

# **Re-regulating finance: Using Minsky to Learn from the crisis<sup>1</sup>**

## **JAN KREGEL<sup>2</sup>**

### **A Diagnosis Is More Important Than a Cure**

The prevailing diagnosis of the difficulties involved in reviving the financial system is based on the idea of a “liquidity trap.” This is not Keynes’s explanation of the liquidity trap, but rather the neoclassical version that stems from Hicks’ IS-LL theory set out in Keynes and the Classics. It has already been used by American economists to explain the problems facing the Bank of Japan after the collapse of the Japanese equity and real estate market bubble in 1990. The Japanese Central Bank responded to the impact of the collapse of equity and real estate values by sharply increasing the reserves available to the banking system in the belief that they could lend to support asset prices and thus lay the groundwork for a recovery. The problem was identified as one of insufficient liquidity. However, to the frustration of the BOJ (and American economists who supported its policy), Japanese banks simply accumulated the reserves on their balance sheets at existing interest rates without increasing their lending. This version of the “liquidity trap” thus referred to the fact that the creation of high-powered money by the central bank appeared to be “trapped” on the asset side of banks’ balance sheets without producing any corresponding increase in deposit liabilities representing loans to businesses. This could be viewed as a collapse of the money multiplier linking high-powered money to deposit, or a breakdown in the stability of the velocity of circulation similar to that which had already occurred under the Volcker experiment with money supply control a decade earlier. Instead of being interpreted as a failure of the central bank to engineer a reduction in interest rates, it was interpreted with the framework of the quantity theory equation of exchange as a failure of the stability of the ratio of reserves to deposits and thus as a failure of an increase in reserves to produce a multiple expansion of loans and deposits, and thus an increase in the money supply.

In order to force the banks to use the reserves to create additional lending in support of asset prices, the Bank eventually introduced a zero policy interest rate (known by the acronym ZIRP) to make it costly for the banks to forego lending and attractive for firms to borrow. In this version the failure of increased reserves to bring about a decline in the rate of interest as the liquidity trap became a descriptive statement, rather than a behavioural explanation. If the rate of interest is zero, it cannot by definition be reduced.<sup>1</sup> The reason given for the absence of any increase in lending is given as the fact that the rate of interest at which the demand for loans equals the supply (given by the money multiplier) is negative. Since nominal rates cannot fall below zero, the Central Bank is helpless to use traditional monetary policy to increase lending. The implicit assumption here is that the decline in profit expectations produces such a collapse of the IS curve that it has an intersection with the LM curve at a negative interest rate. Equilibrium is thus blocked by the existence of a positive nominal constraint on interest rates.<sup>3</sup>

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<sup>1</sup> **Paper Prepared for the IDEAs Conference on Re-regulating global finance in the light of the global crisis, Tsinghua University, Beijing, China 9-12 April 2009**

<sup>2</sup> Senior Scholar, Levy Economics Institute of Bard College

<sup>3</sup> Although the interbank deposit bid rate was negative for some periods in 1998 due to the perceived risk of

Indeed, in conditions of deflation, it is possible that real interest rates would rise, pushing the economy even farther from equilibrium.

This ZIRP version of the liquidity trap led commentators such as Paul Krugman<sup>4</sup> and the current Chairman of the Board of Governors of the Federal Reserve System Bernanke to propose that the BOJ carry out a policy of reserve expansion à outrance, or what is known in the current US policy context, as “quantitative easing,” in order to produce inflation (or at least raise inflationary expectations) sufficient to drive the expected real interest rate to a sufficiently negative value to produce an intersection of the IS and LL curves. Indeed, Bernanke (2000) argued that if such a policy were to be carried on for a sufficiently long period of time, as a matter of logic it would inevitably lead to an increase in lending and rising prices.<sup>5</sup>

As an alternative method to induce rising prices, Bernanke also suggested “that the BOJ should attempt to achieve substantial currency depreciation through large open-market sales of yen. Through its effects on import-price inflation . . . , on the demand for Japanese goods, and on expectations, a significant yen depreciation would go a long way toward jump-starting the reflationary process in Japan” (Bernanke 2000, p. 160). This was actually attempted in July 1999 but resulted only in yen appreciation, largely because the United States was unwilling to allow the value of the dollar to rise.<sup>6</sup>

