

**How to End the European Crisis –
at no further cost and
without the need for political changes**

**by Richard A. Werner, D.Phil. (Oxon)
Professor of International Banking**

Centre for Banking, Finance and Sustainable Development | 31 July 2012

Content:

Executive Summary: True Quantitative Easing	p. 2
1. How to solve the bad-debt problem in the banking system most efficiently and cost-effectively.	p. 3
2. Enhanced Debt Management: How to solve the sovereign funding problem in the bond markets – and at the same time stimulate domestic demand	p. 9
Further Reading	p. 11

How to End the European Financial Crisis – at no further cost and without the need for political changes

Executive Summary

There is a solution to the twin problem of large non-performing loans in the banking systems and the funding crisis for sovereign borrowers that is affecting especially Spain, Portugal, Ireland, Cyprus, Greece, but to some extent also Italy and other countries.

The needed policies constitute ‘true quantitative easing’: The author argued in 1994 and 1995 in Japan, introducing the expression ‘quantitative easing’, that there was no need for a recession due to the bad debt problems in the banking system. Necessary and sufficient condition for a recovery is an expansion in credit creation used for GDP transactions – the original definition of ‘quantitative easing’. The expression was later used by central banks to refer to the type of traditional monetarist policy (bank reserve expansion) that had been warned would be insufficient.

True quantitative easing can be achieved quickly and without extra costs in a two-part process as follows:

- 1. The central bank purchases all actual and likely non-performing assets from the banks at face value (book value) and transfers them to its balance sheet.**
- 2. The government stops the issuance of government bonds. Instead, it funds any future borrowing requirement (including all scheduled ‘roll-overs’ of bonds) by entering into loan contracts with the domestic banks, borrowing at the much lower prime rate.**

Ideally, these two measures are combined, and part and parcel of a larger policy package. For a fuller list of measures, see our CBFSD Discussion Paper No. 1-12.¹

But they can also be implemented separately, so if ECB and national central bank support cannot be gained for measure 1, national governments can end the negative vicious cycle and end their sovereign debt problems by going ahead on their own with part 2.

¹ Richard A. Werner (2012), The Euro-Crisis: A to-do list for the ECB, University of Southampton Centre for Banking, Finance and Sustainable Development, CBFSD Policy Discussion Paper No. 1-12.

How to End the European Financial Crisis – at no further cost and without the need for political changes

There is a solution to the twin problem of large non-performing loans in the banking systems and the funding crisis for sovereign borrowers that is affecting especially Spain, Portugal, Ireland, Cyprus, Greece, but to some extent also Italy and other countries.

The needed policies constitute ‘true quantitative easing’: According to the Quantity Theory of Credit (Werner, 1992), a major recession like the one that was likely in Japan at the time can be avoided if the right policies were taken:² There was no need for a recession in Japan due to the bad debt problems in the banking system. Necessary and sufficient condition for a recovery is an expansion in credit creation – which the author called ‘quantitative easing’ (Werner, 1995), an expression that was later used by central banks to refer to the type of traditional monetarist policy (bank reserve expansion) that the author had warned were not likely to be sufficient.³

The Japanese government did not adopt the recommended policies. Neither did the Japanese central bank, which insisted on continuing to rely on interest rate policies or, later, bank reserve expansion policies (which it misleadingly called ‘quantitative easing’ from about 2002 onwards).

The empirical record speaks for itself: Japan remains mired in its twenty-year recession, soon to commence its third decade, while national debt has topped 200% of GDP.

Fortunately for Europe, we now have the hindsight of the Japanese experience and there is even less reason why one should adopt failed and hugely costly policies, and turn down effective and costless policies.

