Mises.<sup>5</sup> Some contemporary studies related to the subject are those of Leland B. Yeager (1997), Lawrence H. White (1984) (1989) (1999), Larry Sechrest (1993) and George A. Selgin (1988) (1996) (2008).

If the problem of how money and banking affect business cycle is important, as is the question of what monetary policy a central bank should follow to avoid them, a comparative analysis including free banking becomes relevant. It is incomplete to ground the debate of economic policy between rules or discretionality; the problem is not a dichotomy, but a trichotomy: rules, discretionality or market competition.

Economists usually agree that monopolies are inefficient. However, such agreement does not seem to exist on the subtle topic of money supply, where the situation is not just of that of a monopoly, but of a governmental monopoly, which, of course, opens the door to the traditional problems of incentives in government as analyzed by Public Choice. Why does economics warn not to control prices but willingly play with interest rates, even while acknowledging the latter to be a much more complex phenomenon? Why is money the exception where government can, and should be, the monopolist issuer? This seems to be an unquestioned fact, but one of the arguments for this is that freedom in money supply will be unstable.

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<sup>5</sup> Hayek assumes a scenario in which banks issue fiat money, while free banking (*a la* Mises) assumes a scenario where gold is the currency and banks issue money substitutes. This difference is also due to the different historical contexts of their writings. The main difference of Rothbard's work rests in his defense of an enforced 100-percent reserve rule.

It should also be mentioned that in his *Ideal Money* (2002), John Nash notices that his article has very similar ideas to those of Hayek, although he reached his conclusions independently.

This short essay seeks to put forward the argument that this is not true and explain why free banking is an endogenously stable system and why, in such a case, financial market crises are exogenous. If free banking is stable and provides an efficient monetary and banking system, then the case of free banking deserves serious scrutiny.

## The Endogenous Stability of Free Banking

### **General Aspects of the Free Banking Process**

The main characteristic of free banking is the absence of a monetary authority, such as central banks, as well as any regulation interfering with the market of money and banking. Free banking does not carry a different meaning. Strictly speaking, a market cannot be considered free of intervention if there is no free competition in money and banking as well.

It might be useful to introduce Mises' terminology on money (1912, Chapter 3 and Appendix B). Money, in the narrow sense, can be a commodity (i.e., gold or silver), credit money and fiat money; and money in the broad sense includes money substitutes (like fiduciary media and money certificates) in addition to money in the narrow sense.

In such a system, both commodity money and money substitutes are endogenous to the market; money supply is no longer an exogenous variable, but an endogenous self-regulated phenomenon. While money in the narrow sense is a market phenomenon originated as explained by Carl Menger (1892) and Mises' Regression Theorem, money substitutes are offered by banks *ex-post* the appearance of money in the narrow sense. There are no legal restrictions, however, for banks to offer

money in the narrow sense, like fiat money, despite how difficult such a task could be. Money substitutes, of course, require the previous existence of money in the narrow sense. There are, as it were, two levels: the economy with money in the narrow sense (outside money) and banks with money-substitutes (inside money) (White, 1989, pp. 48-69). It is not necessary for all commodity money to be distributed among all banks; part of it could be held by individuals or firms outside the banks. Neither is it necessary that there be only one commodity money; there can be more than one, as was the case with gold and silver.

This situation does not mean that banks will be able to issue all the money substitutes they want or that they will chronically do so until repeated financial crises arise. Each bank has a very strict limit to its issuance imposed by the market itself. If any issuer, for example, Bank A, over-expands its fiduciary media, the receiver of such notes will be in a position to over-bid market goods as it has more notes that have not yet lost purchasing power. As this excess of fiduciary media enters the market, part of it reaches individuals who are not clients of this issuer bank but of a competitor, for example, Banks B or C. When these individuals go to Bank B or Bank C to deposit these notes, these banks will send the issued notes to Bank A (probably through a clearinghouse which reduces transaction costs to the system as a whole) in exchange for its reserves (i.e., gold). Thus, any bank that over-expands its fiduciary media will begin to lose its reserves to its competitors. This adverse clearing is the market signal that there is an excess of issued money-substitutes. Furthermore, as Hayek (1976 [2007], pp. 41-43) mentioned, Gresham's Law, which states that the bad currency displaces the good one, does not apply because there is no fixed exchange rate between competing notes in free banking by definition; it is the good currency

that replaces the bad one. Without fixed rates, Gresham Law says that the good currency replaces the bad one.

