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A Pre-history of the Federal Reserve

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While economists have generally quite favorable views of market-oriented solutions to the provisions of goods and services, there is one common exception: money (Rothbard 1991: 2; Huerta de Soto 2012: xxx). This seeming paradox brings with it three unfortunate results. First, since the supply of money is assumed to be produced optimally by a central bank, monetary economics commonly treats it as an exogenous variable. Second, and as a consequence of this point is that changes an central bank controlled monetary policy is seen as a panacea for economic disequilibria. Finally, since the central bank is in control of the panacea it is raised to the lofty position of "doctor" of the economy, a highly respected and necessary role to correct for imbalances caused by entrepreneurs and investors.

The recent history of the present recession provides a more than adequate example of the final point. Throughout the world central banks have taken on an almost omnipotent aura as the only institutions which can save the world in recession from its much worse fate of depression. No central bank exemplifies this status more than the United States' Federal Reserve (Fed).

The origin of the Fed is commonly seen as a well-thought out addition to the U.S. economy. Under this reasoning, the Fed was an institution which always *should* have been at the helm of American's monetary matters, but it was only in the early 20th century that politicians and economists made it so. In this sense the emergence of the Fed had the same root as all other central banks in the world: happenstance.

There exist, however, alternative theories as to why central banks emerged. Common ones include central banks emerging in response to the government's demand to issue currency to pay for its debts (Smith 1936; Selgin and White 1999), as a cartelizing force by the private banking industry (Goodhart 1988), or as the nationalization of the private clearing house system (Gorton 1985). All three of these theories are important as they call into question the origin of the central bank. Specifically, if central banks did not emerge in response to the exogenous need for a government money supplier, perhaps the lofty honors bestowed on them are misplaced.

In this chapter I will guide the reader through a reverse history of the Fed's origin. I will demonstrate working backwards from 1914 that the creation of the Fed was the response to a series of changes in the legal and regulatory framework of the United States' banking industry over the preceding half century. In conclusion I will demonstrate that this series of changes was originally set in motion by a legal privilege unduly given to American banks during the free-banking era of 1837-62. During this era the provision of money was ably handled by private, competitive note-issuing banks, and in the absence of the legal privilege of fractional reserves this system would have been sustainable, thus eliminating the incentives to create the centralized

Federal Reserve System 60 years later.

From Clearing House to Central Bank

When the Federal Reserve was solidified into law its advocates saw it as no more than "an evolutionary development of the clearinghouse associations" (Timberlake 1984: 15). Indeed, the Federal Reserve Act made only one change to the operational structure of the American monetary system of the time: the centralization of note issuance at the hands of a government-mandated monopoly of the Fed. This monopoly on note issuance represented a major centralization of power in the hands of the Fed, though by-and-large all other roles were already subsumed by private clearing houses. The Federal Reserve bill's Senate sponsor, Robert Owens, went so far as to note that "[t]his bill… is merely putting into legal shape that which hitherto has been illegally done" (U.S. Congress 1913: 904).

The "illegal" activity that Owens referred to was the practice of the private clearing house system of the time to issue its own private currency. In times of banking crisis, a run on banks would occur whereby depositors would redeem the inside money of the banking system (i.e., their deposits) into currency. As the system operated on a system of fractional reserves, these runs had the potential to bankrupt those banks lacking sufficient reserves to honor their redemption requests. To combat these insolvencies, the clearing house system issued currency which was "payable only through the clearinghouse."

This issuance of clearing house money was not sanctioned by the law. Legal money being in

short supply during bank runs, the clearing house system moved to protect its member banks the best it could, thus resorting to this questionable practice. Despite the clear illegality of the practice, "no one thought of prosecuting or interfering with the issuers" (Andrew 1908: 516). The multitude of bankruptcies and financial hardship that it precluded made legislators turn a blind eye to the practice provided that it did not become too widespread.

Though the Federal Reserve bill was drafted and discussed in rather secretive terms (Griffin 1994; Rothbard 1994), its passage brought very little public protest. Partly this was because, as previously noted, the bill did nothing to drastically change the monetary landscape of the United States. More important was that the public and banking establishment actually had reason to demand such a bill be passed (Bagus and Howden 2012a: 167).

