

# INTERNATIONAL CREDIT, FINANCIAL INTEGRATION, AND THE EURO

Jan Toporowski

## Abstract

The theory of optimal currency areas postulates that traded goods are produced by labour and the exchange rate between ‘national’ currencies is the ratio of commodity wages in different countries. In this analysis the exchange rate and wages are substitutes for obtaining international ‘competitiveness’. Such a view is the basis for current reflections about the future of the Euro, and the reduction of its difficulties to relative wages rates in different countries of the Euro-zone. The theory has two important limitations. First of all, it takes no account of the import-intensity of exports, which would require wage adjustments to reinforce exchange rate adjustments, so that wages and exchange rates are necessarily complementary parameters, rather than being substitutes for each other. Hence, exit from, the Euro-zone as a means of closing trade deficits would require additional austerity. Even more importantly, it is a commodity money theory, in which imbalances are accommodated by accumulations of specie or fiat money. However, in a credit economy, banking systems absorb trade imbalances into their balance sheets. Moreover, financial integration means that banking systems throughout Europe are vulnerable to balance sheet risks from exchange rate depreciation in any country in Europe.

*Keywords:* Euro, monetary union, exchange rates, credit.

*JEL Classification:* F33, F36, F41.

‘... capitalist finance as a clearing system that cancels claims and debts and carries forward the differences ... In other words, practically and analytically, a credit theory of money.’ (Schumpeter 1954, p. 717)

## 1. Introduction

It is common now to present the now apparently intractable crisis of the Euro-zone as a crisis of bad policy mix. For monetarists, for example, the crisis has arisen because member Governments have not abided by their fiscal policy obligations under the Maastricht criteria (e.g., Bagus 2010). For Post-Keynesians, at the other extreme, the crisis arises precisely because policy has been forced into an inappropriate mix due to the Maastricht Treaty (Chick and Dow 2012). This paper takes a different approach and argues that the crisis arises out of faulty institutional design rather than bad policy mix. In turn, that faulty institutional design arises out of a defective understanding of what money is and how it works in capitalist economies with complex financial systems that are internationally integrated.

The faulty institutional design was embedded in the Maastricht Treaty of 1992, with its restrictions on Government deficits and a ceiling on the Government debt to GDP ratio. Underlying this was a conviction that monetary stability meant low inflation, and that the key to low inflation was low Government borrowing. The fault in the institutional design is the ban on central bank holding of Government bonds (Article 123 of the Treaty forbids the purchase by the central bank of bonds directly from governments).

The ban on holding of government bonds reversed an even older tradition in central banking, according to which the central bank is the banker to the Government. The oldest central banks, those of England and Sweden were explicitly set up in order to manage the debts of their Governments. Nevertheless, the high German inflation during the early 1990s (in the wake of German unification) aroused sensibilities around the issue of inflation. The faulty institutional set-up was then validated by the extended period of falling and then low inflation since mid-1990s. Central bankers were not modest in claiming this as their achievement.

The inadequate institutional arrangements are now fairly obvious and widely noted. The Eurozone has a central bank, without a Government, Governments without central banks, and banks without an effective lender of last of resort. With a regime of low inflation, now turning into deflation, and without the possibility of expanding government balance sheets, the system has no mechanism for eliminating excessive debt in the economy (Bellofiore and Toporowski 2011).

The deficiencies of the Maastricht arrangements in the present situation are most apparent in the requirement to maintain the present debt to GDP ceiling. By 2011, the average ratio of Government debt to GDP in the Euro area was approaching 90 per cent. The only countries with government debt ratios below the mandatory 60 per cent were smaller countries (the largest being Finland). Even Germany, at the heart of the politics and economics of the Euro-zone, has a government debt to GDP ratio of between 82 and 88 per cent (Eurostat News release 20/1012, 6 February 2012). Thus all economically significant Governments are obliged to run fiscal surpluses until their debt to GDP ratios are reduced below the ceiling. The fiscal surpluses will of course cause reductions in GDP, unless off-set by trade surpluses or private sector investment. But those trade surpluses and private sector investment would have to exceed the fiscal surpluses for GDP to even begin to rise. Meanwhile actual private sector investment is falling and exacerbating the deflation in the Euro-zone. This illustrates the inappropriateness of the ceiling on government debt: attempts to realise that ceiling can only move the economies in the Euro-zone away from the ceiling, because GDP would start to fall well before governments would be allowed (under present rules) to cease deflating their economies.