### **The Same Diagnosis as Irving Fisher and Chicago Economists for the Great Depression**

The diagnosis applied to Japan and to the current crisis in the US is eerily similar to that proposed by Irving Fisher, leading to a similar policy proposal. Fisher had argued that the appropriate policy for dealing with the Great Depression was a reflation of goods and asset prices by means of an expansion in the money supply.<sup>7</sup> As a major policy adviser to the Roosevelt administration and the Federal Reserve it is not surprising that his proposal was followed. It even led to a revision of Federal Reserve regulations then in force to allow a more direct means of expansion in the money supply.<sup>8</sup> The new legislation allowed the Fed to engage

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insolvency of Japanese banks and the preference for holding deposits in foreign banks operating in Japan.

<sup>4</sup> His best-known article on the subject is Krugman (1998).

<sup>5</sup> “The general argument that the monetary authorities can increase aggregate demand and prices, even if the nominal interest rate is zero, is as follows: Money, unlike other forms of government debt, pays zero interest and has infinite maturity. The monetary authorities can issue as much money as they like. Hence, if the price level were truly independent of money issuance, then the monetary authorities could use the money they create to acquire indefinite quantities of goods and assets. This is manifestly impossible in equilibrium. Therefore money issuance must ultimately raise the price level, even if nominal interest rates are bounded at zero. This is an elementary argument, but, as we will see, it is quite corrosive of claims of monetary impotence” (Bernanke 2000).

<sup>6</sup> According to Richard Koo (2003), then U.S. Treasury Secretary Lawrence Summers actively opposed the move after the Bank of Japan had spent three trillion yen without clearing the move with the United States. The attempt to intervene in the exchange markets did, however, earn Eisuke Sakakibara, Japan’s former vice minister for international finance, the title “Mr. Yen.”

<sup>7</sup> Fisher was in step with Chicago economists, who also favored an increase in the money supply as the basis for a recovery of prices, but he diverged from Fisher, who argued that this could take place only through an increase in demand for loans for productive purposes. It would require public deficit spending to generate this demand. See Davis (1968).

<sup>8</sup> Under then prevailing Federal Reserve regulations District Federal Reserve Bank Notes issued by the Fed had to be backed in given proportions by commercial banks’ business loans and gold. The Fed could increase the

in an open market policy of buying Treasury securities that was successful in increasing the quantity of bank reserves. But, just as in the case of Japan, and currently in the United States, this policy led to virtually no increase in the money supply or more importantly in domestic lending. However, in difference from Japan and the current US experience the policy was suspended after a short time, largely due to complaints from Member banks who were supposed to be the beneficiaries of the expansionary policies. The basic reason was that the banks were not eager to expand lending in conditions in which there were few qualified borrowers, while the lower interest rates that resulted from the purchase of Treasury securities simply reduced what was their only source of income: interest received from their holdings of Treasury securities. Thus, the impact of the Fed's expansionary monetary policy was to produce a rapid reduction in bank incomes to a level where they were insufficient to cover operating expenses and thus increased the risk of bank defaults. Abandoning the policy of monetary expansion and allowing interest rates to rise was thus a policy to support bank incomes, even if it subsequently led Milton Friedman and Anna J. Schwartz, in their *Monetary History of the United States* (1971), to garland the Fed with the economy's failure because it had failed to produce a sustained expansion in the money supply that would have led to an increase in prices and thus a recovery from the recession.<sup>9</sup> This is also the basis of Bernanke's statement regarding the necessity of persistence in quantitative easing to produce the result of higher prices.

It is interesting that a similar policy of forbearance or leaning against was instituted by Alan Greenspan in the 1990s after a similar real estate crisis, supporting bank incomes through manipulation of the yield curve to allow banks to ride the yield curve on their holdings of Treasury securities. In Japan there was also reaction to the low interest rate policy from politicians whose constituents faced falling incomes due to the virtual disappearance of interest income from postal savings accounts, a basic source of income for seniors and retirees.

