Irving Fisher

100% Money and the Public Debt

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1936

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Irving Fisher was born in Sugerties, New York on February 27, 1867, and – as his father who died of tuberculosis at age 53 – attended Yale University, became a professor of economics . Irving Fisher survived tuberculosis in his early 30s and developed a great interest in health and hygiene, writing a national best-seller titled "How to Live: Rules for Healthful Living Based on Modern Science." Fisher developed a system of index numbers that are used to this day by the FTSE to measure share value and the RPI. He sold the index to Sperry Rand and became a wealthy man, but lost a great deal in the stock market crash of 1929. Fisher died in New York April 29, 1947.

Fisher won first prize in a mathematics contest as a freshman. He took his PhD in 1892 on a dissertation *entitled "Mathematical Investigations in the Theory of Value and Prices"* which became a landmark in the development of mathematical economics and won immediate praise from Francis Y. Edgeworth and Vilfredo Pareto, two renowned economists. Some 55 years later, Ragnar Frisch (eventual winner of the 1969 Nobel Prize in Economic Science) would say about Fisher: "He has been anywhere from a decade to two generations ahead of his time .... it will be hard to find any single work that has been more influential than Fisher's dissertation." John Maynard Keynes wrote of Fisher as "the great grandparent" of The General Theory, "who first influenced me strongly towards regarding money as a 'real' factor" (Keynes, 1971-89, 14, pp. 203 n.; Dimand, 1995; Kregel, 1988).

Fisher was a full professor of political economy at Yale within seven years of graduation. He stayed there during his entire career. Fisher was founder or president of both the Econometric Society and the American Economic Association.

"Irving Fisher was one of America's greatest mathematical economists and one of the clearest economics

writers of all time. He had the intellect to use mathematics in virtually all his theories and the good sense to introduce it only after he had clearly explained the central principles in words. And he explained very well. Fisher's Theory of Interest [drawing heavily on John Rae and Eugen von Böhm-Bawerk, adding clarity and rigor to one of the most complex concepts in economics] is written so clearly that graduate economics students, who still study it today, often find that they can read—and understand—half the book in one sitting. With other writings in technical economics, this is unheard of." (Hannah Rasmussen for economics.about.com at http://economics.about.com/od/famouseconomists/a/irving_fisher.htm visited 2009-11-09)

Fisher's "*The Purchasing Power of Money*" (1911) completely recasts the theory of money into his classical quantity-theory-of-money equation $MV + M'V' = PQ$, which made the purchasing power of money, the general price level P) completely determined by the stock of money in circulation M, its velocity of circulation V, the volume of bank deposits M', their velocity of circulation V', and the total volume of transactions Q.

Fisher was also the first economist to distinguish clearly between real and nominal interest rates:

$$r = \frac{(1+i)}{(1+inflation)} - 1$$

where r is the real interest rate, is the nominal interest rate, and inflation is a measure of the increase in the price level. When inflation is sufficiently low, the real interest rate can be approximated as the nominal interest rate minus the expected inflation rate. The resulting equation bears his name.

Fisher translated his theory into a policy prescription of "100 percent money" (all bank deposits should be backed by 100 percent reserves rather than fractional reserves, used

then and now by virtually all banking systems) on the grounds that such a policy would control large business cycles. According to the debt deflation theory, a sequence of effects of the debt bubble bursting occurs:

1. Debt liquidation and distress selling.
2. Contraction of the money supply as bank loans are paid off.
3. A fall in the level of asset prices.
4. A still greater fall in the net worth of businesses, precipitating bankruptcies.
5. A fall in profits.
6. A reduction in output, in trade and in employment.
7. Pessimism and loss of confidence.
8. Hoarding of money.

The variety and quantity of Fisher's writings are enormous. His son, Irving Norton Fisher, compiled a 4,300-page bibliography of his known writings, *A Bibliography of the Writings of Irving Fisher* (1961); he also wrote a creditable biography, *My Father, Irving Fisher* (1956), that covers the essentials of his father's career. A valuable introduction to Fisher's many activities is William Fellner and others, *Ten Economic Studies in the Tradition of Irving Fisher* (1967); also Robert Loring Allen (1993), *Irving Fisher: a biography,* Cambridge, Massachusetts.: Blackwell Publishers.

