UNIVERSITÀ DEGLI STUDI DI SIENA



QUADERNI DEL DIPARTIMENTO DI ECONOMIA POLITICA E STATISTICA

Sergio Cesaratto

Controversial and novel features of the Eurozone crisis as a balance of payment crisis

n. 640 - Maggio 2012



Abstract - The European crisis appears as the n-th "this time is different" episode of the financial liberalisation sequence cum fixed exchange rates, capital flows from the centre to the periphery, housing bubble, current account (CA) deficit and indebtedness, default.

In the author's view, although Reinhart and Rogoff (2009) is not a satisfactory account of the history and nature of defaults, their title conveys the sense of a recurring pattern of unfortunate events. In this contribution the author examines some conventional and heterodox explanations that have been given for the nature of the balance of payments (BoP) disequilibrium of the Eurozone (EZ) members in relation also to the presumed German mercantilism. The paper discusses next two different interpretations of the causes of the rise in the sovereign spread of periphery countries: both do not clearly identify the nature of the EZ crisis as a BoP crisis. Finally, it focuses on the novel and controversial features of the EZ BoP crisis compared to previous experiences. These original tracts regard the role of the European Central Bank in refinancing banks in peripheral countries.

Jel Classification: B11, N14, F1, F33

Keywords: European Monetary Union, financial crisis, Germany, neo-mercantilism, Balance of payment, capital flows, sudden stops, TARGET 2, Monetary sovereignty, MMT, Sinn

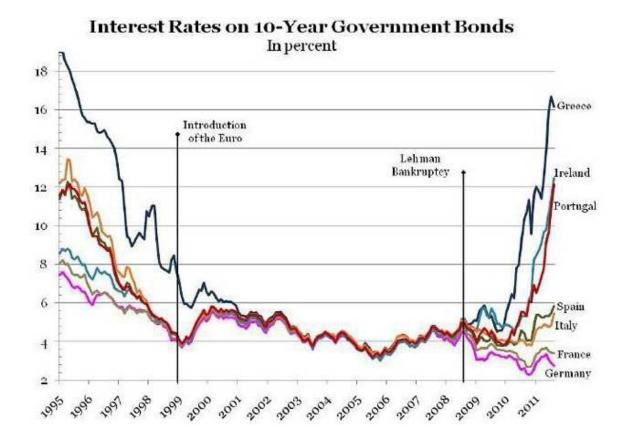
Sergio Cesaratto, Dipartimento di Economia Politica e Statistica, Università di Siena;

Controversial and novel features of the Eurozone crisis as a balance of payment crisis^{*} Sergio Cesaratto

1. Europe and the 'This time is different' syndrome

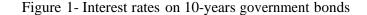
The European crisis appears as the nth 'this time is different' episode of the financial liberalisation sequence cum fixed exchange rates, capital flows from the centre to the periphery, housing bubble, current account (CA) deficit and indebtedness, and default. Although I find Reinhart and Rogoff (2009) to be a poorly organised account of the history and nature of defaults, their title really conveys the sense of a recurring pattern of unfortunate events (a better summary is Reinhart

2011). The title of a seminal paper 'Good-bye financial repression, hello financial crash?' (Diaz-Alejandro, C. 1985) also sums up the essence of those events. This impressive graph has been defined as the best synthesis of the European financial crisis:



Source: http://www.economonitor.com/blog/2011/12/which-graph-best-summarizes-the-

eurozone-crisis



^{*} I wish to thank, without implications, Eladio Febrero, Tiziano Cavalieri, Ramanan and the participants of a workshop held at the Centro Sraffa at the University of Rome, May 3rd 2012.

In this paper I examine some explanations that have been given for the nature of the balance of payments (BoP) disequilibrium of the Eurozone (EZ) members in relation also to the presumed German mercantilism (sections 2, 3, 4).¹ I then discuss two interpretations of the causes of the rise in the sovereign spread of periphery countries (section 5) that pay insufficient attention to the EZ BoP crisis. Finally, I shall focus on the novel and controversial features of the EZ BoP crisis compared to previous experiences, particularly the role of the European Central Bank in refinancing banks in peripheral countries (sections 6 and 7).

2. The neoclassical view

The typical pattern: financial liberalisation + fixed exchange rates -> capital flows from the centre to the periphery -> housing bubble -> current account deficit and indebtedness -> default, suggests two things. First, foreign financial flows do not generally finance domestic investment but consumption, mainly household demand for new residential dwellings and speculative investment in the construction sector. This empirically disproves the neoclassical theory that capital flows from saving-rich/trade-surplus core-countries towards saving-deprived/trade-deficit peripheral-countries to facilitate the industrial catching up of these countries. Second, foreign saving/trade surplus in core countries is the result of the trade-deficit in the periphery: the story of the financial crisis validates the Keynesian tale that financial credit precedes investment and autonomous consumption, and that saving is an ex-post result. In other words, savings do not determine investment either in closed or in open economies (the world is, after all, a closed economy). The results of the capital theory controversy provide the rationale for the empirical rejection of the neoclassical claim.

According to conventional theory, international trade and factors' mobility are substitutes (Mundell 1957). An advanced country, for instance, might export goods and services produced with relative high capital/labour intensive techniques, and import labour-intensive commodities or, alternatively, export capital and import labour. In both cases, factors' marginal products would level off globally and per-capita incomes would converge. Very often conventional economists were convinced that capital flows from industrialised to catching up countries, i.e. from countries where capital is relatively abundant and their marginal product relatively low, to countries where capital is scarce (cf. e.g. Holinski et al. 2012: 3). Blanchard and Giavazzi (2002; B&G hereafter), for instance, championed this view in a paper in which they examined the Portuguese and Greek cases:

'The fact that both Portugal and Greece are members of both the European Union and the euro area (...), and the fact that they are the two poorest members of both groups, suggest a natural explanation for today's current account deficits. They are exactly what theory suggests can and

¹ For a similar approach see Bibow (2012).

should happen when countries become more closely linked in goods and financial markets. To the extent that they are the countries with higher expected rates of return, poor countries should see an increase in investment. And to the extent that they are the countries with better growth prospects, they should also see a decrease in saving. Thus on both counts, poorer countries should run larger current account deficits and symmetrically, richer countries should run larger current account surpluses.' (ibid: 148; see also 154-5)

Surprisingly, however, B&G conclude that although 'this hypothesis indeed fits the facts', yet, '[lower] saving rather than [higher] investment is the main channel through which integration affects current account balances' (ibid: 148; see also 174-6).² 'The effect on investment has been surprisingly limited', they acknowledge (ibid: 179), also in the form of foreign direct investment. It is common wisdom that unless trade deficits finance investment strengthening the tradable goods sector enhancing overall productivity, a country can hardly return its accumulated debt (e.g. European Commission 2009: 31). Impressively cool and prescient was instead the comment to B&G by Pierre-Oliver Gourinchas (2002: 204) who promptly recognised in the Portuguese and Greek experience a reminiscence of the still fresh standard Latin-American events (particularly Argentina's default in the same year):