From the public's point of view, the American banking system by 1913 was characterized by frequent suspensions on deposit redemptions during banking crises. With an "inelastic" supply of currency, the fractional-reserve banks that dotted the financial landscape of the time had few options to increase the supply of base money when redemption demands increased. Rightly or wrongly, this inability led the public to all but welcome the elasticity that the Federal Reserve would bring to the supply of currency – an ability to increase the money supply during reserve draining emergencies to keep banks liquid and depositors appeased. Indeed, from the average depositor's point of view, it mattered not whether this elasticity of the money supply to keep illiquid banks solvent happened at the hands of the private clearing house system or a centralized monetary authority. The end result, and goal, was the same in either case: continual access to deposits and a reduced threat of disruptive bankruptcies.

From the government's point of view, the Federal Reserve bill provided an avenue to eliminate one illegal activity from the financial arena. There was also the thorny issue that any noncompliance with the law threatened the legitimacy of the government and its laws, and thus removing illegal activity in a way that did not cause public outcry (as would have occurred had the clearing house system not been allowed to issue currency and allowed banks to fail) increased the appearance of the government's control over its jurisdiction.

The bill also called for the central bank to serve as the fiscal agent of the government, something that would further appease Congressmen. Not only would control of its fiscal agent result in some cost savings compared to using the private banking system for its transactions, it would also enable the government easier access to financing through monetization of its debt. Indeed, central bank creation as a response to the fiscal needs of the government is one long-standing theory of the origin of central banks. In the case of the Federal Reserve, although it is an apparent explanatory factor, it was really only a force that made the bill more palatable for legislators to pass through Congress.

While both the general public and the government had valid reasons for creating a centralized monetary authority, one would usually be surprised to see an industry clamoring for monopolization at the hands of the government. However, from the banking industry's point of view, a coordinating agency such as a central bank allowed for greater and more consistent profits than was previously the case. Banking industry profits are maximized when banks are allowed to operate on fractional reserves and use their deposited funds to finance new

investments. Instability is bred, however, unless these same banks can do so simultaneously "in-concert".

Any sustainable in-concert expansion of the money supply by banks requires that they function as a cartel – each member must expand at the exact same pace as any other member. In order that the members do not see individual profits threatened by one member "cheating" to attract clientele, the greater banking sector solidifies the informal cartel by way of a formal monopoly. Indeed, industries that are difficult to cartelize are subject to forces enticing them to monopolize to secure greater profits (Rothbard 1962: 579). The U.S. government, usually weary of cartels and centralization of industry power at the hands of specific firms, was only too willing to grant this monopoly provided that it was in control of it.

Thus all three interests – the government, banks and depositors – had an incentive to see the existing monetary system nationalized at the hands of the federal government. The private clearing house system begat the Federal Reserve.

The Growth of the Clearing House

If the Federal Reserve was created to make legal that banking system which already existed, it is instructive to understand what such a banking system looked like, and how it emerged. The common denominator between the pre- and post-Fed banking systems is the strong presence of a clearing house system. The clearing house largely directed banking activity and held an inordinate amount of power over individual banks.

The first and still largest clearing house in the United States is the New York Clearing House Association (NYCH).[1] Created in 1853 as a solution to a complex settlement process among New York City banks, the NYCH took on broader roles than just clearing transactions. One of the most significant expansions of its powers, and one most apparent in Federal Reserve operations today, is the mandate to mitigate banking panics.

The first such test occurred during the panic of 1857. In a bid to maintain confidence in the banking system, member banks decided that when any one bank was faced with the option of suspending specie payments they could turn to the NYCH for liquidity assistance. The NYCHwould issue loan certificates to settle accounts, thus economizing on the amount of currency that banks would otherwise need to use for settlement. These loan certificates were issued as a joint liability of all member banks and thus spread the risk of any one individual bank's collapse across all members. These loan certificates would become common during banking panics, bring used in smaller denominations during the panic of 1873 and every subsequent panic through 1907.

The use of the NYCH loan certificates was a straightforward affair. Banks in need of currency could submit part of their assets as collateral against certificates that could only be used in the clearing process. In this way, banks were able to swap illiquid for liquid assets and thus promote their liquidity positions, as well as ensure their solvency. If any one bank failed, the posted collateral would be made worthless. Due to the risk-sharing arrangement that the NYCH

[1] Although not the only clearing house relevant to this paper, I will focus almost exclusively on the role of the New York Clearing House Association for simplicity and also because of its continuous operations throughout all of the present study. Almost everything concerning the NYCH also applies to other major clearing houses of the time, such as the Suffolk Bank of Boston.

brokered between member banks, all remaining members would share the loss in proportion to each bank's remaining capital relative to that of all other members (Gorton 1985: 280-81).