Irving Fisher's primary publications:

- 1892. *Mathematical Investigations in the Theory of Value and Prices.*
- 1896. *Appreciation and interest.*
- 1906. *The Nature of Capital and Income.*
- 1907. *The Rate of Interest.*
- 1910. *Introduction to Economic Science.*

- 1911. *The Purchasing Power of Money: Its Determination and Relation to Credit, Interest, and Crises.*
- 1911. *Elementary Principles of Economics.*
- 1915. *How to Live* (with Eugene Lyon Fisk).
- 1921, *The best form of index number, American Statistical Association Quarterly.*
- 1922. *The Making of Index Numbers.*
- 1923, "The Business Cycle Largely a `Dance of the Dollar'," *Journal of the American Statistical Society.*
- 1926, "A statistical relation between unemployment and price changes," *International Labour Review.*
- 1927, "A statistical method for measuring 'marginal utility' and testing the justice of a progressive income tax" in *Economic Essays Contributed in Honor of John Bates Clark.*
- 1930. *The Stock Market Crash and After.*
- 1930. *The Theory of Interest.*
- 1932. *Booms and Depressions* 1933, "The debt-deflation theory of great depressions," *Econometrica.*
- 1933. *Stamp Scrip.*
- 1935. *100% Money.*

Ref.: *The Works of Irving Fisher.* edited by William J. Barber et al. 14 volumes London : Pickering & Chatto, 1996.

100% MONEY and the PUBLIC DEBT

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April 1936

During the last two and a half years there has been a fast growing interest in the plan to put and keep a 100% cash Reserve behind all Demand Deposits.[1]

Why is it that at various times for over a century there has been a recurrence of the suggestion to put a full cash reserve behind demand deposits instead of a partial one? And why, in particular, is there now so sudden and striking a display of interest in the proposal?

The chief answer is: depressions. Independently, many writers thought of the 100% money plan as a solution.

As I have stated elsewhere,[2] I have come to believe that the plan, "properly worked out and applied, is incomparably the best proposal ever offered for speedily and permanently solving the problem of depressions; for it would remove the chief cause of both booms and depressions, namely the instability of demand deposits, tied as they are now, to bank loans."

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[1] The proposal was first made in this depression by Professor Henry C. Simons in a mimeographed memorandum privately circulated.

[2] 100% MONEY, Aldephi Company, New York. Second Edition. 1936, p. xviii.

In an earlier book,[3] I tried to show that the recent depressions, and, so far as I was able to get any evidence, all the other *great* depressions, have been due mainly to one or both of two causes: too much short term debt to start with and, later, when liquidation is attempted and as a consequence of such liquidation, too great a contraction of the circulating medium. Both of these two factors, debt and deflation, are found combined in our short-reserve banking system.[4]

The most outstanding fact of the last depression is the destruction of eight billion dollars—over a third—of our "check-book money"—demand deposits. This was the natural result of our unstable short-reserve system and the principal reason for the great severity of the depression.

To specify in more detail: the level of wholesale prices was nearly cut in two, that is, the dollar was nearly doubled. So drastic was this change in the buying power of the dollar that even after a liquidation of 20% in the *number of dollars* of debt, the actual debt burden was not 20% lighter, but, *in terms of commodities*, 40% heavier. This is what I have called the Debt Paradox—the more the debtors pay the more they owe!

The obvious reason for this Debt Paradox is that, when prices fall, the dollar grows dearer; it grows dearer because it grows scarcer; and it grows scarcer by reason of the destruction of the check-book money of the nation through the liquidation of bank loans; and finally, the fundamental reason why such liquidation destroys our check-book money lies in our partial reserve system.

Not only can we largely explain the downswings of the depression by the lessened deposits subject to check, but we can explain the subsequent upswing by the restoration of those deposits. To this end Uncle Sam made every effort to

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[3] BOOMS AND DEPRESSIONS, Adelphi Company, New York 1932.

[4] For detailed evidence, I must refer the reader to BOOMS AND DEPRESSIONS.

induce banks to lend to business and to induce business to borrow of banks. In this, he failed. Then he stepped into the breach and did the borrowing himself. The essential point is not his borrowing but his borrowing *of banks*. Thereby he and they jointly created the "credit," that is the check-book money which they lent him. This new money, though only a by-product of debt, is, according to my theory, the main cause of our present partial recovery.