In the following sections the two main pillars of the policy package of ‘true quantitative easing’ are discussed. For a full set of policies, please refer to CBFSD Discussion Paper No. 1-12.⁴

² Richard A. Werner (1992). A Quantity Theory of Credit, University of Oxford, Institute of Economics and Statistics, mimeo. See also Richard A. Werner (1997), Towards a New Monetary Paradigm: A Quantity Theorem of Disaggregated Credit, with Evidence from Japan, *Kredit und Kapital*, 30, 2, pp. 276-309. Available at <http://eprints.soton.ac.uk/36569/>

³ Richard A. Werner (1995). How to create a recovery through ‘Quantitative Monetary Easing’. *The Nihon Keizai Shinbun (Nikkei)*, 2 September 1995 (morning edition), p.26 (in Japanese). English Translation available at <http://eprints.soton.ac.uk/340476/>. For further details of the policies proposed, see Richard A. Werner (1998), Minkanginkoukarano kariire de keikitaisaku wo okonaeba issekinichou, *Economist (Japan)*, 14 Jul., 1998 and Richard A. Werner (2002), ‘How to Get Growth in Japan’, *Central Banking*, vol. XIII, no. 2, November 2002, pp. 48-54

⁴ Richard A. Werner (2012), The Euro-Crisis: A to-do list for the ECB, University of Southampton Centre for Banking, Finance and Sustainable Development, CBFSD Policy Discussion Paper No. 1-12.

1. How to solve the bad-debt problem in the banking system most efficiently and cost-effectively.

The current approach adopted by the European and IMF leadership of how to handle large and growing bad debts in the banking system, for instance in Spain or Greece, is to ask the affected states to borrow even more money. This is further use of public i.e. tax money (either national, European or international), which is then employed to recapitalise banks and help them write off bad debts. This is a very expensive method and adds to the already major problem of excessive sovereign debt.

Economics tells us that a zero-cost alternative is available, and has indeed been adopted successfully in the past.

We must remember that the problem of insolvent banks, due to bad debts, is fundamentally a standard accounting problem: the balance sheet of banks shows a hole on the asset side: Instead of the original value of assets of, say, 100, the market value of the assets has dropped. This quickly produces an insolvent banking system, since already a fall in asset values by ten percent means that most banks would have used up all equity and thus would be bankrupt. Due to the nonperforming loans banks have also become highly risk-averse and unwilling to grant new loans. As a result, bank credit growth has slowed to zero or negative in many European countries. This is why domestic demand will stay weak in Spain, Ireland, Italy, Greece – if nothing is done to kick-start bank credit growth.⁵

How can this accounting problem of non-performing assets be solved? If only we could use an eraser, rub out the nonperforming asset entries in the accounts, and write in a market value of 100 again!

Actually, it can be done, without suspending any accounting conventions, by one particular player: the central bank. Spain and Italy have national central banks that have, according to the ECB, some discretion over their asset purchases.

The problems with the national banking systems can be solved at zero new costs if national central banks were to purchase all nonperforming assets (actual, not official, since the official figures understate the scale of NPLs) from the banks at face value. Immediately the health of the banking sector would be fully restored.⁶

Assume the market value of the NPLs is 20, but the central bank has bought them for 100 (face value). While we have solved the problem for the banks, have we not just shifted the problem onto the central bank balance sheet? In other words, does the central bank not now face insolvency, with a loss of 80 on its purchases of assets for a face value of 100 although they only have a market value of 20?

The problem is that NPLs render banks risk averse, which impedes their willingness and ability to create credit – thus resulting in a potentially long drawn-out slump. The above proposal solves this problem – at zero new cost to the tax payer. There is also no hidden costs: Firstly, central banks do not need to mark to market. They can thus keep such purchases on their books at face value for many years. Secondly, an important accounting principle is for accounts to reflect economic reality. The central

⁵ The Quantity Theory of Credit tells us that a necessary and sufficient condition for an economic recovery is an increase in credit creation used for GDP transactions.

⁶ In the case of loans with non-assignment clauses (likely a minority), a law can be passed to allow compulsory purchase by and reassignment to the central bank.

bank could in reality not possibly make a loss of 80 on this transaction. Instead, the reality is that it makes a profit of 20. The reason is that the central bank has zero funding costs for this operation, yet obtains something worth 20 – a gain, then, not a loss.