While the loan certificates were able to meet the liquidity needs of the banking system for some time, they too eventually became insufficient to maintain the smooth functioning of the banking system.

The first alternative measure to the loan certificate was the extension of their use to members of the general public. Originally the certificates were to be used solely for settling accounts within the banking system through the NYCH. This development occurred during the panics of 1893 and 1907, and made small denominations available to the public. The issuance of these certificates to the public created a currency substitute, and was an illegal activity (Timberlake 1984). It was this illegality that prompted Congress to reassess the role and structure of the clearing house system, and provided one reason to abrogate its functions to the Federal Reserve.[2]

If the bank run was more severe than the use of clearing house loan certificated could stymie, banks would resort to convertibility suspensions. Loan certificates issued to banks, and also individuals, came to be associated with restrictions on or suspensions of the conversion of inside money to currency. As the scope of the Clearing House grew, so too did the range of banks that it would invoke its policies on. This point brings us back to the prime reason why the American public did not resist the centralization of its monetary system at the hands of Congress: the correlation between clearing house loan certificates and restrictions on deposits became so

[2] There was one benefit to the illegality of issuing clearing house certificates to the general public. The risk of legal penalties ensured that this option would only be undertaken during extreme circumstances, and thus led to their use being less than would otherwise be the case (Horwitz 1990: 647).

prevalent that the public welcomed the creation of the Federal Reserve to halt these suspensions (Timberlake 1984: 14).[3]

Precedent Set for Clearing House Certificates

The original use of clearing house certificates to stem banking panics occurred during a period when the United States banking sector was already facing numerous regulations, hindering its stability. The use of the certificates was the best option available to the private banking system to ensure its stability in the face of destabilizing regulations and lacking an official lender of last resort. The precedent for their use occurred during the free-banking period, a period of relative deregulated banking activities, specifically during the Panic of 1857 (Timberlake 1984: 4). The free-banking period, generally characterized as lasting from 1837-62, is a reasonable approximation of how a laissez-faire banking system can function and mitigate panics if left to its own devices.

After functioning reasonably well for several decades, the Panic of 1857 was set in motion by the failure of the Ohio Life Insurance and Trust Company on 24August. The Panic was of such breadth that Marx and Engels, writing from London England, defined it as the world's first global economic crisis (1986, vol. 28: xiii). The failure of Ohio Life threatened to precipitate the failure of other Ohio banks through association, and perhaps even spread to neighboring states (Calomiris and Schweikart 1991: 808-10).

[3] Note that the suspension of payments was not only a feature of the American free banking period. Checkland (1975: 185) observed that "[t]he Scottish [free-banking] system was one of continuous partial suspension of payments."

President James Buchanan blamed the panic on the paper-money system prevalent at the time, and in particular he encouraged Congress to pass a law forfeiting a bank's charter in the event that it suspended payment in specie to its depositors (Klein 1962: 314-15). Although this may seem like the actions of an overreaching executive branch, in 19th century America a suspension of the convertibility of deposits "amounted to default on the deposit contract, and was in violation of banking law" (Gorton and Mullineaux 1993: 326). With this avenue removed from their policy options, banks begin coordinating their behavior, particularly in the affected states of Ohio and Indiana (Calomiris and Schweikart 1991). Notably, however, the coordinated behavior diverged from the past in one important way.

Early in the Panic banks pursued the usual path of curtailing loans to augment their precautionary reserves. The Clearing House, on the other hand, pushed forward a different solution which was not uniformly beneficial to all banks. Under this alternative, banks would increase their loan portfolios proportionately. In this way, clearing house balances would be reduced or eliminated and thus currency would be further economized (Myers 1931: 97). Any shortfalls in clearing balances would be met through the issuance of loan certificates.

Member banks voluntarily abrogated certain rights to the clearing house during banking panics, though some irregularities of this abrogation are apparent (Bagus and Howden 2012a: 165).