THE PRESENT "3 ½%" SYSTEM

Until the Federal Reserve Act of 1935, our reserve requirements had been growing less stringent and our crisis, unlike those of England, have, accordingly, been growing more severe. We must expect future booms and depressions to become worse, unless this menace of low reserves is removed promptly. Our Federal Reserve System, though expressly intended to strengthen reserves, weakened them in the net result. Our last depression has been the severest in all the world and the severest in all history; and our reserve requirements have been the weakest in the world and, except for relatively insignificant cases, the weakest in all history.

We think of our reserve requirements against demand deposits as averaging 10%. But these 10% reserves are not cash; they are themselves demand deposits in the Federal Reserve Banks, and behind these deposits the reserves only need to be 35%. So behind every $100 of check-book money of the public there is only nominally required a $10 reserve, while the actual cash required is only $3 ½. Such an inverted pyramid—3 ½ to 100—cannot but be unstable. It is like a truck 3 ½ feet wide trying to carry, without an upset, a load of hay 100 feet wide. Thus our present system, far from being a 100% system is a 3 ½% system! Yet few people not versed in banking ever dream that their money "in the bank" is not in the bank; and few people versed in

banking ever dream that the money which is not there ought to be there, or that it is practical to have it there.

The money question is not simply a question of convertibility. It is also a question of maintaining the proper volume (and velocity) of the circulating medium so as to prevent disturbances in business activity. Today, even when runs on banks can be successfully withstood, the success is bought at the price of creating a money shortage. For a bank whose reserve has been weakened by withdrawals has to get its money from the public—either actual pocket-book money or check-book money. In other words, the banks are forced to reduce their deposits (by calling loans) in order to prevent their cash reserves from falling below the legal minimum. For each dollar of cash withdrawn, $10 of deposits may be destroyed. The net result of the withdrawal of cash is therefore a decreased in the total volume of circulating medium.

Evidently, if instead of our present 3 ½% system of cash reserves, we had a 100% system, the public could withdraw any amount of money from the banks without affecting the total volume of money in circulation. The banks would not call on the public to get money. They would already have the money on hand, 100% of it. Every person's money, including credit (check-book money), would be actual tangible, indestructible money, either in his pocket or in the bank so that he could transfer it by hand or by check; the distinction between the two kinds of money (pocket-book money and check-book money) would vanish. A depositor's "cash in bank" would no longer be the fiction it now is. Now it is not cash at all but a mere promise to furnish cash, a mere book credit.

ANCIENT 100% MONEY

The earliest deposit banking was on the 100% principle. The Bank of Amsterdam in the 17th century conducted such

banking. Professor Dunbar of Harvard, in his *History of Banking*, said "it [the bank] was understood, to have actually in its vaults the whole amount of specie for which bank money [what we call demand deposits, or check-boo money] was at any time outstanding."

But the bank broke faith and secretly lent out some of its 100% reserve. Ultimately this policy caused its failure after a career of 182 years. Dunbar says: "For generations the peculiar constitution of the bank had enabled the administration to hide this guilty secret and to stifle suspicion. A system of banking of great utility, under which, with a faithful management, failure was impossible, thus ended in discredit and ruin, from a lack of public knowledge of the real condition of affairs."

Other institutions like the Bank of Venice and the mediæval goldsmiths seemed to have had a 100% system. This system turned into modern commercial banking originally through a breach of faith.

Mr. Dooley described a banker as "a man who keeps your money by lending it out to his friends." Today the banker can plead that this is no longer a breach of faith since you and the modern law gives him permission. But, though no longer a breach of faith, it is still against public policy. We should, I believe, go back to the system which worked successfully long ago. England and Canada have gone part way back. The present proposal is simply a proposal to go all the way back.

HOW TO MAKE THE TRANSITION

But how, at this late stage, is this to be accomplished without deflation? Many ways have been proposed. One of the simplest is that suggested by Professor Angell.[5] Let the Government, through a "Monetary Commission" or

[5] ANGELL, JAMES W., "The 100% Reserve Plan." Quarterly Journal of Economics, Vol. I, No. 1. November, 1935, pp. 1-35.