'The experience of these two countries-up to this point-is very reminiscent of that of many Latin American countries that have adopted exchange rate-based stabilization programs. Stabilization of the exchange rate, renewed access to international capital markets, and some euphoria at the prospect of steady future growth combined to generate a strong consumption boom - that is, a decline in saving-which may or may not have been accompanied by an investment boom. Growth was initially solid and everything looked benign. Over time however, clouds gathered on the horizon: the currency appreciated in real terms, competitiveness plummeted, and foreign investors became worried as growth performance failed to meet expectations. The endgame is well known: with a fixed exchange rate, restoring competitiveness required an adjustment in relative prices. Often this was too little and too late. Eventually capital pulled out, forcing devaluation.³

In this regard, two aspects will be outlined here. In the first place, in the case of open economies, no less than in closed economies, the idea that core-countries' savings find an automatic debouche in investment in periphery countries depends on the neoclassical saving –

 $^{^2}$ The higher growth prospects for these countries would lead to a lower marginal propensity to save, as households want to distribute consumption smoothly over time. Footnote 3 shows that, in reality, it is a larger autonomous consumption financed out of credit that leads to a lower average propensity to save.

³ Blanchard (2007a: 5) somehow recanted B&G (2002) starting to blame nominal and real wage rigidities as the cause of the maladjustments.

investment relationship and it is therefore subject to the Keynesian and capital theory critiques (Garegnani 1983). In other words, in the non-orthodox context there is no automatic mechanism that translates a larger (potential) saving supply into domestic or foreign investment since a fall in the rate of interest does not affect investment either in the domestic economy or in that of other countries. So in an open economy, no less than in a closed one, it is investment that - both in the short and in the long run – determines saving (both domestic and foreign). The world economy is, after all, a closed economy (Dalziel and Harcourt, 1997: 628). Referring to global imbalances, Reinhart and Rogoff (2009:211-14) are, for instance, wrong when they endorse Bernanke's saving-glut hypothesis to explain the 'this time is different' event in the US which culminated in the financial crisis of 2008. How could China obtain a trade-surplus if American households were not spending in the first place! We hear a similar argument in Europe from Germany. German savings are financing peripheral profligacy: these savings are instead the result of a trade-deficit in the South fuelled by financial capital inflow (credit creation).

Secondly, a trade deficit is not necessarily generated by an investment boom financed by foreign financial capital inflows: these flows may well, and more likely will, finance consumption booms (Prasad et al. 2007). The fact that a CA deficit corresponds to the excess of domestic investment over national saving may mistakenly lead people to believe that foreign saving is financing an investment boom. It is not necessarily so, as an example in the footnote promptly shows.⁴

The conventional approach to international capital flows, according to which surplus countries - those which present an excess of domestic saving over domestic investment - lend this excess to borrowing countries (those who invest more than the domestic saving supply) should be so re-expressed. In the absence of controls over capital inflows and assured commitments to pegged exchange rates, the international and domestic private financial institutions are able to create credit facilities in periphery countries that typically finance housing bubbles rather than investment in the tradable sector. The increasing demand of imports from core-countries generates, for a given domestic autonomous demand, the 'twin surpluses' in these countries – an excess of savings over

⁴ Take a peripheral economy with the following data (standard notation): c = 0.5, propensity to import m = 0.2, I = 250 and E = 100. Income is 500 and the trade balance in equilibrium: S - I = E - M = 0. Now suppose that core countries' banks finance autonomous spending Ca = 100. The new income level will be 643 (approx.), M = 129, S = Y - C - Ca = 221, S - I = E - M = 29. This looks like the Portuguese and Greek result illustrated by B&G: a lower saving rate (or average propensity to save), due to the expansion of Ca, accompanied by an unaltered I.

public and/or private consumption and a current account surplus - and the corresponding 'twin deficits' in the periphery countries.⁵

3. The German view

A variation of the neoclassical story has been proposed by the influential German economist Werner Sinn (e.g. 2012; CESifo 2011). Summing up, he maintains that the capital outflows from Germany impoverished the investment capacity of his country and this (and not the repression of domestic consumption) would explain Germany's low growth in the EMU pre-crisis decade. After the crisis, capital outflows ended. The ensuing recovery of investment reinforced by wage moderation, so the argument goes, led to the German recovery in spite of the periphery troubles.

It may, in the first place, be asked why the EMU favoured credit demand in the periphery and not in Germany. One may dare to think that, on the one hand, countries such as Spain and Ireland were already in a process of catching up, while suffering from financial repression - for instance, mortgages were available only at high interest rates and for a short duration, the opposite happened after the EMU. This attracted foreign financial flows. On the other hand, the German market was unpromising as far as investment was concerned: wage moderation, the traditional German household aversion for debt and the low propensity towards home-ownership (only 43% of German households live in their own house, one of the lowest in the industrialised world) may

(S - I) + (T - G) = CAB (1)

where CAB = (X - M) + NFI

(symbols have the usual meaning, NFI is net foreign income). In other words:

private savings + public savings = (national saving) = foreign savings

Net of so-called valuation effects, i.e. of the fluctuations in the price of the stocks of assets and liabilities, the variation of the net foreign (or investment) position of a country is equal to its CAB over the period under consideration: $CAB = \Delta NFP$.

⁵ It is common knowledge that, national accounts provide a necessary flow identity between the balances of the domestic private and public sectors and the CA balance (CAB), more specifically:

The EZ peripheral countries show different combinations of the two private and public domestic stock and flow balances (Bagnai 2012). In spite of this diversity, should we, however, assemble private and government debt into a single domestic debt (equal to foreign debt)? Reinhart and Rogoff (2009: 26 166, 231) who tend to say yes, given that private debt (which concerns the bank sector) is often backed by the State. Looking at what is happening in the EZ, the opposite is also true: as far as public debt (PD hereafter) relies on domestic banks to be (re)financed the troubles of the public sector are reflected in the market value of government bonds held by banks. Nersisyan and Wray (2010: 15) are very critical of this assemblage that could blur the differentia specifica between private and public sovereign debt, the fact that the second is (traditionally) backed by a CB. But since any private debt might be sustained by the state, then the distinction does not look so pregnant.

explain the absence of a housing bubble.⁶ So credit went where the economic climate was more favourable to autonomous (credit financed) spending decisions.⁷ In no sense, moreover, could financial flows to the periphery have constrained credit availability in Germany. Sinn clearly argues as if a given amount of German saving was available for alternative purposes, either in the core or in the periphery. But, as has already been said, German savings are the end result of a financial circuit which starts from the creation of purchasing power by peripheral or subsidiaries of core banks in favour of autonomous spending in the periphery. German (foreign) savings are thus the outcome of (actually by definition identical to) the German foreign trade surplus – more precisely of its current account surplus.