Apart from the Schachtian hostility to government borrowing, the more theoretical consideration inspiring and distorting the present arrangements in the Eurozone is a Ricardian theory of money that was in the minds of the politicians and central bankers who set up the monetary system in the Euro-zone. The Ricardian theory of money is one in which money is a commodity or a *fiat* currency issued by a Government or a central bank; money that is not a liability, and which has value in exchange. As is argued below, this is exemplified in Robert Mundell's theory of 'optimal currency areas'. In such a view, exchange rate flexibility is a substitute for wage flexibility. Hence the monetary discourse prevalent in the Euro-zone according to which the level of employment in member countries of the Euro-zone is determined by their respective 'competitiveness'. Such 'competitiveness' may be obtained by low wages, or a devalued currency, or both. In the absence of the possibility of devaluation, due to membership of the monetary union, the alternative is reduced wages. This theory therefore provides a teleological rationale for deflation, when deflation has been sufficient to increase the 'competitiveness' of a country's output and thereby increase demand for that output abroad.

The logical flaw in this argument is of course that lower wages reduce the demand for consumption goods in a country. Only under heroic assumptions of perfect competition (so that lower prices keep real wages constant) and an absence of debt (so that lower prices do not increase the real value of debt) can lower wages fail to reduce output and employment. The section that follows explains how macroeconomic adjustments are supposed to take place in the kind of commodity money system that underlies most approaches to the crisis in the Euro-zone. Section 3 analyses how macroeconomic adjustments take place in an economy that uses credit, back by debt, as money. Section 4 outlines some of the implications of this analysis for the management of the international monetary system. Section 5 highlights the role of financial integration in Europe, a process which makes the crisis in the Euro-zone fundamentally different from the kind of emerging market exchange rate crisis from which lessons are commonly drawn for the Euro-zone. Finally, section 6 concludes.

## **2. Macroeconomic adjustment in a commodity money or monetary credit system**

The theoretical foundations of current discussions about the problems of the Eurozone were laid out by the 'Optimal Currency Area' theory of Robert Mundell (Mundell 1961). This postulates the effectiveness of monetary policy under a system of adjustable exchange rates. The starting point for this may be equilibrium in different countries that are then affected by an 'asymmetric' shock, that is an economic disturbance which affects countries in different ways. In a world of floating or adjustable exchange rates, such a 'shock' would require a differentiated adjustment of the exchange rate or the rate of interest in countries differently affected by the 'shock'. So, for example, in a country in which general unemployment emerges, the exchange rate could be depreciated relative to the currency of a country in which full employment is maintained. The standard example of such an 'asymmetric' shock would be a substantial rise in the price of oil. This would boost profits in an oil-

exporting country, but cause a deterioration in the terms of trade in an oil-importing country. A depreciation of the currency in the oil-importing country, and an appreciation of the currency in the oil-exporting country, would encourage substitution effects (in the oil-importing country more competitive exports, energy conservation, alternative domestic sources of energy; in the oil-exporting country less competitive exports) that would eventually lead to more balanced trade.

A more dynamic interpretation might be that countries whose business cycles do not coincide need to differentiate their monetary policy, if they are to achieve some sort of stability or equilibrium: A country in a recession needs, in this view, a looser monetary policy (lower interest rates or a depreciated exchange rate) relative to a country that is undergoing a boom; a country experiencing a boom and approaching full employment needs tighter monetary policy (higher interest rates, or an appreciated exchange rate) in order to stabilise its economy.

This was the thinking at the beginning of the 1990s when the leaders of the European decided at Maastricht, in February 1992, the criteria for membership of the European Monetary Union. Those criteria involved convergence of business cycles in the future Euro-zone. In addition to the well-known fiscal criteria (a maximum government deficit of 3 per cent of Gross Domestic Product, and a ceiling on government debt of 60 per cent of GDP, both criteria no longer enforced within the Euro-zone), the Treaty specified that countries entering the monetary union should have inflation rates no higher than 1.5 percentage points above the average of the inflation rates in the three countries in the union with the lowest inflation; the country should have been in the Exchange Rate Mechanism of the European Union without devaluation for two years prior to entry; and the nominal long-term rate of interest should be no higher than 2 percentage points above the interest rates in those three countries with the lowest inflation. These monetary and inflation criteria arose from a conviction that monetary policy is a key determinant of the business cycle. Unless business cycles converged, it was believed that monetary policy would cease to be effective as an economic stabiliser, and would cause divergent cycles in the rest of the union: countries experiencing unsustainable booms, or recessions would have those booms/recessions reinforced by a monetary policy determined by 'average' conditions in the union.

In Mundell's 'optimal currency area' analysis money is regarded as commodity money or, at best, as a monetary theory of credit in which credit is a claim on money that serves as a medium of exchange, rather than a store value. Accordingly, monetary policy is regarded as a substitute for changes in real wages. In his original 1961 paper, Mundell had argued that the alternative to adjustment through the exchange rate was adjustment through the labour market: With a flexible and mobile labour market, a reduction in real wages would make exports more competitive, and imports less competitive in a country affected by a sudden deterioration in its trade balance. A flexible exchange allows countries to have more rigid labour markets, while obtaining balance in their foreign trade.