"Monetary Authority" such as proposed by Mr. Vanderlip, or through the already existing Federal Reserve Board, lend the banks paper money enough to bring up their reserves to the required 100% of their then existing demand deposits. This money would add nothing to the circulating medium. It would merely make deposits consist of real money. The same amount of deposits would exist as before, no more and no less. And the banks would not be allowed to add to the total. They would only be able to work with the existing volume of cash in the country. This volume could be increased only by the Government Monetary Authority and accordingly to a legally adopted criterion. The money to make up the reserves could be lent to the banks by the Government at zero interest, amounting, therefore, to a gift of the use of the money as long as the bank lasts. The Government would then have a lien on the assets of the bank up to the amount of money lent. To safeguard against theft the new paper money could be issued in blank, not good until counter-signed by the bank. This would not be until it was actually needed, which, except in small amounts would never be at all.

CURRENCY MANAGEMENT

As to redemption in gold, no change need be made because of this increase of reserve requirements to 100%. That is, the question of keeping or altering the gold standard is an independent question. So also the question of a managed currency is an independent question. The 100% system would of itself rid us of the chief cause of instability in the volume of money and consequently in its velocity and consequently also in the value of the monetary unit.

Some of the converts to 100% money would be content to stop here, merely issuing the requisite reserve money and then issuing no more—nor withdrawing any. Such a currency, absolutely fixed in amount and never varying,

would require no management at all and no manager. An act of Congress could fix the system once and for all. And it would be far more "automatic" than the gold standard ever was.

Personally, however, I would prefer, besides a 100% reserve, a system of money management like Sweden's with an official index number. Combined with the 100% reserve system such money management would give us a high degree of precision in stabilizing the dollar in purchasing power.

I would give up the use of gold, except so far as needed for the settlement of international balances, and then at the prevailing market price. But these, as I say, being separate questions, need not be discussed as a part of the 100% money plan.

In passing, however, I would point out that even under the 100% plan the gold standard would be far more stable than it now is or can ever be under the partial reserve system. There are some, like Professor George F. Warren, who choose to explain the ups and downs of prices and so of business, in a gold standard country, wholly in terms of the changing commodity value of gold. This is correct as far as it goes. But it goes not go far unless we take note of the fact that the value of a gold dollar is profoundly affected by the number of dollars not only of gold but of all kinds in circulation and that the aggregate number is, in tern, subject to tremendous fluctuations because of our present partial reserve system. It was the destruction of eight billion dollars of check-book money in the United States which, more than any other one factor, raised the value of gold throughout the world, and let to gold hoarding. This collapse of deposit currency in Anglo-Saxondom brought depression practically to every gold standard country in the world by raising the commodity value of gold per ounce. China escaped, not being on the gold standard. Some gold

standard countries partially escaped by soon abandoning the gold standard or devaluing their gold coins.[6]

MONEY A GOVERNMENT FUNCTION

Is it safe and proper to let the Government take charge of our money and banking?

As to this question, my answer is two-fold. The Government should take away from the banks all control over *money*, but should leave the *lending* of money to bankers. We could leave the banks free, or at any rate far freer than they are now, to lend money as they please, provided we no longer allowed them to manufacture the money which they lend.

This means that in practice each commercial bank would be split into two departments, one a warehouse for money, the checking department, and the other the money lending department, virtually a savings bank or investment bank. It seems that Sir Robert Peel and Lord Overstone had such a picture in mind when they devised the plan used by the Bank of England since 1844. The Bank is split into two departments, one to issue money, and the other to make loans. While the plan has helped lessen depression, it overlooked the fact that bank deposits could be used as money so that the lending department ("banking department") also issue money or the quasi money of demand deposits. In short: Nationalize money but do not nationalize banking. In fact the present demand to nationalize banking would fade away if only the control of money were recaptured by Government. Moreover, in my opinion, almost all of our complicated and vexatious banking laws could be repealed if once we made this separation between money creation and money lending. The

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[6] See my: "Are Booms and Depressions Transmitted Internationally Through Monetary Standards?" XXII Session De L'Institut International De Statistique, London, 1934.

insurance of bank deposits would become unnecessary, because there would be no reasons for runs on banks.

Furthermore, the 100% plan is the *only* way to make this separation complete. One of my half-converted correspondents proposes that we require an 80% but not a 100% reserve, "Surely 80% is enough." No, not enough to disentangle money from banking, not enough to give Government undisputed sway over the former and bankers' undisputed sway over the latter. Even 99% would not quite do that. Why not make the divorce complete?