In the second place, the general opinion is that the German recovery in mid-2010 has been led by exports (who would say otherwise?) to extra-EZ markets and certainly not by investment driven by the 'capital reversal' that followed the crisis. Export growth was the result of both the good performance of the emerging economies and the euro depreciation against the US \$ and, in particular, against the Yen – that helped German exports in China. According to Professor Makoto (2012), the 'Euro's exchange rate against a dollar has fallen from around 1.6 dollars in 2008 to 1.31 dollars, about 20%, and against yen from 160 yen to 100 yen, about 38%' (see figure 2).⁸

⁶ Waffel (2008) provides an informative article on why Germany has not had a housing bubble. We find that this country did have a bubble in Berlin and the East Länders in the 1990s induced by tax-advantages for residential investment there that ended in tears.

⁷ Holinski et al. (2012: 8) also raise 'the puzzle of why the combined effect of higher government savings and a lower real rate did not increase spending in the North'. They attribute this to the more Calvinist preferences of the 'North', without mentioning the role of wage and fiscal moderation in depressing demand in the 'North'.

⁸ I would like to thank Professor Makoto for figure 2.

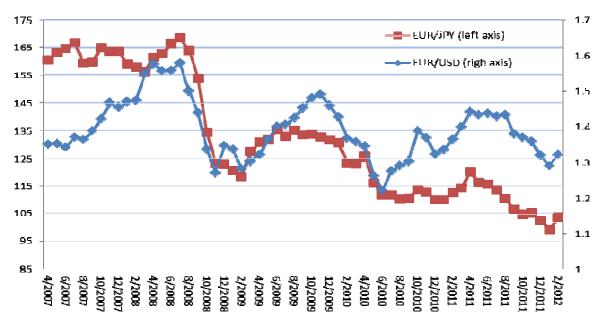


Figure 2 - Euro-US Dollar-Yen exchange rates, 2007-2012

So grotesquely, Germany profited both from the European disgraces that weakened the euro and from the support to domestic demand by emerging economies.⁹

A big fuss was also raised by Professor Sinn in late spring 2011 when he accused the ECB of providing unlimited financial support to the periphery countries with persisting current account deficits and capital flights. The story has to do with a complicated mechanism through which the ECB manages in an ordered way the payments flow within the EZ, called TARGET 2 (T2), that involves the Eurosystem central banks (CBs) along with the ECB itself (Garber 2010). As explained, e.g. by Febrero et al. (2012), credit that finances net imports in the EZ periphery is created by local banks. This spending eventually becomes foreign saving (net exports) in corecountries and, normally, financial lending by core-EZ banks to periphery banks. To simplify, whenever a Greek citizen borrowed money from a Greek bank in order to buy a German commodity the German exporter would eventually lend to the Greek bank, through its German bank, the revenues received as payment for its exports. Unsurprisingly, it is the shopkeeper that lends money to the old lady that lives off her poor pension.¹⁰ Ordinarily, the ECB is involved in this

7

⁹ In November 2008 the then German minister for the Economy declared: 'We can only hope that the measures taken by other countries ... will help our export economy', (Financial Times 30th November 2008).

¹⁰ The way the 'credit circuit' functions in this context is described by Febrero (2011: 16-18; 2012: 11-15). A credit granted by a local bank (LB_P) in the periphery is backed by the creation of reserves by the peripheral national CB (NCB_P) (according to the 'horizontalist' view that credit creates deposits, deposits create reserves). Supposing that the credit is used for a payment to the core, the LB_P will order the NCB_P to transfer an equivalent amount of reserves to the core local bank (LB_C). This is done by the NCB_P through T2. In practice the NCB_P will transfer liquidity to the core

circuit only as an intermediary, as a clearing house. Since 2008 onwards, however, Germans began to distrust the solvency of the peripheral European countries and stopped the recycling of their export revenues. These earnings began, therefore, to remain deposited in the very German banks that re-deposited them, via the Bundesbank, in the ECB. Once the interbank market fails, it was the selfsame ECB that, as part of its normal duty as a Central Bank in a currency union, began to replenish the reserves of the peripheral banks. Sinn does not seem mistaken in calling our attention to the role of the ECB in making European imbalances financially sustainable – although he typically overstretches his case to maximise the German role as a victim. What Sinn fails to see, indeed, is that the ECB, by constantly refinancing German exports towards the periphery, is actually preventing the circuit from collapsing.¹¹ As a German critic of Sinn sums up: 'the counterfactual

¹¹ The way the 'credit circuit' works (see the previous footnote) in the T2 context proves that it is financial lending in support of spending in the periphery that generates - via higher German net export, production and income - higher German (foreign) savings. So it is not correct to say that German savings financed Greece's (presumed) profligacy, since it is actually Greek profligacy, financed out of credit created by the financial system, that has generated German savings. This is not surprising for those who have fully understood Keynes. Without that spending, nicht saving. One is tempted to say that the 'credit circuit' proves, in the specific international case, but also in general, that investment (or autonomous consumption) precedes saving: it is clear that the NCB cooks up a credit creation that finances periphery-imports first, and finally core-banks lend coreexport revenues. One objection would be that this does not prove Keynesian causality since the NCB might just lend at some international 'natural interest rate' at which full-employment capacitysaving is equal to investment. Although credit precedes the investment that precedes saving, the ECB is just acting in a Wicksellian way: it sets $i_m = i_n$ leading investment to adjust to fullemployment saving (cf. Pivetti 2001: 104 and passim). In other words, even in neoclassical theory banks do not lend savings as the loanable funds theory claims. This sounds correct. Note, however, that while the loanable fund theory adequately approximates to the neoclassical belief that banks lend savings, leaving the financial details aside, the understanding of the financial mechanism that sustains spending (autonomous spending) is much more necessary in the Keynesian-Kaleckian story (here you cannot say that banks lend savings, they just collect them). Pivetti stressed at the seminar at Roma 3 that real spending decisions are more relevant than the financial credit mechanisms to explain aggregate demand. Again I agree. However, in a 'This time is different' context, a set of financial and monetary circumstances - like financial deregulation and liberalisation, fixed exchange rates, low real interest rates - typically influence (real) spending decisions, particularly autonomous consumption.

national CB (NCB_C) and this will move it to the LB_C. Note that the LB_P, if it has not received an equivalent payment from LB_C, is likely to be violating the reserve/deposits requirement. When the interbank market functions normally the LB_C will lend the liquidity received as a payment to the LB_P that can thus re-establish the reserve requirement. If this does not happen, the LB_P must ask for help from the ECB through its various refinancing operations. The same happens if the LB_C or its depositors do not roll-over past credits to the LB_P (that is, there is a capital flight): the LB_P will have to resort to ECB re-financing. This is mainly done on a very short term basis through the Marginal Refinancing Operations (MRO) and on a longer term basis through the Long Term Refinancing Operation (LTRO). The latter was usually granted on a three month basis, and in 2009 for up to one year. The LTRO operation of December 2011 can last for up to three years, and part of the shorter term refinancing has been substituted with this longer term instrument.

would be a breakdown of the euro where Germany's claims would be against foreign commercial banks. In this case they would be just as worthless. The whole point of the rescue operations is to prop up the solvency of Germany's export clients' (cited in Eurointelligence.com 20-2.2012). If Sinn doesn't trust the long run reliability of this system – here he would perhaps not be wrong to do so – why has he not asked for an embargo of German exports towards the periphery? Certainly fringe Europe would not oppose it. In addition, as the crisis unfolded, in order to keep the financial system stable, the ECB's refinancing operations also make good the capital flights from the peripheral to the core European banks by replenishing, in practice, the peripheral banks' reserves. This appears as a T2 liability of the peripheral CBs at the ECB. Symmetrically, in this case, the capital outflows from the periphery that reach, say, German banks are re-deposited, via Buba, in the ECB. This appears as a T2 net claim of the Bundesbank. (I shall return to T2 in section 6).