Thus, in a free banking scenario, it becomes clearer that banks' clients are not those asking for credit, but those relying on them for saving. Banks can only expand their fiduciary media to the extent that the specific demand for their currency has increased and as long as more money in the narrow sense is deposited in them. It is easy for any bank to find debtors by lowering interest rates; this, however, results in a loss of reserves for the bank if it is not facing an increase in demand. If Bank A decides to lower its interest rates, agents in debt with Banks B and C will take A's debt to cancel their debts with Banks B and C, resulting in a drain of reserves from Bank A to Banks B and C. To gain market confidence, on the other hand, is something more difficult and delicate. It does not matter if the marginal cost of printing money-substitutes is virtually zero; this production cost does not consider the loss of reserves. This last indicator is much more relevant to the issuer-bank than is the marginal cost of printing notes.

Issuer banks need their currency to be commonly accepted in the market so that it can circulate and there is no need to change it for money in the narrow sense or for a competitor's notes. On the other hand, they also need their currency to be a reliable medium of saving that will not lose purchasing power over time. Thus, only those banks that excel in managing their currency and in gaining the market's confidence will be able to expand their money circulation as their specific demand increases from market growth as well as from new clients.

Note that the issue involves not only how much money-substitute there should be in circulation, but also where changes in the money supply should take place

geographically. As Hayek (1967 [2007], pp. 270-279) pointed out, to expand money in the wrong places through fiscal policies causes not only economic but also demographic disequilibria and consequences. What should have been a step-by-step market and demographic evolution becomes an accumulation of errors to be solved all at once. Even though this problem could be avoided by open market operations by the central bank, the lack of a market for money and banking may distort its adjustment as there is no place for competition signals to appear. Nonetheless, the problem becomes more serious if the central bank becomes –formally or informally– a lender to the government to finance fiscal deficit and spending.

Under such a scenario, there is also independence between economic and political borders. As there are no institutional benefits for any currency, each issuer is unaffected by the political borders and governments. It is no longer the government making monetary policy; the evolution of the money supply responds to market demands.

Regarding the shortage of money supply, a particular difference deserves to be mentioned. An excess supply results in reserve losses. The cost of such a mistake is easily seen, and if the action is not corrected, the bank will eventually lose all of its reserves. However, an increase in demand may remain continuously unnoticed. An increase in demand in the place where the banks are already operating may be easily spotted, but opportunities in other regions must be discovered or even anticipated. The Kirznerian entrepreneurial alertness to discover market opportunities is not infallible and cannot guarantee that such opportunities will be successfully noticed. Thus, some market error of shortage in money supply may remain undiscovered indefinitely.

This is no less true, however, for a central bank; in its presence, money in the narrow sense tends to be accumulated in it rather than diversified in different commercial banks. The adverse clearing system is altered, becoming sticky in comparison to a free banking with competing issuer banks. Monopolistic central banks rely only on international clearing, which might be less regular and imply higher values of reserve movements than a more vivid clearing adjustment in free banking. Consequently, central banks may suffer higher volatility in the reserves' movements than issuer banks in free banking. In addition, the central banks have less information available from the market because the banking market is constrained. Free banking is, of course, not perfect, but its stability is much more efficient than that achievable by a monopolistic central bank. There is no reason to think that a central bank will be more efficient or have better information and analysis than free banking to discover excesses of money demand, but on the contrary, central banks do not have a strict limit as that imposed in free banking to over-expand the money supply thanks to legal tender laws and their monopolistic power in their region. Central banks are a governmental monopoly subject also to political incentives rather than following only those of economic efficiency. In free banking, there is no place for chronically devaluating currencies, as is so common for central banks.

### **Prices and Monetary Disequilibrium**

The fact that markets are not in equilibrium, but in a process of discovering disequilibria, is equally relevant in money market. Money supply and relative prices are not in equilibrium at any given point in time, and money supply and demand are not equal, just as they are not in any other market.

The fact that any quantity of money *can* be optimal does not mean that any quantity of money supply *is* optimal in any given specific circumstances. Any quantity of money supply is optimal once the market is in equilibrium; that is, once the market has made all of the necessary adjustments to make that quantity optimal. Thus, being in disequilibrium does not mean that any change in the quantity of money is anti-equilibrating; on the contrary, money changes can be part of the adjustment process.