The pooling of reserves to back clearing house loans against, though technically voluntary, was predictably not uniformly desired among the banking establishment. Prudently managed banks

with stronger liquidity positions objected to the practice as "inequitable", and decried that pooling "denied them the rewards for their caution" (Timberlake 1984: 4). The effect was that strong banks subsidized the weak ones when liquidity became scarce.

The clearing house did not just stop at using member banks' assets as a common pool to issue loan certificates against; it also set out on a policy to equalize reserves by its own assessment, using the reserve base as a "common fund to be used for mutual aid and protection" (Myers 1931: 100). This pooling feature had the effect of allowing for an even greater degree of centralization than even a "strong central bank" could hope for (Myers *ibid.*).

Our earlier description of the advent of the Fed as being one of making the existing illegal banking system legal may be a bit of an understatement. The clearing house systems that existed in late 19th century America had even more powers than other central banks of the time.

The use of loan certificates, for example, allowed the clearing house to be "converted, to all intents and purposes, into a central bank, which, although without power to issue notes, was in other respects more powerful than a European central bank, because it included virtually all banking power of the city" (Sprague 1910: 50-63, as quoted in Timberlake 1984: 5). Shenfield (1984: 74) is an even stronger critique, describing the Boston based clearing house, the Suffolk bank, as "a successful central banking system." Indeed, clearing houses had grown to such importance that they were almost universally seen as equivalents to their European central bank counterparts. By design or not, they took on a scope of roles and tools that was not even apparent to the original developers of them (Cannon 1908: 97).

Banking's Original Sin

If the use of clearing house loan certificates ushered in a period of increasingly centralized powers in the hands of a few clearing houses, we may do well to ask why these certificates were necessary. Interestingly, while the expansion of clearing house roles and strengthening of their powers came during the more heavily regulated post-Civil War period, the original use of the loan certificates and asset pooling occurred during the laissez-faire free-banking era.

There is a large body of theoretical literature on free-banking regimes that suggests that the reason the loan certificates were invoked – liquidity draining runs on reserves – should not happen. One specific theoretical outcome of a free-banking system is that it will be able to function with fractional reserves while not suffering reserve draining conversions of inside to base money. Notably this was not the case during the American free-banking. If the theory does not provide an adequate job of describing reality, the only conclusion is that the theory is somehow mistaken.

Two key areas where the theory of free banking errs are in its assumption that competitive note-issuing banks will not over-expand credit in a destabilizing manner, and that the demand for inside money is stable.

In the first instance, there is a clear incentive for profit-maximizing banks to increase their credit issuances in a bid to maintain not only absolute, but also relative profits. This can only be done

by all banks in a system acting in-concert with one another, primarily by one of three avenues (Bagus and Howden 2010; 2012a): 1) using an interbank loan market to substitute for reserves in covering non-zero clearing balances; 2) lengthen the clearing period so as to minimize clearing balances; and 3) use the increased negotiability of reserve assets apparent under credit expansion to reduce holdings thereof. In the case of the 20-year period of free banking in question, the first avenue was apparent through the increasing role of the clearing houses (Bagus and Howden 2012a: 164-65). The second avenue is difficult to discern, but no evidence precludes its possibility (Bagus and Howden 2012a: 162), and some evidence does point to lengthened clearing periods (Norman *el al*. 2006). The final avenue would be apparent if an in-concert credit expansion engendered a credit-fueled boom. As we will see, this was one of the hallmarks of the Panic of 1857.

The other area where the theory of the stability of free banking errs is in its claimed "proof" that the demand for money is stable under such a regime. By stable, it is often claimed that the demand for money is comprised solely of the demand for inside money (e.g., Selgin 1988: 54). Indeed, such theorists err in *petitio principi* by assuming that the demand for money is limited to inside money (e.g., Selgin 1988: 37, 60fn18, and *passim*) while simultaneously trying to demonstrate that a free-banking system will reach stability whereby the demand for money will only consist of the demand for inside money.

Panics originate when depositors doubt the ability of their banks to make good on their promise to redeem inside money for currency. One reason why such a situation may arise is if the previous period of credit expansion led to an Austrian business cycle (ABC) – defined as a

situation where a monetary expansion not backed by savings breeds an unsustainable boom (Mises1949; Hayek 1931; Rothbard 1962; Garrison 2001). The years leading up to the Panic of 1857 fit the description of an ABC nicely.