While the Fed's expansionary monetary expansion was reversed soon after it was instituted in 1932, this was not the only policy that the Roosevelt administration had introduced to support the prevailing belief in price "reflation" as the solution to the crisis. Indeed, the policy involved experimentation in virtually any and every conceivable means of restoring prices. The gold standard was suspended and the dollar devalued in the belief that these actions would also raise commodity prices and thus support agricultural incomes reflation.<sup>10</sup> In

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money supply by discounting its member banks' eligible assets (i.e., commercial loans) – or by accumulating gold but the former were in short supply due to the collapse of the economy, and the latter were restricted due to a drain on the US gold supply. A change in legislation (the Glass-Steagall Act of 1932) was required in order to allow District Reserve Banks to increase the outstanding supply of Federal Reserve Notes through the purchase of the debt of the US government in the form of Treasury securities. What is now considered the normal channel of monetary policy == open market operations, was only possible after the introduction of this legislation.

<sup>9</sup> Epstein and Ferguson (1984) also note that differences in condition across Federal Reserve Districts and concerns over the gold backing of currency and foreign deposits were also a consideration in the change in policy.

<sup>10</sup> This is undoubtedly the source of subsequent recommendations made to Japan in the 1990s and a plausible explanation of the clear decision by the United States to abandon its strong dollar policy. Market strategist Frank Veneroso (2008) clearly outlines the similarities between Bernanke's policy recommendations for Japan and the conduct of Fed policy in this crisis, in particular drawing dire conclusions for the value of the dollar.

addition in 1933 the Agricultural Adjustment Act and the National Industrial Recovery Act both sought to bring about higher prices and wages in agriculture and manufacturing, and to provide the legislative support for firms to act as a cartel and set prices. This was the "New Deal" component to the traditional monetarist approach of Fisher, Jacob Viner, Herbert A. Simon, and others, to reflate prices and incomes to precrisis levels so that debtors could meet their commitments.<sup>11</sup>

### **The Fed's Response to the Current Crisis Appears to be Based on a Similar Diagnosis**

It is telling that the Fed's response to the current financial crisis has been praised because it introduced ZIRP more rapidly than the Bank of Japan had done in similar circumstances, and at the same time has moved to embrace massive "quantitative easing." In the absence of eligible borrowers, however, the only impact of lower interest rates is lower household and bank incomes. As yet, there are no proposed measures to support bank earnings. The change in legislation that allows interest payments on Fed deposits does not offset the impact of lower incomes, since interest rates are paid at a discount to the fed funds rate. Under ZIRP, this means that the Fed Funds rate is effectively zero. If quantitative easing moves securities purchases towards the long end of the yield curve and reduces the benchmark rate for mortgages, it could support household disposable incomes by allowing mortgages to be refinanced at lower interest rates. It seems clear, however, that tightening loan standards means that any beneficial impact from any decline in long rates on refinancing will be more than offset by the decline in interest income on household deposits.

The resulting swap arrangements introduced through the various term-lending facilities in which the Fed has exchanged impaired bank assets for Treasury securities, has affected the composition and credit quality of bank asset portfolios while having little or no impact on bank earnings. As noted above this differs, in a fundamental way from the policies adopted in the 1930s and the Greenspan policy of "leaning against the wind". This policy of forbearance reflects the policy employed by Volcker during the Latin American debt crisis; the insolvency of US banks was simply ignored while they were allowed to generate sufficient earnings to restore their capital to regulatory levels. In the current crisis the insistence on mark to market accounting precludes the forbearance solution and requires more direct means of producing a recovery of asset prices to normal levels. It is in this context that the recently introduced TALF and PPIP proposals should be considered.

As noted, this diagnosis is based on a traditional quantity theory interpretation of the relation between money and prices, despite the use of Keynesian terminology. Instead of an expression of the inability of the central bank to use monetary policy to influence the rate of interest, and thus increase investment, in this approach it is the inability of the central bank to use increases in high-powered money to bring about an expansion of lending and an increase in the price level to reduce real interest rates.