As changes in money supply and demand affect relative prices in different times and to different extents, changes in either of those will always affect relative prices. In free banking, however, as the money supply can change only in the quantity and specific places in which its demand has increased, changes in relative prices are diminished, albeit not eliminated. Issuer banks do not inject money in random places, but through the specific economic agents demanding their money-substitutes. The fact that money supply and demand may not be equal in any given time and space is the other side of the fact that prices of goods and services are not in equilibrium. Market prices are not prices in equilibrium, but prices in disequilibrium. Free banking helps to minimize the effect on relative prices due to changes in money supply and demand.

Note that in free banking, money supply (in the broad sense) evolves *pari passu* with money demand. There is room for neither monetary inflation nor monetary deflation as a chronic policy. A drop in prices will happen through an increase in productivity, not through price level adjustment, because money supply does not follow money demand. Monetary deflation is as bad for relative prices as monetary inflation is. Free banking minimizes these effects on both sides.

## **Bank Runs**

One of the main reasons why free banking is alleged to be inherently unstable is bank runs. It should first be mentioned that studies of historical cases with similar scenarios to that of free banking have been found to be nothing but stable (White, 1984). One of the most interesting cases is that of Scotland; it is notable that in Scotland still circulates currency from their free banking epoch issued by the Bank of Scotland, the Royal Bank of Scotland and Clydesdale Bank, despite not being benefited with legal tender laws. History shows that it was not the instability of free banking that gave rise to central banks and monetary authorities, but governmental fiscal needs (Smith, 1936).

We can divide bank runs into two types, “micro” and “macro.” The first are runs against a specific bank, say Bank A, not the system as a whole. Runs against specific banks are due to their inefficiency in managing their reserves or to losing reserves through risky investments. In such a case, while Bank A loses reserves, the system as a whole does not if the runners do not take their savings out of the banking system but deposit them in a competitor, say Bank B. If the clients of Bank A still want to be in the banking system, as they did when they entered the market in the first place, then they will take their savings to Bank B, which will ask for Bank A’s reserves rather than running away from the system. If the initial assumption is that the individual wants to be in the banking system, then a change of behavior toward the system as a whole rather than toward a specific bank should be addressed rather than implicitly assumed. If not, the run to the system remains unexplained. The market is not in a crisis, but changing its structure in a similar way as when a competitor buys out an incompetent bank. Of course, a bank that cannot fulfill all of

its claims will be in bankruptcy, as would any firm that cannot fulfill its debts. In a free banking system there is no place to devalue the issued IOUs to avoid bankruptcy as history shows central banks did more than once.

A “macro” or systemic run is not against particular banks, but to the system as a whole; it is not a bank that raises doubt, but the system. Individuals do not want to be in the system anymore regardless of the availability of other banking alternatives. This suggests a problem exogenous to the system as such, important enough to affect the money market and making all individuals, not only a few, run away from the market. Why, in a competitive market with so many clear problems, can no single bank correct its performance and attract the runaways? Why does no new competitor appear and capture the drain of reserves? If the problem is so widespread, then the bankers should be aware of it as well. It is as unrealistic to assume super-intelligence on the part of banking entrepreneurs as it is to assume super-incompetence by assuming that they are the only ones who do not know what to do. Something exogenous is not allowing the banks to correct their behavior or allowing new competitors to behave differently than existing banks; and that is why the market assumes that the problem will not be solved by anyone.

If there is a change in preferences such that individuals prefer to use commodity money rather than banks’ money certificates for their exchanges or new regulations come into force, then the motive of the run on the banking system is exogenous to the system as such. Any bank may suffer a run and go into bankruptcy, but the system as a whole does not experience an endogenous crisis any more than any real market industry does. Using White’s (2008, p. 2) analogy, the fact that any bank cannot fulfill all of its claims at the same time is not an explanation of bank runs, just

as a constant like gravity would not explain all planes falling to the ground at the same time; the explanation needs to be exogenous.

This scenario of bank runs is commonly presented through game theory with an unstable Nash Equilibrium, where a run by one individual could lead to a generalized run on the system. This is why a last resort borrower -like a central bank- is needed (Diamond & Dybvig, 1983).