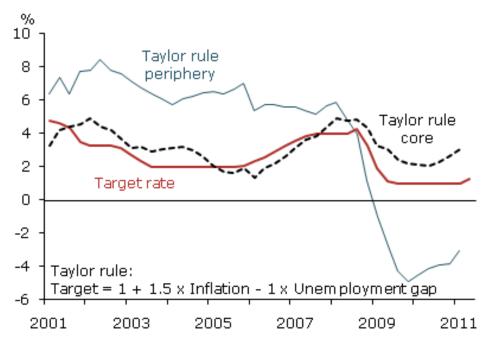
4. The Kaleckian view

Popularized by Martin Wolf (2012; but see De Grauwe [1998] for an impressively farsighted outlook), the interpretation of the European crisis as a BoP crisis is becoming dominant. Accordingly, the cause of the crisis must be found in the easier access of a number of peripheral EMU countries to the European financial markets at low nominal interest rates. Financial liberalisation and the removal of the exchange rate risk encouraged massive capital flows from core to periphery countries in the 'periphery' (see: Merler and Pisani-Ferry 2012, Bagnai 2012, Tilford and Whyte, 2011: 4; Jaumotte, Sodsriwiboon, 2010: 8-9; European Commission 2009, 2010).¹² Credit-financed autonomous consumption determined a growth both of domestic demand and of nominal wages higher than in core-EZ. Higher inflation rates in the periphery determined low real interest rates, a further support to domestic demand. The growth of domestic demand was associated to a housing bubble in Spain and Ireland, and to the growth of public spending in Greece. This sequel of events, and its consequences, foreign indebtedness and 'sudden capital stops' are basically not so different from those that typically took place in developing countries and ended in sovereign defaults (Diaz-Alejandro 1985; Frenkel, Rapetti 2009: 688-89; Reinhart 2011: 27-9).

These events took place in a context in which monetary policy was tailored to the policies of core Europe. Figure 3 shows how much the ECB monetary policy followed a mechanical application of the Taylor's Rule applied to core-Europe (Nechio 2011). Of course, I do not subscribe to the Taylor's Rule and the idea that monetary policy should have, as a consequence, been more restrictive, quite the opposite: rather fiscal and wage policies in the core should have

¹² The fiscal clauses envisaged by the Maastricht Treaty were designed to take preventive care of the possible opportunistic behaviour of governments in peripheral countries that might use the monetary union to finance public deficit spending at lower interest rates. However, the same attention was not paid to private indebtness, a case of laissez-faire blindness.

been much slacker. Had monetary policy been more restrictive, given the German austerity stance, the EZ would have avoided its foreign imbalances but at the price of a generalised stagnation. Figure 3 is also indicative of the (self-interested) 'benign neglect' under which light the effects of financial liberalisation and the mounting European imbalances had been looked at up to the crisis.



Note: peripheral countries: Greece, Ireland, Portugal, and Spain; core countries: Austria, Belgium, France, Finland, Germany, and the Netherlands

Source: http://www.frbsf.org/publications/economics/letter/2011/el2011-18.html?utm_source=home

Figure 3

Growth based on the construction sector is ephemeral, i.e. it usually does not generate significant productivity and export growth (this seems particularly true for Spain and Greece; Ireland has a strong export sector based on FDI). Moreover, the above-average nominal wage dynamic (although not the real dynamic), led periphery countries to a progressive loss of international competitiveness. The combination of bubbly imports and inadequate exports led them to persistent current account deficits and to the deterioration of their NFP.¹³ Core Europe's exports

¹³ The EU Commission points out that the periphery's troubles came from increasing imports rather than by a poor performance of exports (EC 2009: 26-7; EC 2010: 8). This suggests that had core-Europe been more expansive, the imbalances would not have occurred, at least to the extent they have done. Holinski et al. (2012: 12) also note the role of the fall in the EU net transfer to the EZ periphery as a consequence of the enlargement of the Union in the mid-1990s as a further cause of CA imbalances. Of course, interest payments on a mounting foreign debt were a further cause of CA imbalances (ibid: 10).

benefited from these events because they compensated for their languid domestic demand. Parallel to the deficit countries, in Germany domestic demand stagnated due to wage moderation, an outcome of the labour market reforms carried out by Schroeder's government, restrictive fiscal policies, and a relatively high real interest rates (as opposed to the low real interest rates of the inflation-prone periphery).¹⁴

In this respect, Cesaratto and Stirati (2011) see continuity with what an important German economic historian has defined as 'Monetary Mercantilism' (Holtfrerich 2008: 34; see also Holtfrerich, 1999: 242-43 et passim), a strategy inaugurated in the early 1950s under the auspices of Erhard. Taking advantage of fixed exchange rates, as during the Bretton Woods epoch, the German strategy was to maintain the inflation rate a little below that of competitors to sustain exports while enjoying a strong currency. The three institutional pillars of 'monetary mercantilism' are: neo-corporativism, mercantilist micro and macro institutions and policies, and the Bundesbank.

The former implied a direct involvement of the labour movement both at the micro and the macro level in the maintenance of a competitive system, particularly in the export sector (Carlin and Soskice 2009). At the micro-level Germany has an excellent training, educational and R&D system, while the reliance on export-led growth creates an ideological climate that induces cooperation and discipline (Crouch 2008). At the macro level the system keeps wage-growth below or in line with productivity growth. Paternalism is a traditional attitude of the German government, while its domestic and foreign policies prioritise German exports. The sense of the national community, traditions and nature are the main components of the 'German ideology'. This model suits the mercantilist tradition perfectly, particularly the German version of it (Cameralism, Historical School, cf. Riha 1985: chapters 4 and 5). But, of course, as Voltaire said (and the late Vianello liked to repeat): 'Incantations will destroy a flock of sheep if administered with a certain quantity of arsenic'. The watchdog role of the model was thus assumed by the Bundesbank in a unique wage bargaining process directly involving the CB and the leading trade union IG-Metall (Franzese and Hall 2000: 182-83). This role of the Bundesbank as the watchdog of the German mercantilist model is very important to understand German opposition to the reform of the ECB from its present 'monetarist' constitution.¹⁵ The German export-oriented policy was widely criticised by its

¹⁴ It is relevant to note that official think tanks do not attribute German competitive gains to above average productivity gains (e.g. European Commission 2009: 25).