### **An Alternative Diagnosis of the Crisis**

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<sup>11</sup> Fisher's position was supported by recognition of the impact of deflation on the real value of debt that could

However, the proposed measures to resolve the crisis based on this approach have not proven to be adequate in the Japanese case, and in the US there has been little recovery of lending by the banking system to private borrowers. This would suggest that an alternative explanation of the current difficulties would be required in order to provide a basis for the re-regulation of the financial system. In particular it will have to be based on a correct understanding of the relation between the Central Bank and the banking system on the one hand and on the banking system and business borrowers on the other. As noted above, the prevailing interpretation is based on a paradigm in which it is assumed that changes in banks' reserves produced by the Central Bank lead to increased lending and the increased lending leads to an expansion of the money supply that produces an increase in goods and asset prices. But, this is not the way the modern financial system works, even before the introduction of shadow banking and generalised securitisation. Thus, understanding the causes of the crisis requires an understanding of how the (now collapsed) "originate-and-distribute" system differed from the traditional "originate-and-fund" banking system. Under the financial structure introduced in the segmented banking system of the New Deal regulations, the beginning of the credit creation process was not the increase in high powered money by the central bank. Instead, bank loan officers were the active force in an increase in bank lending. Loan officers would originate loans and then pass the responsibility of funding the loans to the reserve desk which had the responsibility to find the deposits or interbank lending needed to satisfy the statutory reserve ratio on the deposits created by the new loans. If the entire banking system came up short of reserves, the Fed would be required to provide the necessary reserves to allow the system to meet its reserve requirements through operations in the Fed Funds market. Thus, rather than being exogenous to the system, bank reserves were, and always have been, endogenous to the financial system.

This need not be true for any individual bank, however, and the secondary market provided the possibility for individual banks to insure their access to required reserves. In addition, banks would hold what used to be called secondary reserve assets (i.e., liquidity cushions) that would be available to be converted into reserves at short notice when shortfalls arise from an excessively exuberant loan officer or from a decline in the quality of loans and an increase in charge-offs. Loans initially funded by creating a bank deposit liability thus represented an unfunded liability that had to be hedged by a bank's liquidity policy. Or, as Minsky (2008) described the process:

"Banking is not money lending; to lend, a money lender must have money. The fundamental banking activity is accepting, that is, guaranteeing that some party (that is, the borrower) is creditworthy.... A bank loan is equivalent to a bank's buying a note that it has accepted.... When a banker vouches for creditworthiness or authorizes the drawing of checks, he need not have uncommitted funds on hand. He would be a poor banker if he had idle funds on hand for any substantial time.... Banks make financing commitments because they can operate in financial markets to acquire funds as needed;

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create an incentive to sell despite falling prices, and a process that Fisher called a "debt deflation."

to so operate they hold assets that are negotiable in markets and hold credit lines at other banks. The normal functioning of our enterprise system depends upon a large array of commitments to finance, which do not show up as actual funds lent or borrowed, and money markets that provide connections among financial institutions that allow these commitments to be undertaken in good faith and to be honored whenever the need arises.”

Thus, the traditional operation of banks before the deregulations of banks in the 1980s was what one might describe as "lend and fund", or "originate and fund", in the sense that the bank makes the loan before it has the funding for the loan and hold secondary assets in order to make sure that it can convert these assets into funding for the loan. In this system, as Minsky has pointed out, banks did not hold money to lend, but hold marketable assets and commitments for funding that allows ready access to market funding. This is what Minsky has described as holding a cushion of safety to ensure the ability to meet cash commitments, in this case the commitment to be able to fund a loan.