Moreover, a 100% system would be far less likely to be broken down. We had a 100% system for gold certificates and it never broke down, though 80% or 40% would have been sufficient for convertibility. But once anything less than 100% is used, the tendency is always to pare it down further; the same argument, "so large a reserve is not required," will again be heard. Witness the progressive weakening of reserves under our Federal Reserve System which was established to strengthen reserves.

One of the primary attributes of sovereignty is the monetary function. Professor Frank D. Graham points out that President John Adams considered any private issue of money a monstrosity and a fraud on the public.

The principle Adams evidently had in mind is the same as that which condemns the counterfeiting of paper money or subsidiary and minor coins. If any private party manufactures a fifty cent, five cent, or one cent piece, he has made a profit which he has not earned because these coins are made of bullion not worth what the coins are worth. The counterfeiter, if his work were legitimized, would flood the nation with coins to its detriment. Still more important is it to prevent any private party from manufacturing paper money and putting it into circulation, because he then makes a 99% profit at the expense of the country. Yet this has been legitimized by bankers issuing

bank notes. All we have done is somewhat to limit the issue by requiring a factional reserve.

When banks were first allowed to issue their demand notes to circulate as money, inflation and depreciation soon followed. The state banks issuing these notes recklessly became known as wild-cat banks. Later the Federal Government taxed all such notes out of existence, leaving only National Bank notes which were especially licensed and limited as to issue. In practically all countries today any bank, to issue notes, must derive its right, usually a monopoly, from the Sovereign State.

But it did not occur to many people that demand deposits also serve as money. And the same tendencies which had led to wild-cat issue of private bank notes soon led, both in England and the United States, to the evasion of this Government control by the wild-cat issue of check-book money. This new evasion has passed almost unnoticed. Even in 1914 our own Federal Reserve Act put stringent restrictions only on Federal Reserve Notes, not on demand deposits.

The actual cash required as reserve behind notes is now 40% whereas behind deposits it is only 3 ½%. Yet notes have become a *minor* part of the circulating medium, while deposits have become by far the *major* part.

The result has been that, just a formerly, fortunes were given away by the people to the private issuers of pocket-book money, so latterly fortunes were given away to the private issuers of check-book money.

Such private fortunes amounting to billions of dollars have been given away to bankers in this way by the people of the United States, just as they gave to private traction companies the use of the streets of Philadelphia and other cities. Today, it is true, this money-creating franchise brings in little new profit. The juice has already squeezed out long ago and competition has finally left little new profit available. In fact, the ultimate result has been to upset the

unstable load to the discomfiture of the bankers themselves. When the Bank of Amsterdam lent the first 1% of the money left in trust with it, it took no skill to make a profit, for there was a 99% reserve left. But today when so much has been lent as to leave only 3 ½% reserve, it takes not only incredible skill but incredible good luck to avoid an upset.

In the very first article of our Constitution, it is written "Congress shall have power to coin money [and] regulate the value thereof." As has been seen we have neglected this provision by letting banks usurp a Government function.

GOVERNMENT FINANCE

At present our nation's chief money is at the mercy of the mob rule of 15,000 banks. These are tantamount to 15,000 private mints independently creating and destroying the nation's money every day, while the Government looks helplessly on at this usurpation of its prerogative. For, without a 100% reserve system, the Government is helpless indeed. It could not even issue any paper money without disastrous inflation. Under our current 3 ½% reserve system for demand deposits it is evident that to have paid the Soldiers' Bonus of 2 billion dollars in new greenbacks would have permitted these, as "lawful money", to become a 3 ½% reserve against a possible total of 57 billions of new check-book money! Thus we see that as long as the Government permits a reserve of less than 100% behind check-book money it cannot fully exercise its sovereign right to issue even pocket-book money. It must have been partly this consideration which led President Roosevelt to turn a deaf ear to all demand for more greenbacks.

On the other hand, in the midst of a money famine, the Government, due to the same partial reserve system, has sold billions of bonds to banks in order that these banks should manufacture new check-book money and get paid

tribute for it into the bargain, the payment being the interest on the bonds. Thus have we moved away from the 100% system and the recapture of sovereign rights instead of toward these objectives.

We could easily reverse all this. One way would be to provide the banks with the needed 100% reserve, not by lending it to them as suggested by Professor Angell, but by buying back the Government bonds they hold in exchange for the new reserve money. Let the banks thereafter make service charges for handling their checking accounts. The cost would then go where it belongs; that is, those would pay who get the service.