¹⁵ George Irvin (2012) points out that: 'In late 2008, when the OECD countries had only just been hit by the credit crunch and Keynesians were arguing for a large stimulus package to offset private deleveraging, the German Finance Minister Peer Steinbrück launched an unprecedented attack on Gordon Brown, accusing him of 'crass Keynesianism' and claiming that economic stimulus would merely 'raise Britain's debt to a level that will take a whole generation to work off'. A year later, Steinbrück helped draft the Merkel government's infamous debt-brake law (Schuldenbremse)

Keynesian-oriented Western partners during the 1950s and later, up until the criticism of German passivity vis à vis growing world unemployment in the second half of the seventies (when international Keynesianism lived out its final swansong with the locomotive theory). With the European Monetary System and later with the EMU, Italy, France and the other European peripheral partners wanted to imitate Germany and 'German discipline'.¹⁶

In the light of Kaleckian theory, 'Monetary Mercantilism' is a perfect strategy for capitalists: low domestic wages (relative to productivity) imply a high surplus (i.e. capitalists' profits) that can be successfully sold in the uncompetitive periphery. The financial capital flows provide the periphery with the purchasing power required to absorb the core capitalists' surplus. More specifically, mercantilism regarded the trade surplus as the only net wealth source for the nation. This is a nebulous idea, but it makes sense in a Kaleckian/Rosa Luxemburg context (Cesaratto 2012a, 2012b). The surplus (S) in a Classical-Marxian-Sraffian approach is that part of the social product (P) left to the capitalists as profits, once the 'necessities' (N) to the workers have been paid: P - N = S (Garegnani 1984). Exports are a way to realise (in a Marxian sense) the surplus. Assuming that the social product is composed by the necessities N and net exports E-M, then: P=N+ (E-M). It follows that: S=E-M, net exports are equal to capitalists' profits. According to Kalecki the central countries must 'export' financial capital first in order to export physical goods later¹⁷ (what happened in the EMU and also with a number of Eastern-Europe and Baltic states). Of

effectively outlawing counter-cyclical deficit spending — which Ms Merkel currently wants applied to the whole Eurozone (EZ). One might dismiss all this as right-wing madness, were it not for the fact that Peer Steinbrück was an SPD (German social democratic party) Minister and the party's Deputy Chairman. Not only does he have a degree in economics from Kiel University, but he may well be the SPD's candidate for Bundeskanzler (Chancellor) in the federal elections scheduled for late 2013'.

¹⁶ Political reasons - German unification – have been adduced as a main reason why France pushed for the currency union. More practically, Vianello (2005: 12) points out that France was paying too high an interest rate to keep parity in the EMS.

¹⁷ Kalecki (1934 [1971]) links the realisation of the social surplus in foreign markets to the 'domestic exports' constituted by government deficit spending. In his marvellous paper on Tugan-Baranowsky and Rosa Luxemburg (1967 [1971]) both markets were subsumed to the label of 'external markets', i.e. markets outwith the conventional 'income-spending circuit'. According to Kalecki (1934 [1971]: 18-9), spending by external markets, as well as investment spending induced by the expected rate of expansion of external markets, is financed by the creation of purchasing power by the financial sector, or by the acceptance by the seller of bonds issued by the buyer: "Financial processes connected with securing a surplus in foreign trade and with 'domestic exports' are ...very similar in character. The analogy is obvious in the case when the capitalists of a given country grant a foreign loan or a loan to their government which is used for purchase of commodities in that country. The capitalists lend money abroad or to their government in return for bonds. Funds obtained by a foreign country or by the government flow back through the purchases of commodities to the capitalists... As a result, the profits of the capitalist class in a given period

course, the limit is that deficit countries may not be able, in the long run, to redeem the debt (but, paraphrasing Kalecki, capitalists do many things as a class, yet they do not plan the international economy as a class).

5. The controversial rise of sovereign spreads

From the blast of the global crisis in 2008 until spring 2011 Italy had somehow managed to escape unnoticed by the financial markets by not adopting any anti-cyclical budget policy, although at the price of the largest fall in GDP in 2009 among OECD countries. After all, the high Italian PD had existed for three decades without a major financial crisis. The spreads between Italian 10-year Treasury bonds and the analogous German Bunds reached unsustainable levels within a few months when competing with the Spanish ones.

After the rise of Spanish and Italian sovereign spreads, many economists begun to puzzle over why Japan, with a much higher PD/GDP ratio was paying much lower interest rates (e.g. Krugman 2011). We can envisage two positions with regard to this. On the one hand, there are those (e.g. Gros 2011) who maintain that the puzzle is mainly to do with the proportion of PD held by foreigners, relatively high in the case of European periphery countries. In this view, a domestically held PD would imply the hypothetical power of the State to redeem this debt by taxing its very holders. On the other hand, there are those (e.g. Nersisyan and Wray 2010 and their Modern Monetary Theory-MMT disciples) who maintain that the key explanation of the relative height of sovereign spreads is in the backing or not of a sovereign CB (SCB), national or, in a currency union, super-national. According to the second position the public sector, if backed by a SCB has a superior, practically unlimited, ability to finance its debt given its ability to create liquidity compared to the private sector. Both theses are only partially true.

5.1. Public debt sustainability in a closed economy with a sovereign currency

Let us begin by discussing the sustainability of PD in a closed economy with a SCB - so neither the causes of the relative higher spreads, a relatively high foreign ownership of the PD or the absence of a SCB are present.¹⁸ The main thesis in favour of PD sustainability in a closed economy with a sovereign currency¹⁹ is that in economies in which the private sector is unable to generate

increase by an amount equal to the value of the government or foreign bonds received, which is equal in turn to the surplus secured in foreign trade or to 'domestic exports' respectively."

¹⁸ In his critical review of the issue, Ciccone (2002: 114 and ff) pertinently refers to two notions of sustainability, one based on the belief that the public sector meets an inter-temporal balanced budget constraint; a second that refers to the ratio between PD and GDP. The second indicator vaguely compares the size of the debt to the levy capacity of the State. I shall refer to the second.

¹⁹ A sovereign currency means that a country promises to honour any sovereign debt written in this currency by issuing its own notes, without feeling committed to exchanging it for any foreign currency at a prefixed exchange rate.

sufficient demand to lead to the full utilisation of output capacity, public deficits generate income and savings so that the private sector would voluntarily and happily absorb the newly emitted government bonds. Hence, 'a superior limit to the ratio debt/income would entail, ceteris paribus, envisaging a limit to the accumulation of wealth and to the income levels the private sector may achieve, that evidently renders the imposition of such limits unacceptable without an adequate justification' (Ciccone 2002: 128-9, my translation). While Ciccone's implicit emphasis is on the (real) Keynesian multiplier process whereby government deficit generates the savings that eventually finance it, the MMT leitmotiv is rather on the monetary mechanisms whereby the government spends first by crediting private bank accounts or by drawing a cheque on its Central bank account, without having to tax or issue any bonds in advance (cf. Lavoie 2011: 12-19 for a clarification of the mechanisms behind these statements).²⁰ The two views are thus complementary, although a role for the Keynesian mechanisms remains implicit in the MMT approach that favours a 'stock-flow consistent framework' (SFCA hereafter) that, in my opinion, can be misleading.²¹ In both perspectives no obvious limit can be envisaged with regard to the PD/GDP ratio as far as, for instance, a public deficit is necessary to keep capacity at full utilisation or reach full employment. The example in table 1 shows, for instance, an economy in which the ratio of PD/GDP rises to maintain economic growth constant.