While the failure of Ohio Life Insurance and Trust proved to be the instigator of the broader Panic, widespread imbalances in the US economy had already been bred over the preceding boom.[4] Lasting roughly from 1852 to 1857, the boom was marked by widespread credit expansion driven by a reduction in the reserves held by private banks and coupled with an increase in the issuance of base money.

Traditional explanations of the Panic of 1857 diverge, though center on the common theme of bank speculation. J. S. Gibbons (1859: 2) attributed the Panic to banks contracting their loans, because of deposit withdrawals by New York country banks. D. Morier Evans (1859) blamed excessive speculation by banks, and B. Douglass & Co. thought that, in the wake of otherwise prosperous economic times, the cause was a "terror inspired by a trifling cause or misapprehension of danger" (Evans 1859: 122-34).

During the contraction of 1839-43, banks increased their reserve ratio to 29%. By the time the Panic of 1857 set in this had declined to 13%, and the money supply ballooned from $171mn. $647mn (Trask 2002). Increased speculation took place as the banking system inflated the money supply by almost 10% per year for 14 years.

[4] The importance granted to Ohio Life may be overstated (Calomiris and Schweikart 1991: 809). Its failure was caused by inappropriate (or possibly fraudulent) actions by its management, which had only a trivial effect on other banks liabilities. Its demise preceded that of suspensions at other banks by about one month. Finally, those banks most directly linked with Ohio Life – its correspondent banks in Ohio – were reimbursed upon its failure with no loss. Only one bank subsequently failed in Ohio during the Panic.

According to ABC theory, one result that should be apparent from such inflation is an increased emphasis on longer-dated investment projects and consumption expenditures. The railroad fever that coincided with this period gave rise to speculative bubbles, notably in land prices and real estate in America´s newly opened western frontier. The hallmark of the ABC is that these investments eventually prove to be unsustainable given the amount of savings available. As these investments proved to be unprofitable, securities prices fell and investors, fearful of their bank´s ability to honor their deposits, rushed to make withdrawals. In this way "[t]he declining fortunes of western railroads and declines in western land values, along with a … reserve drain in New York City banks, ultimately explains the origins of the panic" (Calomiris and Schweikart 1991: 819).

The Panic of 1857 is notable because it is an event that the free-banking literature on suggests should not have happened. According to this literature, private banks issuing notes while holding only fractional reserves should be able to reach a stable equilibrium where competition between banks avoids a destabilizing over-issuances of notes. This was notably not the case, and the hallmarks of an inflationary boom are evident in the pinnacle of the Panic.

The "original sin" of banking, then, was not the free-banking aspect of the industry´s organization, but its ability to issue notes against fractional reserves. This legal privilege allowed these banks to set in motion an inflationary boom that ultimately led to widespread redemption suspensions and bank failures. More notably, it led to increased interventions in the banking sector to rectify the problems of the past.

Conclusion

I have provided herein a reverse chronological history of the Federal Reserve´s emergence, tracing it back to the free-banking era that defined the US banking landscape from 1837-64. Specifically, an error was committed in allowing banks to finance their lending activities with fractional reserves. This error set in motion an an ever-expanding series of interventions into the banking sector to rectify past imbalances, finally culminating with the creation of the Federal Reserve in 1914.

It may prove instructive now that the evolutionary path of the Federal Reserve´s origin has been traced out to reserve the order and rephrase it as a progressive series of sequential steps.

1. From 1837-64 the American banking industry was dominated by free banks able to issue their own currency. They were also legally permitted to operate with fractional reserves, implying a dislocation between their deposit and lending activities.
2. By 1857 a credit-induced boom, or Austrian business cycle, culminated in a banking panic. This credit-induced boom saw banks extending loans to finance the westward expansion of America, primarily through land speculation and railway construction. When these projects proved less profitable than had been expected, investors commenced a selloff that compromised bank balance sheets heavily exposed to these speculations. This in turn brought a run on the banks, as depositors doubted the ability of overextended banks to redeem their deposits for specie.