However, as White points out, this kind of game is not a fair representation of a free banking scenario, and it would be unsuitable to project this conclusion to a free banking situation; a “bank that modifies a relatively fragile contract to make it less fragile has a strong survival argument. It would be remarkable indeed if a truly fragile banking contract had survived the centuries of Darwinian banking competition before the first government deposit insurance scheme was devised.” (White, 1999, pp. 128-129).

In the presence of a monopolistic issuer, the issuer bank and the system become one; it is precisely the presence of the monopolistic issuer that raises the need for a borrower of last resort. Commercial banks are branches of the central bank’s currency that compete between themselves, but not as independent currency issuers. As reserves are in the central bank rather than in commercial banks, a run on any bank easily becomes a run on the system. Furthermore, as long as there are legal tender laws that promote an excess of demand for the central bank’s currency, the ratios of reserves will be situated below their optimal levels, making a run even more likely. It is not that these games are flawed in their formal construction, but that they do not represent a free banking scenario, and it is inconvenient to project their conclusions to such a situation.

It is important to discern what triggered the run in the first place. Banks cannot fulfill all of their claims any more than an insurance company can fulfill all of its contingencies at once or an industry reimburse all of its debts at once; but none of them suffers a run against them originated in an unstable Nash Equilibrium because someone “suddenly” realizes that if all clients call for their claims together, he may not recover his deposit.

A more suitable free banking game should include the possibility for any bank to change its policy and gain competitors’ reserves through adverse clearing; or even for new banks (players) to enter the market (game) when a run starts. Additionally, it might also be composed by a set of  $i = 1$  to  $n$  parallel games, where the run in any game  $i$  would result an increase in reserves in other games through new incoming players or the appearance of new parallel games. While any given game may become unstable, the system as a whole would not.

It should also be mentioned that the issued IOUs might have an option clause, as in the Scottish case, where the banks keep the right to redeem the commodity with a delay (compensated by a rate premium). This gives not only more security to the bank, but also confidence to the clients as they know the bank will have time to acquire the needed commodity money if needed without facing a run. It is worth pointing out that in the Scottish case, although the bank notes have an option clause of up to six months, the notes were accepted at par in the market given the stability and trustworthiness of the issuers, who very rarely called the option. Because issuer banks that accept rival notes at par can increase their own market shares, there is an incentive not to discount money substitutes if they are trustworthy enough (White, 1984, p. 229), making a money-substitute as good as commodity money.

Because in free banking commodity money exists outside the banks, a bank's bankruptcy does not jeopardize the situation of the commodity money. This is clearly not the situation of monopolistic central banks issuing inconvertible, i.e., fiat, money. While in free banking commodity money is an outside phenomenon and reserves are diversified through different banks in the market, the presence of central banks concentrates reserves and risk in one place.

### **Concerted Expansion**

Concerted expansion, as in collusion, is another common worry concerning free banking. In relative terms, it should be proven that if colluded expansion is feasible, it is so in a higher degree than that of central banks. This comparison is not always made, as the possibility of colluded expansion is a common concern about free banking stability rather than as a comparative analysis with a monopolistic issuer.

This situation is commonly presented as a prisoner's dilemma, as, for example, Huerta de Soto (1998 [2006], pp. 667-675) does, to show that there are incentives for the banks to collude, expand fiduciary media and seize higher profits than they would if they did not expand. This game, according to Huerta de Soto, demonstrates three main ideas: 1) that there are incentives to over expand, with all of its economic consequences; 2) that the situation is unstable and a crisis may happen at any moment when one of the colluders decides to get out of the deal; and 3) that because of this, there are strong incentives to have a central bank playing the role of the lender of last resort.

Although this two-bank game is constructed with the idea of a free banking scenario rather than with the presence of a central bank, it has some similar limitations to the game previously mentioned. In particular, this kind of game, like any prisoner's

dilemma, assumes the context and players to be constant; that is, there is no room for new players to enter the banking market when the two actual players collude and increase earnings. The prisoner's dilemma case, as interesting and appropriate for its case as it might be, is not suitable to model banking behavior in free banking. Such incrementing of earnings should attract new competitors, a phenomenon that is not captured in this kind of game but is a fundamental aspect of the real market. Banking collusion cannot last in a competitive market without governmental protection, which is absent by definition in free banking.