²⁰ The idea that taxation and saving are a result and not a pre-requisite of government spending is, of course, very clear in Keynes and expressed with even more clarity by Kalecki (1943: 347-48).

²¹ For instance (Wray 2009: 6-7): 'It is the deficit spending of one sector that generates the surplus (or saving) of the other; this is because the entities of the deficit sector can in some sense decide to spend more than their incomes, while the surplus entities can decide to spend less than their incomes only if those incomes are actually generated. In Keynesian terms this is simply another version of the twin statements that 'spending generates income' and 'investment generates saving'. Here, however, the statement is that the government sector's deficit spending generates the nongovernment sector's surplus (or saving)'. The Keynesian multiplier is clearly alluded to, but Wray's preference goes to the SFCA. The emphasis on the accounting identities may lead to overlooking the Keynesian mechanisms that lead from one equilibrium to another hiding the fact that when the balance of one sector changes, output is also changing. It might thus convey the impression that the SFCA has on our way of thinking, obliging us to always keep in mind the necessary interrelations between the three institutional sectors.

Table 1 – Growing economy with a growing PD/GDP ratio and foreign equilibrium. FD = foreign debt; assumptions (standard symbols) s = t = m = 0.2. At t = 1: I = 100; G = E = 125 all growing at g = 0.1. At t = 3, I growing at 0.05 only, and G growing at 0.15 to compensate. Zero interest rate.

t	Y	G-T	E-M	I-S	PD/GDP	FD/GDP
t=1	625.00	0.00	0.00	0.00	0.00	0.00
t=2	687.50	0.00	0.00	0.00	0.00	0.00
t=3	756.25	5.50	0.00	-5.50	0.01	0.00
t=4	831.88	11.83	0.00	-11.83	0.01	0.00
t=5	915.06	19.07	0.00	-19.07	0.02	0.00
t=6	1006.57	27.35	0.00	-27.35	0.03	0.00

Actually, any expenditure financed out of purchasing power creation, either by public or private subjects, generates, within the limits of existing capacity, additional financial wealth for the remaining subjects. Wray distinguishes between 'inside' and 'outside' debt. The former is held, for instance, by a household relative to another household (that holds 'inside wealth'), while "if the domestic private sector taken as a whole spends more than its income, it must issue 'outside debt' held as 'outside wealth' by at least one of the other two sectors (domestic government sector and foreign sector)" (Wray 2011b). So the specific difference between public and private debt is that the former sector, so long as it controls a sovereign bank, can issue at will the monetary equivalent of its debt, 'monetise' it for short. As a result, it cannot by definition default and PDs appear less fragile than private debts (e.g. Wray 2006: 4).

A monetisation of PD would take place if the private sector (we are assuming a closed economy), for some reason preoccupied with the solvency of the State, refused to subscribe new or rolled-over treasury bonds (These might have been issued, of course, at higher interest rates that, however, just amplify that anxiety). Preoccupation in the private sector can be seen as a rightward shift in the liquidity preference curve - that is, for a given interest rate financial investors prefer to hold relatively more liquidity in their portfolio. What the CB would do is to satisfy this desire, and since the additional liquidity is treasurised, monetisation does not have inflationary effects (see for instance Kalecki (1943: 347-48). An inflationary process might ensue if the private sector tries to

convert money into real assets, such as equities, real estate investment etc. (Ciccone 2002: 133-5). The transmission of inflation to prices of general commodities is, however, uncertain, and depends on the nature of direct and indirect input utilisation of some of those real assets (say office buildings).²² According to Ciccone (ibid: 136) only an irrational preoccupation of the private sector about the sustainability of the PD – sustainability that ultimately depends on the self-fulfilling confidence of the same private sector – may lead to the necessity of monetization, which appears to be an unlikely event in a closed economy.

The presence of a SCB plays the essential role of seconding the liquidity preference of the public to prevent panic. An extreme case might be one of a liquidity trap in which herd behaviour pushes the interest rates on sovereign bonds up to very high and perhaps increasing levels in a selffulfilling confidence crisis that the monetary authority is unable to stop. Even in this extreme case, Wray seems to sustain the unlimited solvency of a sovereign State with a sovereign currency: 'A buildup in private debt should raise concerns because the private sector cannot run persistent deficits. But the government, as the monopoly issuer of its own currency, can always make payments on its debt by crediting bank accounts—and those interest payments are nongovernment income, while the debt is nongovernment assets. Said another way, Ponzi is when one must borrow to make future payments. For governments with a sovereign currency, there is no imperative to borrow, hence it is never in a Ponzi position.' (Nersisyan and Wray: 15). Of course, in extreme situations the confidence in the currency might be undermined by current and expected inflation which is a way to extol from the private sector any amount of resources the state wishes, and is a de facto default with respect to existing treasury bonds. Certainly such an extreme situation seems to describe a political default if not a technical one. We may think that a panic would develop after witnessing some 'real' signs, like a PD/GDP ratio that is currently rising rapidly or expected to do so. Reinhart and Rogoff (2009: 132) state that 'overt domestic default tends to occur only in times of severe macroeconomic distress'. Financial panic and the rise in the sovereign interest rates would follow soon. According to these authors a domestic default – one that mainly involves national government bondholders - is an alternative to the 'inflate the problem away' addage (ibid: 111). At this point we should distinguish between the real triggers (I deliberately refrain from saying causes) of a financial crisis, like an escalating PD/GDP ratio, and financial panic. In the case of PD a 'fundamental' is the PD/GDP ratio that evokes a relation between debt and its tax base. How likely

²² This inflation process would of course reduce the real value of monetised debt, and also of the part that the private sector still holds in bonds as long as the nominal interest rate does not fully incorporate expected inflation.

a sovereign default is in a closed economy is difficult to say since this scenario is very abstract and not really separable from the events that concern the foreign sector (ibid: 123).

5.2. Unsustainability depends on the proportion of PD held by foreigners

In a widely quoted post Gros (2011) indicated a significant positive correlation between sovereign spreads relative to German bunds and current account imbalances. The explanation he provided is that as long as sovereign debt is held by nationals then, in the case of difficulties financing it, the State would be able to tax national bond holders, something which is precluded in the case of foreign holders.²³

The easiest way to execute a wealth tax that hits domestic bondholders directly is precisely a downright default. So, it is not clear in what sense a domestically held sovereign debt would be 'safer' (although nor precisely from the bond-holders point of view) from the point of view of (domestic) investors. With free capital movements, worries about a domestic default, a wealth tax, monetization or 'financial repression', could generate capital flights. If a country feels no necessity and, perhaps more importantly, lacks the will to turn to international financial markets, one may say that a PD is 'safer' if it is 'frozen' within the domestic boundaries in the context of 'financial repression', i.e. by forcing domestic savings to be invested in government bonds at a relatively low interest rate through controls on the domestic financial sector and on capital flows. In this case the government can also resort to an open domestic default, masked by a wealth tax on domestic bondholders, through monetization.