If it's so simple and costless, why has no central bank done this before?

Three major central banks have employed this method before: the Bank of England, the Bank of Japan and, most recently, the US Federal Reserve. The result: the operations were a complete success. No inflation resulted. The currency did not weaken. Despite massive non-performing assets wiping out the solvency and equity of the banking sector, the banks' health was quickly restored. In the UK and Japanese case, bank credit started to recover quickly, so that there was virtually no recession at all as a result.

Details: The UK Case

It is August 1914. Britain has just declared war on Germany and its allies, the Austro-Hungarian empire and the Ottoman Empire. However, a substantial proportion of international financial transactions between these Empires and the rest of the world were transacted through London, so that upon the British declaration of war, major parts of British banks' assets consisted of securities and loans that could not be called and were, due to the state of war, legally in default. The British banking system was bankrupt – and in a much worse situation than in 2007 or 2008 when most recently British banks became insolvent.

But since the Bank of England had no interest in creating a banking crisis and credit crunch recession, it simply bought the non-performing assets from the banks. There was no credit crunch, and no recession. The problem was solved at zero cost to the tax payer.

Details: The Japanese Case

In August 1945, the balance sheet of Japanese banks was far worse than their balance sheet in the 1990s or 2000s: non-performing assets amounted to virtually 100% of assets (since assets consisted mainly of forced loans to munitions companies and forced purchases of war bonds). The firms were bankrupt. The government defaulted on the war bonds.

But in 1945 the Bank of Japan had no interest in creating a banking crisis and a credit crunch recession. Instead it wanted to ensure that bank credit would flow again, delivering economic growth. So the Bank of Japan bought the non-performing assets from the banks – not at market value (close to zero), but significantly above market value. The banks were healed again. Together with some other measures, bank credit growth recovered and so did the economy.⁷

⁷ For more details on the Japanese case, see Werner, Richard A. (2009). Financial crises in Japan during the 20th century. *Bankhistorisches Archiv*, 47, 98-123, available at http://eprints.soton.ac.uk/186635/1/Werner_Bankhistor_Archiv_2009_postfinal.pdf

Details: The US Case

The Federal Reserve has been the central bank most active in implementing this policy in recent decades. It purchased several trillion dollars worth of non-performing assets from the US banking and financial institutions. This drastically improved their balance sheets and avoided default of many banks.

Chairman Ben Bernanke was an active participant in the wide-ranging and intense policy debates in the 1990s centering on Japan, to which this author contributed the proposal of 'quantitative easing', including central bank purchases of non-performing assets from banks, and severely criticised the Bank of Japan. Bernanke was one of the more open-minded voices in this debate and often joined in the criticism of the Bank of Japan and calls for more drastic central bank action.

Objections

A frequent objection to this proposal is usually that it will produce inflation. However, this cannot happen: inflation can only come about, when those who are able to create money (the central bank and the banks, collectively forming the banking system) inject money into the rest of the economy, the non-bank sector (which is not able to create money). The asset purchases by the central bank merely constitute transactions between the central bank and the banks, re-ordering matters *within* the banking system. As a result, not a single dollar or pound is injected into the non-banking sector as part of this transaction. Hence there could not possibly be inflation.

This prediction has been borne out by the facts. When the Fed multiplied its balance sheet size through its non-performing asset purchases, many observers thought this would create inflation and sharply weaken the dollar. Neither happened, for the same reason: no new money was injected into the non-banking economy.

Another objection was voiced by Jörg Asmussen, executive director of the ECB, on 18 June 2012, as a fellow-panellist during a public debate in Berlin. Obviously not having heard the present proposal before, and encouraged by the audience to respond explicitly to the proposal presented by this author – including the question why governments prefer to waste billions of tax money, when the banks could be capitalised at zero new costs to the tax payer – the highest ranking German official at the ECB responded by saying that such a solution could not exist, 'because there is no free lunch'.