However, beyond these limits in these kinds of games and unprotected collusions in general, there are other reasons more specific to the case of why a concerted expansion is unlikely to happen, albeit not impossible; or at least is likely to happen with a narrower limit than a central bank has.

Mises (1949 [1996], p. 441) mentions that solvency considerations will constrain issuer banks to collude with less efficient competitors, and it happens to be that more solvent banks are the ones expanding less. A financial institution like a bank, Mises argues, has a very difficult and long-term task to build up its goodwill, but it can lose it and fall into bankruptcy rather quickly. Money expansion threatens that goodwill and invites more serious competitors to gain market shares. Collusion is unlikely to happen if both banks do not hold exactly the same goodwill. The more efficient bank may prefer to wait for the less efficient one to keep losing reserves and then seize its market. Such a decision will depend on time preferences (rapid increase with lower goodwill and shared market or slow increase with better goodwill and more market) and on each bank's expectations of its competitor's future behavior. In light of this goodwill concern and the adverse clearing, Mises (1949 [1996], p. 443) concludes:

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

Another important aspect was pointed out by Selgin (1988, pp. 80-82): even if banks collude to expand fiduciary media, they cannot control the specific dynamic of their issuance once they enter into the market. This concerted expansion, while possibly keeping the expected value reserves constant, will increase its variance, which, as a risk measure, will require the banks to increase their reserves holdings.<sup>6</sup> Unless the new fiduciary media leaves each bank and reaches all competitors at the same time and in the same amount, a variance increase is to be expected; Selgin (1988, p. 82) concludes:

Thus, given the quantity of reserve media, the demand for and turnover of inside money, and the desire of banks to protect themselves against all but a very small risk of default at the clearinghouse at any clearing session, there will be a unique equilibrium supply of inside money at any moment. It follows that spontaneous in-concert expansion will be self-correcting even without any “internal drain” of commodity money from bank reserves.

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<sup>6</sup> Selgin also mentions that the increase of reserve variance may be less in proportional terms than the money expansion; this would allow for a slow increase in money supply through concerted action, but slower than assumed without taking into consideration the changes in reserve variance.

It is also worth to mention that Huerta de Soto’s game does not address Selgin’s argument of a change in the (expected) variance of reserves, which is ten years prior to Huerta de Soto’s book.

The assumption that new competitors will not enter the market is contradictory to the free banking rules. Any game or model with this constraint is missing a fundamental aspect of free banking and fails to accurately describe its process. It would be a better representation of duopolies or monopolistic competition than of free banking.

On the other hand, the implicit assumptions that all banks hold the exact same goodwill and that all new fiduciary media behave in such a specific way that reserves' variance remains constant are a better description of a fictional world than of the real market process being analyzed. The problem with these assumptions is not only that they are very unlikely, but that they also lead to the wrong conclusions.

Thus, in free banking it is quite improbable for concerted expansion to succeed in a significant way without new competitors entering the market or the banks being constrained because they start to face higher risk indicators through reserves variance. Under free banking, the limits of credit expansion are narrower than are those of central banks.

## **Free-Banking, Business Cycle and Financial Crisis in Schools of Thought**

There are three main theories that try to explain the business cycle, namely the Monetarist, the Austrian and the Keynesian. Despite their differences, money plays an important role in all three. It is unnecessary here to go into the details of each one of them as they are already well known and widely treated in the literature; it is sufficient to briefly explain how a free banking scenario interacts with the problem of the business cycle under each one of them.

The Monetarist identification of the crisis, with the Great Depression case as a basis, contends that a crisis happens when the money supply falls short relative to money demand. The Fed, it is said, did not expand money by a sufficient amount, and the outcome was a financial crisis spreading through the banking system; that is, the crisis was the result of an error in monetary policy. Whether the error was a purely entrepreneurial error, was due to a different theoretical opinion or happened because of political pressures is indistinct. The point is that a competitor with better judgment could not compensate for the Fed's error. In a free banking scenario, if a bank falls short in its money supply, another banker takes its place with better entrepreneurial alertness. Whilst it is not theoretically impossible for all banks to make this mistake together and precipitate a crisis, it is certainly much more unlikely than only a governmental monopoly falling victim to such a mistake is.