So, while domestic ownership of the PD is not per se a no-default insurance, the prevalence of foreign ownership of the PD might be a warning sign for another problem (so a domestically owned PD might be safer, but for different reasons than those adduced by Gros and others). These deeper problems have to do with a country's negative foreign balances (CA and NFP) that are associated with negative domestic private and/or public balances (as noted above, the perceived credit risk of the public sector also reflects that of the private sector which the former might be

 $^{^{23}}$ '[A]s long as Eurozone members retain full taxing powers, they can always service their domestic debts, even without access to the printing press. For example, governments could reduce the value of PD held by residents by some form of lump-sum tax, such as a wealth tax. The government could just pass a law that forces every holder of a government bond to pay a tax equivalent to 50% of the face value of the bond. The value of PD would thus be halved, much in the same way as it would be if the government ordered the CB to double the money supply, which would presumably lead to a doubling of prices. This is why, I believe, it is foreign debt that constitutes the underlying problem for the solvency of a sovereign, even in the Eurozone.' (Gros 2011) Similarly, Barba (2011: 80-1, my translation) argues that 'it is in the very moment in which the holder becomes a foreign subject – that is outwith the perimeter of taxation sovereignty - that the option of shouldering the service of the debt over the holder is definitely precluded.' Notably, these authors neglect the simultaneous consideration of the three balances (see above footnote 4). A PD could be held 100% by foreigners with a positive CA, so that consideration is essential. See above footnote 20

called on to bail out). Persistent negative trade imbalances, with consequently increasing foreign stock imbalances (NFP) and negative net income flows that worsen the CA, would signal that the level of domestic aggregate demand (AD) - which is the consequence of the spending decisions of the two domestic sectors - is inconsistent with the foreign equilibrium, given the marginal propensity to import and the level of exports. This means that the private or the public sectors (or both) do not generate, in these circumstances, enough domestic saving and/or tax revenues and will persistently need foreign savings. This entails increasing foreign held public and/or private debt, which is the domestic manifestation of the worsening NFP of the country. It is in this respect that we view a relative large foreign ownership of the PD as a signal, ceteris paribus, of difficulty.

The example of table 2 shows an economy that is growing with balanced fiscal and foreign accounts (see table 1 for the first two periods), but that in the third period, because of a loss of competitiveness that raises the marginal propensity to import and weaken export growth, given a ceteris paribus value of the other parameters, shows up growing ratios of, respectively, fiscal and foreign debt on the GDP.

Y	G-T	E-M	I-S	PD/PIL	FD/PIL						
625.00	0.00	0.00	0.00	0.00	0.00						
687.50 ort propensity	0.00	0.00	0.00	0.00	0.00						
583.33	20.83	-37.50	16.67	0.04	-0.06						
641.67	22.92	-41.25	18.33	0.07	-0.12						
in addition exports grow at 5% only											
573.86	22.73	-40.91	18.18	0.04	-0.07						
631.25	25.00	-45.00	20.00	0.08	-0.14						
	625.00 687.50 ort propensity 583.33 641.67 tion exports g 573.86	625.00 0.00 687.50 0.00 ort propensity rises to 0.3 583.33 20.83 641.67 22.92 tion exports grow at 5% only 573.86 22.73	625.00 0.00 0.00 687.50 0.00 0.00 ort propensity rises to 0.3 583.33 20.83 583.33 20.83 -37.50 641.67 22.92 -41.25 tion exports grow at 5% only 573.86 22.73 -40.91	625.00 0.00 0.00 0.00 687.50 0.00 0.00 0.00 ort propensity rises to 0.3 -37.50 16.67 583.33 20.83 -37.50 16.67 641.67 22.92 -41.25 18.33 tion exports grow at 5% only 573.86 22.73 -40.91 18.18	625.00 0.00 0.00 0.00 0.00 687.50 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.02 0.00 0.00 0.02 0.03 -37.50 16.67 0.04 641.67 22.92 -41.25 18.33 0.07 0.01 0.02 -40.91 18.18 0.04						

Table 2 – An economy with deteriorating external competitiveness

It is again useful to separate the change in the 'fundamentals', basically a worsening of the CA and NFP of a country associated to a current or expected worsening of the PD/GDP ratio, from the ensuing financial anxiety that leads to a 'sudden stop' of capital flows and to the difficulty of refinancing the PD. Hereafter, by increasing the sovereign spread, this aggravates the negative pattern of the 'fundamentals'. In principle, a country's current account deficit just creates financial wealth for the foreign sector, so why should the 'irrational' behaviour of foreign investors pave the way to a default by a 'capital flow reversal' (as Ciccone wondered in the case of a domestically held PD)? The main reason is that in a foreign unbalanced country there is a devaluation risk that is absent in a closed economy, and although a country might try to reassure foreign investors by letting sovereign rates reflect this very risk, the fact that this worsens the imbalances just augments the expectation of a devaluation. A devaluation is not only a masked default - both external, given the promises of redeeming sovereign debt at a given exchange rate, and internal, given the probability of ensuing inflation -, but also a way to re-address the loss of competitiveness that is likely to be one of the causes of foreign and domestic imbalances, a temptation for any government. Moreover, a government might find it easier to default with foreign rather than with domestic bondholders. The share of foreign held sovereign debt is therefore only a warning signal of a deeper BoP crisis.

5.3. Unsustainability depends on the absence of a Sovereign Central Bank

The absence of a truly European central bank to guarantee the liquidity of European sovereign debts aggravated (although it did not cause) the crisis by letting sovereign spreads spiral upwards. As consequence of the ECB's deficient running, according to De Grauwe (2011) the periphery's public debts (PD) moved from a low risk to high risk equilibrium, in his view from a liquidity to a solvency crisis. This is not totally correct since the original troubles with the European periphery seem to be related to solvency, not just to liquidity, and indeed they emerged when liquidity was abundant and sovereign spreads were low. According to Wray and his MMT disciples this abundance just delayed the redde rationem of the deficient monetary organisation of the EZ, so that they attribute an almost exclusive relevance to the renunciation of a national sovereign central bank (SCB) as the explanation for the European financial crisis.