Yet the solution offers no free lunch. It offers the most cost-effective solution. Europe has experienced a massive multi-year credit expansion in the banking systems in Ireland, Portugal, Spain and Greece, which have produced asset bubbles and vast resource misallocations, including millions of bankruptcies and home repossessions. These are real and high costs to society. The collapse that followed has greatly burdened government budgets and fiscal expenditure on the non-banking part of the economy, such as welfare, health and education, have been drastically cut. Unemployment has risen to record levels in many periphery countries. These are large-scale real costs – so it is preposterous to talk about a 'free lunch'. Precisely

because this crisis has been so immensely costly to society it does not make sense to *further add* to these high costs through misguided banking bail-out policies.

Finally, one often hears the objection that if one bails out the banks in this way, they will simply repeat their mistakes and return to their same old tricks soon – the moral hazard argument. The fact is, however, that governments have been bailing out the banks – using tax money. The moral hazard argument says that we should not use tax money, for it was not the tax payers that have been responsible for the bad debts. The principle is that those who mess up should pay up. This raises the question of just who is responsible for the banking crises that has befallen Ireland, Spain in particular, as well as Portugal and Greece.

So who is responsible for the 25%, 30% or even 40% bank credit growth that was recorded for months on end, until about 2007, in countries such as Ireland, Portugal, Spain and Greece? Whose job is it to monitor and rein in bank credit expansion? In 14 of the 17 eurozone countries, the banking regulator was the national central bank – a constituent component of the ECB System. Moreover, it is the job of the European Central Bank to monitor aggregate credit growth, for this measures the growth of the money supply. Did the ECB have the powers and tools available to prevent 30% credit growth in the periphery countries? It certainly did. The most powerful and independent central bank in the world has complete freedom to choose its policy instruments and policy targets. Revealed preference says that the ECB chose to allow a vast credit bubble, which must result – as these bubbles *always* do – in massive non-performing loans in the banking systems. So since the ECB has been responsible, it should also pay up. And the most efficient way at this stage is for it to purchase the non-performing assets of the banks.

Political Obstacles

The proposed policy is only possible with the cooperation of the central bank. So if governments have given up control or influence over central banks, as is the case in the European Union, the central bank has to be convinced by rational economic argument of the superiority of this measure in order to adopt it voluntarily.

Since independence is a great privilege that imposes the moral responsibility on central banks to be transparent and accountable for their policies, the ECB needs to explain to the public why it is not inclined to adopt such a policy. If national central banks cannot be persuaded to voluntarily use their national discretion to implement it, they should be asked to explain in great detail why they oppose such a policy.

On the other hand, the ECB's policies have exacerbated the crisis, and thus created the opportunity for political changes and the creation for new, unnecessary European bureaucracies, such as the ESM. Furthermore, the ECB has been rewarded for its disastrous policies by obtaining greater political powers. Indeed, some authors had warned that the very extent of ECB independence, powers and lack of accountability was likely to result in wrong policies in the form of massive credit bubbles and banking crises in the eurozone (Werner, 2003, last chapter). There is thus a form of regulatory moral hazard in place: regulators that obtain more powers after crises may not have sufficient incentives to avoid such crises.⁸

⁸ In the English Version of *Princes of the Yen* the author warns of a major boom-bust cycle in Europe, with the European asset bubbles caused by an excessively powerful and unaccountable ECB. In the original Japanese version of *Princes of the Yen*, published in 2001, the author warns of how Alan Greenspan was creating a

Indeed, senior ECB officials have squarely stated that they favour the adoption of a banking union, Eurobonds, fiscal union, a European Finance Ministry and even the creation of a United States of Europe. Quite a few ECB leaders were personally connected to the people who co-authored the Maastricht Treaty of 1991, or were, as is the case with Jean-Claude Trichet, outright co-authors.