The notion of the exchange rate (or the rate of interest) as a substitute instrument of competitive advantage for the real wage rate arises in a monetary system based on commodity or *fiat* money. This is clear from the critique of the gold standard originally put forward by Alfred Marshall and John Maynard Keynes. Alfred Marshall's evidence before the 1886 Royal Commission on the Depression of Trade

and Industry, and the subsequent Gold and Silver Commission in 1887 highlighted the difficulties for domestic industry and trade caused by an inelastic money supply linked to gold (Marshall 1926). In his *Tract on Monetary Reform* Keynes put forward the idea of an adjustable exchange rate precisely because it would avoid the necessity of balancing foreign trade by means of adjustments in domestic prices (Keynes 1923).

This commodity or *fiat* money approach is therefore of venerable provenance, and provides the foundation for more recent arguments that countries failing to adhere to the Maastricht criteria should remain outside, or if they are inside withdraw from, the monetary union. But it is Ricardian, in assuming that labour is the sole cost of production in a monetary union (the cost of capital being set by the monetary authorities uniformly for the whole union). Moreover, it takes little account of the evolution of the monetary and financial system over the last century. We are today free of a commodity money, or indeed of any credit that is convertible into fixed quantities of any commodity. In the international monetary system of the twenty-first century, among countries with floating exchange rates, capital flows and expectations, rather than the trade balance, determine those exchange rates. This is very apparent in Brazil, for example, where the 'carry' trade (arbitrage between the money markets of the United States and Brazil), driven by interest rate differentials and expectations of exchange rate stability, determine the price of the Brazilian *real*.

Mundell's 1961 paper implicitly assumes stationary expectations (a common feature of early monetarist criticisms of the Bretton Woods system of fixed exchange rates). His later 1973 paper *Uncommon Arguments for Common Currencies* put forward some additional arguments, but did not really go beyond the analysis of credit convertible into a *fiat* currency. He recognised that, in smaller countries, devaluation has a domestic cost in reducing real incomes as the prices of imports rise – his earlier paper had compared Canada with the United States, neither of which are representative of the countries in the Euro-zone, or anywhere else in the world, for that matter. This domestic cost has two implications. First of all, devaluation achieves a lesser competitive advantage for exports the greater is the import content of those exports. This means that small countries such as Greece or Portugal would improve their terms of trade (the ratio of export prices to import prices) by considerably less than the amount of the devaluation.

A second implication is that, in smaller countries where imports constitute a significant part of domestic consumption, devaluation reduces real incomes. (cf. 'Beyond a certain point, devaluation causes not so much an increase as a fall in purchasing power in relation to foreign production.' Kalecki 1933, p. 207). Obviously such a reduction in real incomes could be avoided by raising domestic incomes or wages. But such compensatory wage increases would weaken further the export competitiveness obtained from the devaluation. In extreme cases it could result in hyperinflation. Thus, for the smaller countries of the Euro-zone, exit from the monetary union and devaluation of their new currency unit is hardly an alternative to the existing policies of austerity currently being imposed. To be effective it would require to substitution of fiscal austerity by wage austerity.

In his 1973 paper, Mundell suggested two benefits of monetary union that he overlooked in his earlier paper. One is the benefit of pooling foreign exchange reserves. This has obvious advantages in managing the exchange rate. This in turn

allows countries combined in a monetary union to take more time in adjusting to ‘asymmetric’ shocks, spreading the cost of that adjustment over time and geographically between members of the monetary union. In this paper, Mundell came down rather more in favour of monetary unions for smaller countries as offering more scope for policy, including fiscal policy, than in his earlier paper. The implication is that larger monetary unions are more efficient than smaller ones (Mundell 1973). However, despite the more sophisticated consideration of policy in this later paper, and some reflection on Keynesian themes of uncertainty and expectations, the essential monetary analysis is the same as in his earlier paper. Under other circumstances this observation might be of merely historical importance. However, that analysis continues to inform and indeed constrain the policy and institutional arrangements of the European Monetary Union, and political discussions over the future of that union.