In that way most of the Government debt could be paid almost over night. This would be one of the main immediate advantages of introducing the 100% system.

But suppose the Government were to lend the banks the new reserves and allow them to retain the Government bonds they now hold and so to continue receiving tribute in the form of interest on those bonds. Would the Government debt then be reduced by the new system? Obviously not at first. But with the banishing of great depressions, and therefore the rapid and uninterrupted increase in prosperity, more money would be needed year by year to transact the growing business of the country without a hurtful fall of prices. The new money thus required could and should be issued by the Government through its Monetary Authority in the purchase of Government bonds. This would be sufficient to pay the interest on the Government debt and provide a sinking fund as well.

How the Bankers Would Fare

Getting rid of great depressions would help everybody, including the bankers. For, when their unstable partial reserve system catches us all in a depression, bankers find themselves hoist with their own petard.

The 100% system also has certain special advantages to bankers. For instance, if they obtained a 100% reserve as a loan without interest from the Monetary Authority they would be relieved of the work, anxiety and expense incident to managing the 3 ½% reserve system. Under a 100% system a bank, for merely storing money and transferring it by check, would require, as one banker said, "only a man and a boy."

Where then would a bank get any real revenue and how could it do any money lending? Almost everyone asks this question.

Yet there is not difficulty in answering it. In the first place, everyone who lends money (except the commercial banker) does so with pre-existing money and with money of his own creation. Even the investment banker lends only in that way—with pre-existing money. Clients who have given him money to invest cannot go on using it as their own money by drawing checks against it as though it were really "on deposit" in a safe. Likewise, the savings bank lends on a mortgage only the money which it has obtained from its depositors. The ignorant customer of a savings bank may realize that when he deposits his money he invests it. He may still think of it as "in the bank"; but he knows he cannot use any of it and circulate it by check. His only way so to use it is to "withdraw" it; which really means to sell his investment just as he would sell any other investment, such as a bond.

There are examples of borrowing institutions that lend simply what they have borrowed. As to the commercial banker, he certainly could do the same with his savings and time deposits *not subject to check.* He could also lend his own capital. The only question remaining is, Could he, under the 100% system, as he can now, lend any of the cash behind deposits subject to check? Certainly not. It would not belong to him. Every cent of it belongs to the checking-depositor. The only way he could use or control this cash

would be by having its present owners transfer it to him. For instance, some of it could be transferred to him in payment of loans; some in payment of bonds or other securities; some for deposit in savings account (without the checking privilege). The bank could clearly gain, not lose, by this arrangement, because it would not have the slightest fear of being able to meet the wishes of demand depositors in any amount and at any time. And because of the new freedom from *great* booms and depressions, there would be more savings and therefore more money brought to a bank for its savings-and-investment department to loan.

SPECIAL REASONS TODAY

There are several special reasons today beckoning us toward the 100% plan.

One is the huge excess reserves. Unless these are absorbed by raising the reserve requirements, they will continue to threaten us with an inflation ten times their size. These reserves were created in a vain attempt by the Federal Reserve to increase business loans. A chief reason why the attempt failed was the partial reserve system under which the commercial banks feared to lend.

Another important fact is the provision now in the law for increasing reserve requirements. Why not take advantage of this provision and then keep on going until 100% reserve is reached?

Another fact is that there is now no prospect of a sufficient volume of old fashioned short term commercial loans on which bankers have hitherto depended for the backing of their precarious demand deposits. The Federal Reserve was construed on the assumption that such loans would forever be a normal feature of American business. But they have become less and less important while capital loans have become more and more important. This is partly because the local fluctuations, which once made seasonal

loans so common, have been smoothed out by national integration of commerce and industry, by chain stores and otherwise.

It was also because corporations have grown large enough to finance themselves, through long term bonds or otherwise.

Meanwhile, through all this revolutionary change in American business, the banks' customers have kept right on signing three months' notes for three year enterprises, trusting to renewals or to the shifting of their loans to other banks! When this inelastic loan structure grew big enough, it had to burst, leaving a great volume of frozen loans behind—loans which mostly pretended to be short term to conform to commercial banking, but which were really long-term and were known to be such even by the bankers.