Their argument has so far been justified by the claim that, in Thatcherite manner, 'there is no alternative'. This is why it is important to realise that there is an alternative that is economically superior, will maintain the euro and does not require any of these European centralisation measures.

Bloomberg has even raised the possibility that the ECB may cherish the current ongoing slow-motion type of crisis, as it might consider it the best opportunity to convince national politicians and the general public to support the goal of the creation of a United States of Europe.

“Central bank officials may be hoping that by keeping the threat of financial Armageddon alive, they can coerce the region’s people and governments into moving toward the deeper union that the euro’s creators envisioned.”⁹

This would suggest an extreme degree of cynicism on behalf of the ECB. In any case, the ECB needs to be asked to explain why it is opposed to any bank bailouts that do *not* require further tax money nor a banking nor fiscal union.

The baseline scenario is that the ECB is likely to oppose such a proposal, but it should be required to provide a sound reason for such opposition.

While the ECB is unwilling to adopt Part 1 of this proposal, national-level government policy should opt immediately for Part 2. This does not get rid of the bad debts in the banking system in one stroke at zero additional cost, as Part 1 does. But it will achieve the same ultimate goal, and likely do so very quickly: namely to boost domestic demand, especially in affected countries such as Ireland, Portugal, Spain, Italy and Greece.

massive boom-bust cycle that will burst, causing financial dislocation in the US. Excerpts from Chapter 19 of the Japanese original of *Princes of the Yen*: “When the US stock market collapses and overextended banks veer on the brink of bankruptcy, individual savers will not lose their livelihood, as they did in the 1920s. America now has a deposit insurance system. The problem is, however, that due to financial deregulation, the money is not in the bank anymore. Over the past 25 years, a dramatic shift of savings has taken place, from bank deposits to the equity market. Whether directly or via mutual funds, up to 50% of individual savings are now invested in the stock market. And there is no insurance against capital losses in the stock market yet.” ... “Alan Greenspan knows that the economic dislocation that will follow his bubble will let previous post-war economic crises pale by comparison. Individual savers will lose their money. In the words of Alan Greenspan (1967): “The financial policy of the welfare state requires that there be no way for the owners of wealth to protect themselves.” Large losses will be incurred by most Americans, when the Fed changes its policy and sharply and consistently reduces credit creation, as it ultimately will. A Great Depression is possible. Of course, it could be avoided by the right policies.” Richard A. Werner (2001). *En no Shihai* (*Princes of the Yen*), Tokyo: Soshisha

⁹ Bloomberg, Editorial, 25 October 2011, accessed at <http://www.bloomberg.com/news/print/2011-10-25/euro-self-styled-saviors-could-be-its-greatest-enemies-view.html> Their argument follows mine in *Princes of the Yen*, 2003.

2. Enhanced Debt-Management: How to solve the sovereign funding problem in the bond markets – and at the same time stimulate domestic demand

Today (24 July 2012) Spain paid a new post-euro record high interest rate on its newly issued government bonds. Borrowing rates in the bond market have risen to unsustainable levels. This was also the problem in Greece, Ireland and Portugal, and could also easily become a problem for Italy.

Observers are well aware of the negative feedback loops: the troubled banking systems, when dealt with through government money and not central bank money, worsen the fiscal situation of the government drastically. It is expensive to bail out a banking system. Ireland boasted a strong fiscal position, until its government offered to bail out the banking system. It subsequently teetered on insolvency and called in IMF (and European) funding.

As speculators know when bonds mature and large tranches need to be refinanced, they can usually earn money by shorting bonds around these dates, hence pushing up interest rates. This makes it a self-fulfilling bet, since higher rates worsen the fiscal position of the government.

A further negative feedback loop occurs via the credit rating agencies and alternating downgrades of banks and sovereigns.

All these problems can be avoided altogether: they are the result of the government borrowing in a securities market characterised by a large number of short-term speculative transactions.