### **3. Macroeconomic ‘Adjustment’ in a pure credit economy**

There are obvious inadequacies in the policy prescriptions derived from this theory and reflected in the Maastricht Treaty criteria that are being used to inflict deflation on European economies in serious economic recession, in the belief that a sufficient fall in real wages will have some eventual ‘real balance effect’ that will cause those with money to start spending on a scale sufficient to overcome the reductions in government and private sector expenditure. However, the key element which makes this theory inappropriate to the twenty-first century international monetary system is its view of credit as deriving its value from its convertibility into some kind of commodity or *fiat* money. This is inappropriate because today’s money is bank credit, which derives its value from its convertibility into other forms of bank credit (in other currency units) or into financial assets. International reserves now take the form not of gold (although this commodity remains a minor part of central bank reserves), or even *fiat* money in the forms of notes issued by central banks, but of claims on, or deposits in international *commercial* rather than central banks. Accordingly:

‘... logically it is by no means clear that the most useful method (in the analysis of money) is to start from the coin – even if, making a concession to realism, we add inconvertible government paper – in order to proceed to the credit transactions of reality. It may be more useful to start from these (credit transactions) in the first place, to look upon capitalist finance as a clearing system that cancels claims and debts and carries forward the differences ... In other words, practically and analytically, a credit theory of money is possibly preferable to a monetary theory of credit.’ (Schumpeter 1954 p. 717).

The link with other forms of bank credit and financial assets means that consideration has to be given to those issues of uncertainty, expectations and speculation that are the essence of Keynes’s monetary theory. Moreover, an essential element of the international monetary system is the international integration of bank balance sheets. This is discussed further in the next section.

The key feature of credit money is that it is backed by debt. This distinguishes credit money from commodity money, which is backed solely by its convertibility into other

commodities, and from monetary credit, which is backed by its eventual convertibility or promise to convert into commodity or *fiat* money. As Irving Fisher and Michał Kalecki pointed out, this makes the modern capitalist economy unusually vulnerable to price adjustments that affect the real value of that debt (Fisher 1933, Kalecki 1944). Fisher and Kalecki made their case in the context of a closed economy, as a critique of wage reductions, or price reductions as means of reducing mass unemployment. In their view, in a credit economy backed by debt, wage and/or price reductions would increase the real value of debt. The rise in the real value of debt would induce indebted producers and households to try to reduce their debt, further depressing expenditure and economic activity. Paradoxically, both Fisher and Kalecki regarded government debt in domestic currency as exempt from this kind of depressive effect, because both lived in times when governments had little difficulty in managing quite substantial domestic debt – the government debt problems of the inter-War period of the 1920s and 1930s were caused by debts linked to the value of gold or foreign currencies. The fiscal constraints of the Maastricht Treaty, however, have succeeded in making domestic government debt an instrument of deflation on the same terms as governments' foreign currency debt, or private sector debt.<sup>1</sup>

Once it is accepted that international money is credit backed by debt, it becomes easy to see where the flaw in an international monetary system with floating exchange rates lies. The value of international credit, assets and liabilities is many times the value of international trade, and the two are linked by exchange rates. Globally, assets must equal liabilities. But there are inequalities in the distribution among countries of foreign assets and liabilities in particular currencies. If all countries, their governments, and their firms and households, had equal values of foreign assets and debt, then the exchange rate of each country could be managed, as recommended by Keynes and Mundell, to balance trade. However, most developing countries, with the notable exception of China, are net debtors in their external capital account balance sheet, that is their public and private sectors have more foreign liabilities than assets. Most countries in Europe and North America, with the notable exception of the United States, are net creditors in their external capital account balance sheet, that is have more foreign assets than liabilities. In the absence of central bank intervention, foreign liabilities would have to be 'hedged' by foreign assets of the same maturity, payment structure and currency for debt servicing flows to have no effect on the exchange rate.

If central banks intervene to manage the exchange rate, then it is in a situation in which that exchange rate affects not only the trade in goods and services of most countries but also the cost of managing their foreign debt. A country with extensive foreign borrowing is therefore faced with the dilemma that, on the one hand, its foreign borrowing is most easy to manage with a strong, overvalued exchange rate for its currency. An overvalued currency reduces the domestic purchasing power that has to be sacrificed to service foreign currency debt. In an economy with an open capital account, overvaluation reduces the domestic money value into which foreign obligations may be converted. Specifically, it makes it cheaper to convert a government's foreign debt obligations into domestic debt obligations that are then easier to service from tax revenue. But such overvaluation would obviously adversely

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<sup>1</sup> This achievement of late-twentieth-century monetary theory in Europe should be taught to students of Economics as an antidote to belief in linear progress in economic theory.

affect its trade in goods and services. On the other hand, the weak undervalued exchange rate that supports a country's trade in goods and services, can make it much more difficult to manage its foreign borrowing. Any stimulus obtained from exchange rate depreciation will be off-set by reductions in investment expenditure by government and firms whose net foreign debt has increased in domestic currency terms as a result of the depreciation. The conventional development economics, according to which from the 1970s developing countries were encouraged to borrow abroad to finance the trade deficits resulting from attempted industrialisation or terms of trade misalignments, left the developing countries with foreign debts that were then exacerbated with the devaluation that was part of the International Monetary Fund's standard structural adjustment programme for indebted countries. There are parallels with the decision of the major powers in Europe to return to the gold standard after the First World War, a decision denounced at the time and thereafter as pandering to *rentier* interests at the expense of industry and employment (Keynes 1923, pp. 142-8). But the decision was a rational way to manage war-time debts that were tied to the price of gold (Moggridge 1969, pp. 60-61).