Two experts in these subjects, one a banker, consulted independently, assure me that never again can a short-term loan system flourish in the United States. Genuine short-term loans will never be enough to keep up the present volume of deposits and to replace the Government bonds now in the banks' portfolios. If this is true, there is no proper place in modern times for our 3 ½% system of demand deposits. Demand deposits were precarious enough when the short-term loans on which they were based were the rule. The 3 ½% system cannot endure when short-term loans are the exception. The sooner this fateful fact is recognized and we go back to the original 100% system of the Bank of Amsterdam the better of all concerned, even the bankers.

Just as for several decades after the Civil War our national bank notes dwindled as our Government debt to which they were tied dwindled, so must our deposit currency dwindle if it is to remain tied to the dwindling private debt in the form of commercial short-term loans.

Something must therefore be done about it, and the adoption of the 100% system seems the very best thing to do.

The 100% plan would be easy to adopt at this particular time because service charges for deposit accounts are already in vogue. In fact, Mr. Efrom of the New York National Safety Bank and Trust Company, has extended the deposit system to very small depositors by charging 5 cents for every deposit, every withdrawal, every check; and yet he has found a big demand for these accommodations. Other banks are beginning to do the same. The Empire Bank and Trust Company does it, charging 10 cents instead of 5.

Another reason why the present time is opportune for adopting the 100% plan is the fact that already most of the business world is off the unmanageable gold standard and on a managed currency standard. Sweden is the star example. Even China has decided to adopt a managed currency. But the great examples are England and Sterlingaria [sic., presumably meaning *Sterling Area*]; they are now virtually using gold as I proposed in 1920 my *Stabilizing the Dollar* and as Professor Warren proposed in 1933, that is, at a variable price and for international payments only. Just as, after the Napoleonic Wars, England led the rest of the world to the gold standard, so now she will lead it to a managed currency standard. And obviously 100% money is, by far, the easiest to manage.

Psychologically the 100% plan would greatly simplify banking for the uninitiated. At present there is a conflict of ideas. The depositor talks of "*his*" cash in bank, while legally all the cash in the bank belongs to the bank.

Under the 100% plan all the money on deposit really would belong to the depositors. The bank would merely be trustee or custodian. But this would not be true if the reserve were even a dollar less than 100%.

SUMMARY AND CONCLUSION

We have noted several advantages of the 100% plan, the minimizing of depressions, the payment of Government debt, banishing the prospect of inflation from excess reserves, the unification of our two sorts of money by making deposit money into genuine money in trust so that the average man can understand the money system, and the making unnecessary the short-term loans now required by banks but often unavailable.

Most important of all the Government would recapture its lost franchise and regain its sovereign power over money as granted to it by the Constitution.

There are a number of advantages not above described. Among these, on is the restoration of a more normal interest rate. Another is the elimination of the management and domination of industry by banks, a common consequence of the freezing of loans during depression. A third is the restoration of confidence, necessary for complete recovery, the use of long-term loans, the revival of the capital goods industries, and the quicker elimination of unemployment.

In closing I want to emphasize the fact that, important as is the 100% plan, it is not urged as a panacea. It will smooth out the business cycles but not totally abolish them. Over-indebtedness, not to mention many other maladjustments, could still cause disturbances. But the 100% plan would at least prevent that great present disturber—the recurrent variations in the supply of circulating medium—inherent in the 3 ½% system, from ever raising its head again.

Made in the USA
Lexington, KY
02 September 2010

Irving Fisher was one of America's greatest mathematical economists and one of the clearest economics writers of all time. He had the intellect to use mathematics in virtually all his theories after he had clearly explained the central principles in his own words.

Fisher demanded that Congress take back its Constitutional *money power* that had been usurped by the commercial banks. He suggested that the public debt be redeemed under the Congressional money power withtout inflationary results.

His "100 percent money" system required that demand deposits be backed 100 percent by federal funds rather than fractional or no reserves, on grounds that such a policy would prevent bank failures and control large business cycles ("booms and recessions").

According to Fisher's theory, a sequence of effects of a debt bubble bursting occurs:

1. Debt liquidation and distress selling.
2. Contraction of the money supply as bank loans are paid off.
3. A fall in the level of asset prices.
4. A still greater fall in the net worth of businesses, precipitating bankruptcies.
5. A fall in profits.
6. A reduction in output, in trade and in employment.
7. Pessimism and loss of confidence.
8. Hoarding of money.

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