This was similarly a problem for banks and their funding. But the ECB on 8 December 2011 rightly decided to allow banks to become less reliant on securitised and traded debt, by substituting direct credit lines from the ECB (the long-term refinancing operation, LTRO). This happened after we had presented to about 50 senior staff members at the ECB our proposal of how governments could similarly sidestep their funding problems, and at the same time solve several other problems.

Why should the government rely on the bond market for its funding needs, under current conditions? It is a fact that the prime rate for borrowing from banks is far lower than the benchmark sovereign issuance yield. This is an anomaly resulting from the current financial crisis. Governments need to respond to this anomaly by exiting the bond market.

The solution is for governments to stop issuing government bonds. So when the next tranche of government bonds are about to mature, where will governments obtain the funding from?

Many commentators have proposed to ask the ECB to step in. However, this is problematic for many reasons, and far less efficient than our proposal. It also renders governments at the mercy of the ECB and its European unification agenda. But why do many observers anyway think the central bank should step in? Because they believe that the central bank is the main creator of the money supply. This is simply not true. The fact is that central banks only create about 3% of the money supply.

A full 97% of the money supply is created by the private sector: the ordinary commercial banks in each country. This ability to create the bulk of the money supply makes them far superior to the bond market

Governments should thus enter into loan contracts with the commercial banks in their country. In other words, governments should not borrow via the issuance of tradable securities, but through direct credit lines from their banks.¹⁰

Some observers believe that banks could not do this, because they ‘do not have the money’. That may be true in one sense. But this is true for any loan granted by a bank. Which is why banks do not lend money, they create it: banks are allowed to invent a deposit in the borrower’s account (although no new deposit was made by anyone from outside the bank) and since they function as the settlement system of the economy, nobody can tell the difference between these invented deposits and ‘real’ ones. Actually, those 97% of the money supply are invented in this way.

Others object that a mere switch from government bonds to bank loan contracts would not change much, or even anything. Well, in that case they could not possibly object to trying it out. And if they did try it out, they would be surprised at the significant difference it makes – a difference of night and day:

This simple switch in funding, called ‘enhanced debt management’, has a number of major advantages:

1. The borrowing rate is substantially lower. Governments receive, according to Basel banking regulations, the lowest risk-weighting (zero). Thus they can borrow from banks at their favoured-client rate, which is the prime rate. The prime rate has been substantially lower than the sovereign bond rate throughout this financial crisis. In the case of Italy, we estimate that about E10bn can be saved in the next two years alone on lower interest charges. Furthermore, governments will deal with stable borrowing rates that are fixed throughout the loan contract period (say 3 years). Movements in the bond market become far less relevant.
2. The banks do not have to mark these loans to market. Moreover, they are not affected by downgrades from credit rating agencies. This severs the vicious negative feedback loop between banks and governments. At the same time, however, the banks can use these loans fully as collateral with the ECB for funding, as the ECB’s announcement of 8 December 2011 makes clear.
3. Instead of a negative feedback loop, there is now a positive feedback loop: banks will be happy to lend to governments, for one, because sovereigns carry a zero risk weighting according to BCBS rules. This means that banks will need **zero** new capital to back these loans.

¹⁰ The author has presented this proposal in Japan in the 1990s: Richard A. Werner (1998), Minkanginkoukarano kariire de keikitaisaku wo okonaeba issekinichou, *Economist* (Japan), 14 July, 1998; It was also published in English in the FT: Richard A. Werner (2000). Japan's plan to borrow from banks deserves praise. *Financial Times*, 9 February 2000. The author also personally explained it to government officials in Japan, among others, to Mr Hirohiko Kuroda, then vice-minister of international finance, who liked it enough, as he said, to pass it on to Andrew Smithers on his visit to Tokyo – who in turn wrote it up in his reports, whence it circulated in the City. It then came to be endorsed by Tim Congdon as well as Martin Wolf. It is explained in greater detail in Richard A. Werner (2005), *New Paradigm in Macroeconomics*, Palgrave Macmillan; A recent application to Europe is in: Helmut Siekmann and Richard Werner (2011), Eine einfache und gerechte Lösung der Schuldenkrise, *Börsen-Zeitung*, 09.12.2011, Nummer 238, page 7.