In the post 1999 Financial Modernization Act world of origination and securitization for the distribution of assets, there was little or no concern for holding negotiable assets against a loan commitment to provide a cushion of safety, and there were no visible backup credit lines, because of the assumption that there was no need for money market connections to provide backstop funding. The loans were sold or packaged in trusts with other loans and then sold (often presold) to another arm's-length securities institution, classified as variable interest entities organized to issue own capital market liabilities in order to purchase the bundles of bank-originated assets. These special purpose vehicles (or special investment vehicles) were created to ensure the nonrecourse transfer of the risk of first loss from the originating/issuing bank to the owners of the trust—the capital market investors—thus removing the loans from recourse against the issuing bank, eliminating the need to hold capital against the loans and reducing the need for secondary sources of liquidity. Thus, the need for cushions of safety was shifted from the issuing/originating bank to a third party was presumed to be willing and able to bear the first loss, and thus to provide the backup funding for any shortfall on repayment

Here it is clear that the incentive was to remove the necessity for capital backing for the lending from the bank, but more importantly in this structure the function of the reserve desk as providing backup funding through the structure of the secondary reserve portfolio was replaced by financial engineering, which produced a structured product in which liabilities sold on a nonrecourse basis to the capital markets were given a notional cushion determined by the first loss guarantors portfolio. As has now been widely noted, this replacement eliminated the loan officer's normal due diligence process that judged the quality of the borrower and replaced it with an analysis of the capital structure of special purpose entities. No one assessed the quality of the underlying assets purchased by the entities. Even the structure's due diligence was outsourced to private rating agencies, whose interests were those of the issuing banks who paid the fees rather than the loan officers or final buyers (see Kregel 2008).

But, more importantly, the liquidity cushion of secondary reserves, along with the access to market financing that was normally held by banks in the originate-and-fund system,

disappeared in the new system based on cushions provided through overcollateralization or credit enhancements from bond guarantee insurance companies, or through credit default swaps. The purpose was to provide investment-grade credit ratings to the senior liabilities, not to provide liquidity to the structure. Thus, the movement of loans off the banks' balance sheets not only reduced the capital backing of outstanding loans but also eliminated the liquidity cushion behind the loans. What Minsky deemed a clear increase in financial fragility was justified on the argument that the increased risk was diffused and did not increase systemic fragility.

The weakest link in the system was that a large portion of the subprime and Alt-A loans, many of which were written with optional adjustable rates, were programmed to become insolvent at their reset date if the collateral could not be sold at a profit. To simplify, the secondary liquidity once held by the banks' in the form of reserves of Treasury securities (the safest assets traded in the most liquid market) or other easily negotiable instruments, was replaced by the secondhand real estate market—one of the least liquid and most fragmented markets in the financial system.

There was an additional perverse impact. Bond insurers and issuers of credit default swaps who provided credit enhancement to these structures were even less capitalized, and had even lower liquidity cushions, than the structures they insured. As real estate prices declined and it became clear that the nonrated equity and lower-rated intermediate-liability tranches of securitized structures would be impaired, questions arose about the creditworthiness of the AA and AAA senior tranches. In response, rating agencies began to downgrade their ratings. This meant that the sellers of credit default swap protection had to provide additional margin to the buyers of credit protection, while the increased exposure of monoline insurers meant that they also had to increase their margin payments. This affected a whole series of other assets whose ratings were determined by their respective bond insurers. Thus, the institutions that provided liquidity insurance to the structured investment vehicles also created an additional demand for liquidity in a system that had more or less eliminated all of the traditional liquidity cushions.

AIG-Financial Products Corporation provides the extreme example by writing credit default swaps with virtually no hedging and minimum margins because its parent company had a triple-A rating.<sup>12</sup> Downgrades led to additional margin payments that soon outstripped the net worth of the parent holding company. In normal circumstances, a liquidity crisis creates the need to sell position in order to make position, and this response leads to insolvency. In the current crisis, the recognition that the securitized structures were insolvent set off a rush for liquidity that engulfed the entire system.

At the same time, rising loan-to-value ratios and the failure to verify borrowers' income meant that the liquidity cushion (normally provided by the borrower's home equity and other

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<sup>12</sup> It has been suggested that this grew out of the practice of writing non-enforceable insurance guarantees through the use of side letters. Since the letters made clear that the guarantees would never be called it was unnecessary to reserve against them. When credit default swaps were substituted for the guarantees there was a presumption that they would never be exercised and thus they were not hedged, but there was no equivalent side letter to insure this. See Institutional Risk Analyst, "AIG: Before Credit Default Swaps, There Was Reinsurance, April 2,

wealth, as well as income) all but disappeared. When house prices stopped rising, it implied insolvency for the borrowers and the special-purpose entities holding the mortgage as collateral, as well as the liquidity provided by overcollateralization. But the structures never possessed a liquidity cushion in the traditional sense of liquid assets that are sold in the market. It is not surprising, therefore, that it was difficult to find reliable market prices for the collateral and for the liabilities of the mortgage securitizations. Equally important, households had no liquidity cushion other than the real estate market—meaning insolvency for borrowers on or before their mortgage reset date.