#### **4. The Management of International Money**

Nearly two thirds of all international credit and debt is denominated in US dollars (Perelstein 2009). Three decades ago, during the 1980s international debt crisis, Hyman Minsky had argued that the international credit system required an appropriately large U.S. trade deficit to supply the indebted countries with a net inflow of dollars with which those countries could meet their dollar liabilities. A large part of that crisis, according to Minsky, was due to the failure of the U.S. to follow such an 'accommodating' trade policy (Minsky 1986; Minsky 1989). A more narrowly-trained international monetary economist might have argued that, in a pure credit world, with credit available on demand and credit markets always liquid, it would not be necessary for the United States economy to provide such 'free' dollars: a trade surplus of the indebted countries with any other country would be sufficient. Assuming perfect liquidity in all financial markets, or in a regime of fixed exchange rates, this may be so. As Charles Goodhart has pointed out to me, it should be possible to deal such currency mismatches through the 'swaps' market. But this would require counterparties willing to swap payments in U.S. dollars for payments in other currencies. To effect this for all obligations in all currencies at all maturities the premiums in the swaps market would have at least to compensate for prospective exchange rate fluctuations. Such transactions costs would end up costing the indebted countries as much as transactions in the spot market for U.S. dollars. With the less restrictive assumption of other things being equal, then a trade surplus with other countries would require conversion into U.S. dollars. In a world of floating exchange rates such shifts between currencies would tend to cause the U.S. dollar to increase its value against other currencies. This indeed is what happened during the 1980s, until the Plaza Accord of 1986 resulted in a concerted effort by the world's leading central banks to reduce the exchange rate of the U.S. dollar.

An international credit system therefore requires accommodating trade deficits in the countries in whose currencies international debt is denominated (chiefly the United States). Deficits of other countries are not a fully effective substitute for the trade

deficits of the countries issuing the currencies of international debt. For the deficits of other countries to be effective substitutes the debtor countries would have to convert their net export earnings into the currency of their debt, or else invoice their exports into that currency. Invoicing into the currency of debt would simply transfer the additional demand for the currency of debt from the exporting to the importing country. So changing the currency of export invoicing would still leave excess demand in the foreign exchange market for the currency of international debt.

This can be illustrated as follows. Consider a situation in Latin America whose governments have a substantial foreign debt denominated in US dollars. The ideal solution, which Minsky advocated, is for the United States to run a deficit in its trade with Latin America, to supply Latin America with dollars to service its dollar debt (Minsky 1986, 1989). Supposing, however, that Latin America has balanced trade with the United States, but has an adequate trade surplus with Europe that, if it were in U.S. dollars, would service the foreign debt of Latin America. The dollars to service the Latin American debt could be obtained by selling the net export revenues in European currencies and buying the necessary dollars in the foreign exchange markets. Like all additional buying of a currency in the foreign exchange markets, this would tend to cause the US dollar to appreciate. As the US dollar appreciates, the value of Latin America's debt, in relation to other currencies, but most immediately in relation to Latin American and European currencies, will tend to rise. Latin America might try to avoid this by invoicing its net exports in US dollars. But such invoicing would not suppress the appreciating tendency of the US dollar, but merely result in European importers doing the additional buying of US dollars for their Latin American suppliers. As the US dollar appreciates, Latin American exports would become less competitive in Europe, reducing the dollar proceeds from exports.

***Thus, far from requiring the elimination of macroeconomic imbalances in order to achieve equilibrium, an international credit system requires trade imbalances to service the international debt that is the counterpart of the international credit that is today's international money.***

There is no mechanism, in a free market international trading system, to ensure that such accommodating trade deficits are obtained, so that international debt can be serviced and eliminated, through debt repayments, as a matter of routine. In practice, the debt is managed by taking out additional debt where required, or drawing down on assets or reserves held in foreign currencies. As long as additional debt is available, or assets can be realised without disturbing markets, the system works smoothly and appears to be in equilibrium. But once obstacles are placed in the way of extending debt or refinancing, the system falters and goes into crisis.