The well-known Friedman's rule to expand money supply according to the historical performance of GDP growth rate is founded on the idea of equating money supply changes (by the central bank) with money demand changes (GDP). If, instead of a monetary authority, there were a free banking market, this idea underlying the rule would be self-controlled by the market itself; it is the absence of a market that generates the need for a rule. The rule will be the spontaneous result of the market and not the monetary policy decision of the monetary authority. There are, of course, differences in the mechanism. Friedman (1968, p. 16) suggests expanding the monetary base and leaving the banks free to manage their fractional reserves, so there is no total control of the money supply in a broad sense. Commercial banks will have to adjust their multipliers given the changes in demand and monetary base they face. The monetary base should follow a rate of change correlated with the rate of change of GDP. It should be mentioned that contractions is not the only problem for

all instances, inflation is clearly considered a problem as well. Friedman's rule, then, by setting a cap on monetary expansion would also avoid problems derived from inflation.

Austrians, on the contrary, see the problem arising earlier than does Monetarism. It is not the drop in money supply that causes a crisis, but errors accumulated in the capital structure because of an artificially lowered interest rate that will eventually need to be corrected altogether. At that point, a large number of firms will become unable to repay their debts to the banks, causing the drop in money supply. What is commonly called the crisis is identified as the correction phase. The Mises-Hayek business cycle theory starts with a continuous shock of monetary expansion entering the market through banks pushing the market interest rates below the Wicksellian natural rate. However, there needs to be an important monetary expansion for enough time in order for a crisis to happen as described in the Austrian Theory of the Business Cycle. A one-time shock or one of a small magnitude will not be sufficient. Any given bank can commit an error and over-expand its money supply, but this cannot become a recurrent error because a bank that fails to correct its policy will be set aside from the market through adverse clearing. A monopolistic central bank favored with legal tender laws is in a different situation and can put into motion important increases in money supply for enough time to affect the temporal structure of capital, as the Austrian Business Cycle Theory requires.

From an Austrian point of view, free banking also eliminates the possibility of a crisis as explained in the Mises-Hayek business cycle theory. This does not imply that a crisis cannot occur for different reasons, but it cannot take place because of a distorted interest rate for a long period.

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A Keynesian position, however, describes a different situation. A crisis is triggered by a drop in aggregated consumption, and hence the solution is to increase it through government spending. The Keynesian approach gives less weight to the role played by changes in money supply, but sees them as a tool to increase government spending to get out of the crisis. As free banking cannot do this, it is not as affable to Keynesianism as is the case with the Austrians or could be with Monetarism.

Of the three approaches, Austrians seem to be the most interested in the case of free banking. However, this does not mean that Austrians were only concerned with theoretical problems and did not offer practical solutions to specific monetary problems. There were practical recommendations from Austrians just as there were from Monetarist and Keynesian points of view. During the Great Depression, Hayek (1931 [1967], pp. 123-124) used the  $MV = PQ$  equation to suggest keeping  $MV$  stable as a general policy of a central bank. Note that this does not aim at stabilizing  $P$ , nor at stabilizing or increasing  $M$ , but at keeping  $MV$  stable. This can happen with an increasing  $Q$  and a decreasing  $P$ .<sup>7</sup> Hayek's later *Denationalisation of Money* also suggests how to move from a situation with central banks to currency competition.

In 1952, Mises wrote his *Monetary Reconstruction*, which appeared as a fourth part in his 1953 edition of *The Theory of Money and Credit*. There, he put forward his monetary policy recommendation of converting central banks into currency boards through a marginal 100-percent requirement for issuer banks against gold; leaving commercial banks with the freedom to manage their reserves as they consider best.

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<sup>7</sup> For more on this productivity rule see Selgin (1997).

Mises took some inspiration for the idea from the Gold Standard rule and Peel's Act; his intention was, as Friedman's, to constrain central banks' ability to over-expand the money supply.

### **Information and Knowledge in Banking**

A final aspect that deserves a few comments is the differentiation between information and knowledge. While information refers to data, knowledge refers to interpretation; information is a quantitative concept, whereas knowledge is a qualitative one.