If the price readjustment had been restricted to the buyers of liabilities associated with securitized mortgage entities and the underlying subprime borrowers, the financial collapse would have produced a loss of wealth for the entities and borrowers alone, and would possibly have lessened the wealth effect on consumption and economic activity—in other words, there would have been a short slump. But the current slump will not be short.

Banks had warehoused or held investment-grade senior liabilities. They, along with other financial institutions, provided liquidity guarantees to the entities (often on a highly leveraged basis). When the securitized entities became insolvent, there was a direct and negative impact on banks, because the entities had to provide additional margins or the losses had to be taken against bank capital when there were no secondary reserve cushions. In combination with the demand for liquidity to provide margin on credit enhancements, these circumstances produced what Fisher and Minsky called a “debt deflation”—that is, it became necessary to sell position to make position. In a market where there are only sellers, however, there is by definition no liquidity or market price. It was impossible to value the assets of financial institutions or the institutions’ creditworthiness as counterparties. Thus, not only private sector lending came to a halt, but lending amongst financial institutions (which normally supports liquidity) also came to a halt. This result was simply exacerbated by the response of the Fed to Bear Stearns, Lehman Brothers, and AIG when there was no clearly enunciated principle to determine who would receive support and who would be allowed to fail. Even a secured loan is lost in bankruptcy, so the threat that every institution is a potential Lehman Brothers means that banks will not lend to one another, leaving the entire provision of liquidity to the Fed as the only secure borrower. The problem is not that the banks are not lending; it is that they are lending only to the Fed.

While the bailout of financial institutions has prevented insolvency from turning into bankruptcy, it has done little to increase the willingness or ability of banks to lend to private businesses or to one another. This circumstance is independent of the decline in qualified borrowers that stems from the sharp decline in overall economic activity. The crisis has destroyed the “modernized” lending mechanism based on leveraged securitization for the private sector (financial and business)—and there is not another mechanism to take its place.

Yet a clear road map for a new financial system is more important than a replacement mechanism that removes impaired assets from bank balance sheets. The Roosevelt

administration designed a new system in a very short space of time (1933–35). Nearly the same amount of time has passed since the outbreak of instability in the mortgage markets (in the spring of 2007), but there is no clear vision of what the “New Deal” will be for the financial system. It is also clear that policy attempts to return prices to precrisis levels and save the existing system have not worked. Indeed, they probably cannot work. The prevailing approach to resolving the crisis relies on the notion that if impaired assets are held long enough, they will recover in value, so that commitments can be met and banks can return to their old ways by tightening their limits on leverage and on some financial products (such as credit default swaps).

### **The Final Lesson from the New Deal**

The current response to the financial crisis does not appear to acknowledge the importance of the negative impact of low interest rates on incomes, while accepting Fisher’s idea for a resolution through ZIRP and quantitative easing in order to restore asset and goods prices (an idea resurrected by Krugman and Bernanke during the Japanese crisis). These policies did not work in the United States in the 1930s or in Japan in the 1990s. This approach to a “return to normalcy,” however, explains the absence of the most important aspect of the New Deal—a rapid assessment of financial system failures and the introduction of a new financial structure that corrects these failures.

In the 1930s, there was a firm belief that commercial bank affiliates dealing in capital market businesses were a major cause of the problem, and that Glass-Steagall simply got rid of the affiliates. Today’s insistence on restoring asset values and removing “impaired” assets from the balance sheets of institutions (and restoring them to health) suggests that these institutions will be able to generate incomes much as they have in the past. This seems to be an impossible outcome, and it leaves one final aspect of the crisis’s resolution that is associated with the New Deal and Japan’s lost decade.

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