3. Under the threat of widespread insolvency, banks banded together via the private clearing house system and commenced the use of clearing house certificates to brace up illiquid members. These certificates would be jointly guaranteed by all banks in the system, and would economize on scarce specie for clearing transactions. First used during the Panic of 1857, these certificates were not uniformly welcomed by the banking industry. Those banks that followed more prudent lending practices and were in less dire need of liquidity objected that their funds were used to support their less prudent competitors. Inclusion in the clearing house system depended on participation, and thus all banks were obliged to partake lest they become outsiders in the industry.
4. The centralization of reserves in the clearing house continued unabated through subsequent banking panics, and effectively endowed the private clearing house systems with as many powers as established central banks in Europe.
5. While the use of clearing house certificates did keep illiquid banks afloat for a period, by the end of the 20th century larger reserve drains required further measures. The first alternative measure was the extension of the certificates to the general public. In this way reserves were even further economized on as they were no longer necessary to the same extent for interbank transactions clearing or redemption requests by the general public. Issuing certificates to the general public was illegal.
6. Because of the illegality of issuing certificates to the general public, this option was undertaken sparingly. A necessary additional measure was redemption suspensions, whereby the public was not able to convert their deposits to specie. Depositors had obvious objections to suspensions, as they did to the use of clearing house certificates as currency substitutes.

7. The Federal Reserve Bill of 1913 was an attempt to make legal those practices that the clearing house system was already undertaking. To that end, the drafters of the bill saw it not as a change in the organization of the banking sector, but rather in the sanctioning by law those previously questionable practices (specifically, the issuance of clearing house certificates to the public and the elimination of redemption suspensions).
8. Few industries clamor for nationalization, though there was no significant backlash during the creation of the Federal Reserve. This is because bankers saw it as a way to coordinate their credit issuing activities and secure more dependable profits than without such a coordinating agency. (They also welcomed it as a dependable lender of last resort.) Depositors saw the Fed as an end to annoying and at times painful redemption suspensions. The government saw it as a way to maintain the legitimacy of law by ending illegal banking practices but not endangering the solvency of the banking sector.
9. Congress enacted the Federal Reserve Act on 23 December 1913, 56 years after the Panic of 1857 set in motion the events that would culminate in its existence.

Most theories of central bank origins see them as exogenous developments. Generally they are a response to the fiscal needs of the central government. While this was no doubt a concern in the case of the United States, the emergence of the Federal Reserve is an organic outgrowth of the existing private free-banking system from 1837-64.

I will close with a few thoughts on whether this organic outgrowth is healthy. The reason the Fed was created was to provide the liquid necessary to forestall banking panics. The banking panics that became more-or-less regular features of America´s financial system were the product of the

original sin of the free-banking era: fractional reserves. Legally permitted to over-issue credit against their deposit base, the private and free banking system of 1837-64 put in motion ever more severe Austrian business cycles. The reserve draining runs that accompanied these cycles led to more interventions and regulations that ended with the creation of the Federal Reserve.

Yet the Federal Reserve is not a panacea to these credit cycles. Indeed, evidence abounds that business cycles have been more frequent and severe since the creation of the Fed (Selgin *et al.* 2012). If the Fed has not been as successful as was originally reckoned at overcoming the failings of the then-existing banking industry, an alternative is to reconsider changing the banking industry.

The original sin of fractional reserves set in motion the business cycles that led to the creation of the Fed. Redrafting banking laws so as to force banks to hold 100 percent reserves would remove this original instability, while at the same time not onerously burdening the banking sector. Credit would still exist through strict time deposits (Bagus and Howden 2012b: 299) or equity transactions. Reserve draining runs would become a thing of the past, as banks would hold sufficient reserves to cover any contingent possibility.

If the evolution of the Federal Reserve shows one thing it is that its emergence lies in the culmination of errors with a single origin. As we reflect on the 100-year anniversary of the Fed, the question of its performance over its history takes center stage. A more important question to ask, however, is whether the creation of the Fed and its continued existence was the proper response to the original problem. To this end this paper has demonstrated two facts. First, that the

Fed is the organic outgrowth of, and response to the problems of, the free-banking era. Second, that the business cycles and panics of the free-banking era were the product of the legal privilege allowing banks to hold fractional reserves. Given this second fact, the birth of the Federal Reserve was the incorrect response to the problem at hand. Eliminating the Fed and redrafting banking law to eliminate the practice of fractional reserves would not only mitigate banking panics and business cycles, but also remove the illusion of stability fostered by the supposedly omnipotent Federal Reserve.

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