4. The main business of banks is to lend, but they are not lending to the rest of the economy due to their risk aversion. Thus they do not generate earnings to retain and rebuild their balance sheets. Through enhanced debt management, banks will rapidly grow their balance sheets and earn decent income. Instead of primary market bond underwriters, such as Goldman Sachs, earning large fees in cosy relationships with semi-privatised public debt management agencies, banks will be the beneficiaries of this business.

5. Despite the above major advantages, which alone should make this an irresistible policy proposition, the single most important advantage of switching public funding to loan contracts from banks has not yet been mentioned: it will boost domestic credit creation – turning bank credit growth from zero or negative growth to positive growth (of about 3% in the case of Italy). This will increase demand and the money supply, ending the current debt deflation spiral, and generate nominal GDP growth, in the case of Italy between 3% and 4% above the growth otherwise possible. (This is the result of our empirical nominal GDP model based on our Quantity Theory of Credit).

Enhanced debt management that exits securitised debt markets and relies on bank credit from the commercial banks will trigger an economic recovery. It is the necessary second half of the policy that would render the ECB's LTRO successful: as we have seen, bank credit is currently still contracting, despite the LTRO. This would change drastically.

The economic recovery, triggered by a recovery in bank credit creation, will increase tax revenues. Suddenly the negative spiral will be turned into a positive one.

There is also a historical precedent for this type of policy: the economics is the same as that of the system of short-term bills of trade issued by semi-public entities in the years from 1933 onwards in Germany, which were bought by the German banks, hence increasing bank credit creation. These are known as 'Mefo Wechsel', after one of the issuers, the Metallurgical Research Corporation. This method was introduced by Dr. Hjalmar Schacht, President of the Reichsbank, the German central bank, in 1933.¹¹ The method, which he called 'silent funding', was highly successful. As this author has argued elsewhere, the sharp German economic recovery from over 20% unemployment in early 1933 to virtually full employment by the end of 1936 was the result of the ensuing expansion in bank credit creation – in other words, it was the funding of fiscal policy through credit creation that caused the recover, not fiscal stimulus per se. Japan's experience of the 1990s has proven how even far larger fiscal expansions will not boost the economy at all if they are not funded by credit creation (see Werner, 2003, 2005).

In the 1930s the bills of trade were a preferable method at the time, instead of direct loan contracts with banks, since banks did not have to mark securities to market, and credit rating agencies did not exist. The method suggested, of direct loans by banks to governments, is a modern version that is more suitable to today's regulatory and financial market environment. The effect of stimulating a recovery will be the same.

¹¹ For further details, see Werner (2003).

Further reading:

Werner R. A. (1995). How to create a recovery through 'Quantitative Monetary Easing'. The Nihon Keizai Shinbun (Nikkei), 2 September 1995 (morning edition), p.26 (in Japanese). English Translation available at <http://eprints.soton.ac.uk/340476/>.

Werner R. A. (1997). 'Towards a new monetary paradigm: a quantity theorem of disaggregated credit', with evidence from Japan. *Kredit und Kapital*, Duncker and Humblot, Berlin, 30, pp. 276–309. available at <http://eprints.soton.ac.uk/36569/>

Werner R. A. (2002), 'How to Get Growth in Japan', *Central Banking*, vol. XIII, no. 2, November 2002, pp. 48-54

Werner R. A. (2003), *Princes of the Yen, Japan's Central Bankers and the Structural Transformation of the Economy*, M. E. Sharpe

Werner R. A. (2005), *New Paradigm in Macroeconomics*. Palgrave MacMillan.

Werner, R. A. (2009). Financial crises in Japan during the 20th century. *Bankhistorisches Archiv*, 47, 98-123, available at http://eprints.soton.ac.uk/186635/1/Werner_Bankhistor_Archiv_2009_postfinal.pdf