The failure to provide trade deficits to accommodate foreign debt payments may be called *credit neo-mercantilism*, although it arises less out of explicitly planned policy and more out of an absence of trade direction. Such a failure then induces international credit failure when international debt commitments cannot be settled through trade or refinancing. Two recent cases of credit-neo-mercantilism both occurred as a result of recessions in the United States. During the early 1980s and the early 1990s, recessions in the United States caused a narrowing of its trade deficit. In both cases, financial crises broke out in developing countries (in the 1980s the Third

World debt crisis; in the 1990s the Emerging Market crises). Both incidents were also associated with rises in the value of the U.S. dollar in the foreign exchanges.

As an aside here, it is important to distinguish this international debt servicing function of the U.S. trade deficit from the monetary requirement for such a deficit identified by Robert Triffin during the 1960s. Triffin's argument was a monetarist concern about an inadequate supply of U.S. fiat money for the needs of international trade in goods and services. By contrast, credit neo-mercantilism is a supply of bank credit from a trade deficit in the United States that is inadequate for the needs of servicing international debt in U.S. dollars, rather than trade in goods and services. A large part of the problems in the European Monetary Union may be said to arise from credit neo-mercantilism occurring in the more complex circumstances of a monetary union, where financial integration has inflated bank balance sheets with cross-border assets and liabilities.

## **5. The role of financial integration**

The degree of cross-border integration of bank balance sheets is a feature that is peculiar to the European Monetary Union. Monetary union involves not only the use of notes and coins that are accepted and circulate freely among the countries in the currency union, as in say the Franc zone, where CFA francs circulate across borders. It also involves converting credit and debts into that currency shared with other countries. Monetary union is therefore a credit as well as a purely monetary matter.

Nevertheless, basing themselves on Ricardian notions of money, critics of indebted governments and of the current arrangements in the Euro-zone have argued that the way out of the current crisis is either through the reduction of wages (or the 'social wage' in the case of fiscal austerity) in over-indebted countries, to recover 'competitiveness'; or else governments in those countries should default on their debts and exit from the monetary union, to allow a new currency to be depreciated in order to recover 'competitiveness' (e.g., Das and Roubini 2012, Lapavistas 2012). As indicated above, the first option of lowering wages would lower demand and decrease employment and output even further in existing conditions of austerity. The second option, of default and exit would cause the collapse of the banking system in the country attempting such a strategy: banks holding government securities would become insolvent, due to the reduction in the value of their assets and the increase, with the devaluation of the new currency, in the value of any Euro liabilities that they may retain. Those banks would also be subject to mass withdrawals of deposits as citizens in the countries exiting from the monetary union try to obtain cash in order to keep their savings in appreciating Euros. Paradoxically, therefore, far from entering a comfort zone of increased international competitiveness, the introduction of a successor currency would establish the Euro as an effective parallel currency, or the 'Euro-isation' of an exiting country. In a parody of the state theory of money (Wray 1998), residents of such a country would designate the successor currency to pay taxes, while attempting to fix all civil (i.e., non-government) contracts in Euros, even if payments are made in the successor currency.<sup>2</sup> The collapse of banks would

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<sup>2</sup> In such a situation, a measure of international financial integration may be taken to be the amount or proportion of financial intermediary liabilities that cannot be converted into a local currency.

accelerate the reversion to cash payments. The rising cost of imports, and the revulsion against holding the successor currency, would very rapidly lead to hyperinflation.

For Europe as a whole, and the Euro-zone in particular, the crisis would be spread outside the exiting country by the process of financial integration that has been one of the goals of the European Union since the Maastricht Summit. This process was accelerated by the Special European Council of European Heads of Government that met in Lisbon in 2000. The meeting agreed to move towards a common capital market and a common market in financial services to complement the imminent single currency, the common market in goods and services and the partially free market in labour. A Financial Services Action Plan in 1999 was followed by the Lamfalussy Report of 2001, which laid down procedures to make financial regulation compatible throughout the Union and to encourage the development of a common market for capital in Europe.<sup>3</sup>

The thinking behind the single market in financial services was typically Ricardian (commodity money or monetary theory of credit): the common market in financial services and capital would result in a more efficient application of resources because capital would flow to those activities in those countries where it would obtain the highest return. The actual result was to foster cross-border mergers and acquisitions that have effectively integrated the balance sheets of the respective national banking systems in the European Union. As a result, banks in all countries of the European Union are exposed to risks in other countries, in the sense that they have assets or subsidiaries in other countries or, at the very least, that they have liabilities to European Central Bank. Banks like Deutsche Bank, Société Générale, Unicredit, Erste Bank, have large cross-border operations in the euro-zone. Indeed, the Royal Bank of Scotland has already been brought down by its takeover of ING in the Netherlands. At the same time, the financing operations of the European Central Bank (over one trillion Euros in the Longer-Term Refinancing Operations) would effectively bring down the banks in the countries exiting from the Euro-zone: The transfer of collateral to the European Central Bank would deprive those banks of the Euro assets that they would need to balance their Euro liabilities.