This can be illustrated with a simple example. If we take three economists, a Monetarist, an Austrian and a Keynesian, and give to all of them the same complete information regarding the Great Depression or the recent Sub-Prime Crisis, they will give us in return three different explanations. Information does not speak for itself; it needs to be understood. The same will happen if we ask them to forecast the result of a stimulus plan in the middle of a crisis. Their differences are not because of diverse information, but because of different knowledge. Therefore, while information is quantitative and objective, knowledge is qualitative and subjective. Information can be complete or incomplete, but knowledge can be neither complete nor incomplete; it just is.

This distinction is important for two reasons. First, the presence of complete information does not suffice to guarantee an equilibrium as there can still be important differences in how that information is understood by the economic agents. In addition, because information and knowledge are of different natures (quantitative and qualitative), they cannot be mixed together; complete information cannot mean equal knowledge. To set aside the aspect of knowledge is, as Hayek

(1948, p. 91) suggested, a kind of assumption that sets aside the specific problem that economics has to solve.

The second aspect is related to centralization and decentralization in the market. Entrepreneurial activity uses information to discover market opportunities and anticipate market movements, but this anticipation implies subjective considerations. It depends on each entrepreneur's understanding of the market, which is mixed with his/her assumptions and instincts. Preferences are not the only subjective aspect of economic agents; knowledge and expectations are subjective as well. The aggregated information a central bank can use cannot contemplate the circumstances of particular time and places, as each bank in free banking would be able to do for its own place and circumstances.

A monopolistic issuer, even if we grant that it could solve the problem of lack of information, would not be able to solve the problem of an incorrect understanding of the market. If he makes a mistake, there is no competitor with a better understanding that could take his place. In free banking, as in any other market, the banks with better performance will be those with better knowledge of the money market. To support the presence of central banks presumes the availability of knowledge that they do not, and cannot, have.

A central monetary authority, regardless of how much information it has, does not resolve the problem of different knowledge. If it were the case that a central bank can have more and better information, why not transform the central bank into an information center to provide data to different issuer banks? Free banking is superior to a monopolist issuer not only because it is more efficient through competitive

forces, but because there is also knowledge competition in gathering incomplete and diffuse information, an important aspect that is usually passed over.

## Conclusions

We have seen that the free banking case has been set aside in the monetary discussion in economics. It is understandable that, from a pragmatic point of view, central banks are the reality with which economic policy must work, but this does not apply to the discussion in pure theoretical terms. Economics as a science should aim not only to work with present institutions, but also to study better alternatives and make them viable from a political point of view. It is vain to expect politicians to open their minds on monetary policy if economic theory does not do so first.

The free banking scenario is not only more flexible to respond to the spontaneous and unpredictable evolution of an unhampered market, but it has historically shown to be stable and efficient. Contrary to some opinions (Hülsmann, 2003, p. 416), free banking is not a “hypothetical history,” but a very real one. Although none of the historical cases involved pure free-banking, many of them shed light on how the system works (like the Scottish case) and how intervention negatively affects the system (like the Suffolk case). The fears of bank runs and concerted expansion seem to be overstated by historical and theoretical studies. For this same reason, business cycles originating in money markets tend to be constrained as free banking sets limits to the issuance of fiduciary media and money-substitutes, a fundamental requisite that is not so strictly followed by central banks.

It should be pointed out that even if crises became rare under free banking, market fluctuations due to changes, for example, in technology or preferences would still

take place. These fluctuations are part of the natural changes of the market, whereas crises are exogenously caused.

It is true that currency competition, as suggested by Hayek, is somehow present among central banks, but the situation suffers from important imperfections. Below each central bank, there is no market freedom and no central bank can open a branch within another's region. The situation among central banks is more similar to monopolistic competition than to Hayek's free competition currency. There are still regional monopolies through legal tender laws.

There is nothing to indicate that the existing distribution of monopolistic issuers is the best arrangement of issuer banks. The numbers of banks and currencies co-existing in a single region are parameters to be defined endogenously by the market. The fact that free banking means free competition in issuing money does not imply that the outcome will be a large number of currencies; the limit, as small or large as it may be, would be imposed by the market itself by choosing with which and how many currencies to work. Free banking minimizes transaction costs by adopting the optimal quantity of currencies.

Money, like religion, should be independent of the state; money cannot only exist outside the state, it can also do a better job than is being done by central banks. As Mises (1912 [1981], p. 482) suggested, “[f]ree banking would have spared the world many crises and catastrophes.”

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