The degree of financial integration in Europe is what makes the single currency in Europe different from a currency board, such as that which Argentina had in the 1990s. Proponents of default and exit strategies have been inspired by the example of

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<sup>3</sup> The process of financial integration is extensively discussed in Grahl 2009. The effect of the financial crisis on the process of financial integration is described in European Central Bank 2012. However, the ECB report takes financial integration to mean a common system of regulation in which a 'law of one price' ensures that equivalent securities have one price throughout the EU (See ECB 2012, chapter II). Such a definition of financial integration overlooks the cross-border integration of balance sheets that is emerging as the key factor in the crisis of the Euro-zone.

Argentina, whose Government abandoned its obligation to peg the Argentine Peso to the US dollar in 2002, defaulted on its foreign borrowing, and was able to enjoy the political benefits of an economic recovery for the remainder of the decade. However, there are important differences between Argentina and the countries in the Euro-zone. Unlike European countries, Argentina is primarily a commodity exporting country. Its export sector is therefore relatively vertically integrated, with costs determined in Ricardian fashion by wages and the declining marginal productivity of land. In this situation, the exchange rate and wages can substitute for each other in obtaining international competitiveness. In Europe, by contrast, no country (with the exception of Norway) has such a vertically-integrated export sector, although Italy, with its own capital goods sector comes close such integration. Real wage reductions are therefore necessary in Europe to obtain international competitiveness. Moreover, Argentina's banking system was relatively insulated from the international financial system, but highly dollarized and constrained by the currency peg. The Argentine crisis was precipitated by a banking crisis, rather than a crisis of government indebtedness (although that Argentina had too, but of foreign indebtedness, rather than in its domestic currency, as in the case of Greece). The banking crisis hinged upon the requirement, under the currency board, for the Argentine central bank to issue only banknotes that were backed by holdings of U.S. dollars. This limited the amount of domestic Argentine credit that could be converted into cash. When doubts about the viability of the currency board emerged, a run on Argentine commercial banks started, as their depositors sought to withdraw their deposits in cash in order to convert them into dollars before the peso depreciated. The run was stopped by instituting capital and credit controls, and coming off the currency board with a massive devaluation of the peso. The devaluation also allowed Argentine commodity exporters to win back markets that had been lost to Brazil and Uruguay, whose currencies had previously depreciated.

#### **4. Conclusion**

The Euro-zone represents a major fault-line in an international monetary system based on credit and debt, where the possibility of the break-up of the Euro area threatens to externalise a large parts of the domestic debt system, restricting the possibility of debt accommodation by means of normal credit expansion, so that debt forces contradictory shifts in trade and emergent exchange rates: On the one hand, the needs of trade require depreciation of the new currencies of the countries leaving the zone; on the other hand, that depreciation inflates the value of newly externalised Euro debt of governments and the Euro liabilities of their banking systems, depressing the private and public investment that is necessary to recover from the crisis. In the present situation of financial as well as economic integration, the only non-catastrophic strategy of exit, and financial 'disintegration' from the Euro, would require a successor currency whose value would stay stable, or appreciate, against the

Euro, facilitating the conversion of euro debt into the successor currency at a favourable rate. But that in turn would deprive the exiting country of the trade benefits of a depreciated exchange rate.

An important conclusion from this is there exists no 'optimal' exchange rate that would satisfy both the needs of trade *and* maintain stable balance sheets, that is the *practical and policy irrelevance of exchange rates* in an economically and financially integrated Europe. The attraction of independent monetary policy is in the eyes of slaves of 'defunct economists' who had no knowledge of modern bank balance sheets.

However, the policy irrelevance of exchange rates does not mean that there are no other policy instruments for reversing the debt deflation affecting Europe. In the first place primary fiscal deficits and public investment need to be maintained in Europe until nominal GDP starts to rise faster than Government debt, offering the prospect of achievement of the Maastricht criteria, but through a more effective process of economic recovery rather than deflation. A corollary of this is that primary fiscal deficits and public investment need to be maintained in Europe until nominal GDP starts to rise faster than Government debt, offering the prospect of achievement of the Maastricht criteria, but through a more effective process of economic recovery rather than deflation. At the same time it is vital to maintain the liquidity of the money markets to avoid debt deflation, which would transmit itself from deficit countries to the surplus countries of Germany and its satellites. Liquidity management and fiscal reflation require a more effective management of government debt markets. Government debt managed would be facilitated, and the liquidity pressures on the balance sheets of banks holding government bonds would be eased, by issuing government bonds maturing at the same time as European Central Bank refinancing operations. There is scope for further support of the government debt market through active government repurchases of their own bonds financed by a tax on bank balance sheets. Such repurchases from banks would maintain the liquidity of bank balance sheets, while providing banks with an incentive to hold government debt (because in this way they would get back the balance sheet tax they have paid). Finally, it is vital that wages should be increased throughout the European Union, as a way of reflating domestic markets. Business will of course enter the usual objections. But it will benefit from the recovery of domestic markets.

### **Acknowledgement**

I am grateful to David Laidler, Charles Goodhart, Rob Jump, Joseph Halevi, Arturo O'Connell, Daniela Gabor and participants in the seminar on Understanding Crisis in Europe, organised by the Centre of Global Finance, University of the West of England, at the University of Bristol, Mariana Mortagua, Francisco Louçã, Riccardo Bellofiore and the staff and students of the Economics Faculty of the University of Bergamo with whom I was able to discuss key aspects of this analysis during my lectures there on International Money and Macroeconomic Imbalances: '... for the signs that remain in these pages of ignorance unconquered these guides can in no way be held responsible.'

## References

Bagus, P. (2010) *The Tragedy of the Euro* Auburn, Alabama: Ludwig Mises Institute.

Bellofiore, R. And Toporowski, J. (2011) 'L'Europa al bivio. Suicidio per le banche o riforma fondamentale' *Critica Marxista* 2011 n. 5, settembre-ottobre pp. 9-16.

Chick, V. and Dow, S.C. (2012) 'On the Causes and Outcomes of the European Crisis: Ideas, Institutions and Reality' *Contributions to Political Economy* Vol. 30, no. 1, June.

Das, A., and Roubini, N. (2012) 'A blueprint for an amicable divorce settlement' *Financial Times* 3 April, p. 9.

European Central Bank (2012) *Financial Integration in Europe* Frankfurt, April.

Fisher, I. (1933) 'The Debt Deflation Theory of Great Depressions' *Econometrica* vol. 1, no.1, pp.337-357.

Grahl, J. (ed.) (2009) *Global finance and Social Europe* Cheltenham: Edward Elgar.

Kalecki, M. (1933) 'O handlu zagranicznym i „eksportcie wewnętrznym”' in J. Osiatyński (ed.) *Michał Kalecki Dzieła: 1 Kapitalizm Koniunktura i zatrudnienie* Warszawa: Państwowe Wydawnictwo Ekonomiczne 1979.

Kalecki, M., (1944) 'Professor Pigou on "The Classic Stationary State": A Comment' *Economic Journal* Vol. 54, No. 1.

Keynes, J.M. (1923) *A Tract on Monetary Reform* London: Macmillan.

Lapavitsas, C. (2012) 'It is in Greece's interest to leave the Euro' *Financial Times Opinion* 24 May in <http://www.ft.com/cms/s/0/a4f139ee-a4f0-11e1-9a94-00144feabdc0.html#axzz1vyvHxLQ9>

Marshall, A. (1926) *Official Papers* London: Macmillan.

Minsky, H.P. (1986) 'Conflict and interdependence in a multipolar world' *Studies in Banking and Finance* Supplement to the *Journal of Banking and Finance* Vol. 4 1986 North Holland Publishing.

Minsky, H.P. (1989) 'Financial Structures: Indebtedness and credit' in A. Barrère (ed.) *Money, Credit and Prices in a Keynesian Perspective* New York: St. Martin's Press.

Moggridge, D.E. (1969) 'The Return to Gold, 1925 The Formulation of Economic Policy and its Critics' *Occasional Paper* No. 19, University of Cambridge, Department of Applied Economics.

Mundell, R. A. (1961) "A Theory of Optimum Currency Areas". *American Economic Review* Vol. 51 (4): 657–665

Mundell, R.A., (1973), "Uncommon Arguments for Common Currencies", in H.G. Johnson and A.K. Swoboda (eds.), *The Economics of Common Currencies*, George Allen and Unwin Ltd, London, pp. 114-32.

Perelstein, J.S. (2009) 'Macroeconomic imbalances in the United States and their impact on the international financial system' *Working Paper* No. 554, New York: The Levy Economics Institute of Bard College.

Schumpeter, J.A.S. (1954) *History of Economic Analysis* London: Allen and Unwin.

Toporowski, J. (2010) '*Why the World Economy needs a Financial Crash' and other critical essays on Finance and Financial Economics* London: Anthem Press

Wray, L.R. (1998) *Understanding Modern Money: The Key to Full Employment and Price Stability* Cheltenham: Edward Elgar.