In short, Wray argues that as long as a country retains a sovereign currency, it retains the privilege of making payments by issuing its own currency and makes no promises to redeem its debt at any fixed exchange rate or even worse in a foreign currency, then it cannot default and the nationality of the debt holders is irrelevant:

"The important variable for them [Reinhart and Rogoff 2009] is who holds the government's debt—internal or external creditors—and the relative power of these constituencies are supposed to be an important factor in government's decision to default (...). This would also correlate to whether the nation was a net importer or exporter. We believe that it is more useful to categorize government debt according to the currency in which it is denominated and according to the exchange rate regime adopted. ... we believe that the 'sovereign debt' issued by a country that adopts its own floating rate, nonconvertible (no promise to convert to metal or foreign currency at a

pegged rate) currency does not face default risk. Again, we call this a sovereign currency, issued by a sovereign government. ...A sovereign government services its debt—whether held by foreigners or domestically—in exactly one way: by crediting bank accounts. ... [it is indeed] irrelevant for matters of solvency and interest rates whether there are takers for government bonds and whether the bonds are owned by domestic citizens or foreigners." (Nersisyan and Wray 2010: 12-14).

It is certainly right that if a fixed exchange rate leads to a CA deficit, a country is exposed to 'sudden stops' in capital flows, while the higher interest rates needed to avoid capital flights and to keeping parity will worsen the external and domestic imbalances. Wray seems, however, to hold a different view. Given full monetary sovereignty, the MMT scholars apply the same argument envisaged for a closed economy to an open economy: a public deficit corresponds to net private wealth desired either by the domestic private sector or by the foreign sector, so there are no limits to the foreign holdings of Government bonds 'so long as the rest of the world wants to accumulate its IOUs': "a country can run a current account deficit so long as the rest of the world wants to accumulate its IOUs. The country's capital account surplus 'balances' its current account deficit....We can even view the current account deficit as resulting from a rest of world desire to accumulate net savings in the form of claims on the country." (Wray 2011a). The devil is, notoriously, in the details, and the proviso 'so long as the rest of the world wants to accumulate its IOUs' seriously circumscribes Wray's view that countries with a fully sovereign currency and no promise of convertibility at a given exchange rate can have faith in unlimited foreign credit. But for most countries, the non-convertibility at a given exchange rate is precisely the case in which they will not get (cheap) foreign credit. Indeed, it is by promising at-pair convertibility that periphery countries can finance in a cheap way their CA deficits. Of course, this will often create future problems, but certainly a floating exchange rate would discourage cheap foreign lending. One may also say that a competitive (real) exchange rate policy is what periphery countries need, a position largely shared by development economists nowadays, not least because it is not conducive to fictitious foreign-borrowing-led growth.

Wray (2011c) elsewhere admits that the proposition that any State 'can run budget deficits that help to fuel current account deficits without worry about government or national insolvency' applies indeed only to the US: 'precisely because the rest of the world wants Dollars. But surely that cannot be true of any other nation. Today, the US Dollar is the international reserve currency— making the US special. ...The two main reasons why the US can run persistent current account deficits are: a) virtually all its foreign-held debt is in Dollars; and b) external demand for Dollar-denominated assets is high—for a variety of reasons.' The main reason seems that the US issues the main reserve currency, an internationally fully accepted liability even without a commitment to

convert it in something else (i.e. fiat money). So, when Wray says that PD and CA debts, with a sovereign currency, are not a problem, this only applies to the US.²⁴

With fixed exchange rates, it is not so much the promise to redeem the debt at a fixed exchange rate or in a foreign currency that creates problems. It would not be a problem in CA surplus countries, for instance. The problem is that fixed exchange rates lead periphery countries to a CA deficit, to the fear of devaluation, unsustainable interest rates, 'sudden capital stops' etc. Remember that the European imbalances initially grew when the ECB was pursuing very low interest rates that with financial liberalization and the end of a devaluation risk led to the bubbles in the periphery and eventually to the imbalances. This is not to say that the role of a SCB is not relevant: quite the opposite. Lately, the ECB should and could have operated to avoid the increase in sovereign spreads, but it could not have avoided the preceding sequence of events.

It may be added that with the right institutional setting, the EZ could be a perfect US-MMT style country. With the full backing of the ECB the infra-European financial imbalances would be perfectly sustainable for a region with external balanced accounts that, what's more, issues an international currency. The institutional change required for the EZ to resemble the US includes the transfer of the conspicuous part of existing PDs along with many government budget functions to a federal government (to avoid moral hazard),²⁵ while national States would work like American local States. Monetary policy should cooperate with fiscal policy to pursue full employment and, subordinated to this, price stability. Federal transfers from dynamic to troubled areas should dramatically increase while a minimum standard of welfare rights should be universally recognised for all European citizens. Labour mobility and infra-EZ direct investment should be incentivised. Actually, fiscal pacts were already included in the Maastricht (1992) and Amsterdam (1997) treaties, in which the European periphery exchanged budgetary discipline with German inflation 'credibility' and low interest rates. As experience has shown, the troubles have not derived from fiscal indiscipline, although part of the problems certainly derived from a deregulated financial sector. At the European and national level, financial resources should therefore be re-regulated to sustain public, social and environmental investment rather than construction or consumption

²⁴ For a similar criticism Ramanan (2012).

²⁵ As Nersisyan and Wray 2010: 16 argue: "With a sovereign currency, the need to balance the budget over some time period determined by the movements of celestial objects or over the course of a business cycle is a myth, an old-fashioned religion. When a country operates on a fiat monetary regime, debt and deficit limits and even bond issues for that matter are self-imposed, i.e., there are no financial constraints inherent in the fiat system that exist under a gold standard or fixed exchange rate regime. But that superstition is seen as necessary because if everyone realizes that government is not actually constrained by the necessity of balanced budgets, then it might spend 'out of control,' taking too large a percent of the nation's resources."

bubbles. Public or semi-public investment banks should be used at both levels for this purpose. Unfortunately, this project appears too challenging for the EZ, a club of independent states. Short of this full institutional unification, pro-active monetary and budget policies at the European level, particularly in the surplus countries, would of course also help towards a solution.

6. But can EZ countries really default? Target 2 and LTRO

In December 2011 the ECB adopted a special-term refinancing operation extending LTRO (longerterm refinancing operation) - an existing refinancing facility usually limited to three months at a variable interest rate, but already extended to one year in 2009 by an earliest special-term refinancing operation – to three years at a fixed 1% interest rate allocating one trillion Euros to the operation (at the same time mandatory bank reserves were reduced from 2% to 1% of all deposits). The scope was to ring fence banks with weak capitalization and mark-to-market devalued assets; to avoid a credit crunch; to stimulate local banks to support their respective domestic sovereign bonds. On the one hand, the last objective has had limited success, but the reduction of sovereign spreads on the Spanish and Italian bonds has been limited since, at the same time, the austerity measures were squashing growth. On the other hand, this intervention has avoided the capital outflows from the periphery rapidly leading the periphery to a default stage – since foreign investor clearly did not wish to roll-over previously acquired peripheral private and government debts. According to Credit Suisse (2012), 'about 20% of the peak cumulative portfolio and other investment made since 2002 [till January 2012] has been withdrawn recently ... these capital outflows could become much larger, if domestic investors were to join foreign investors in pulling money out'. Figures 4 and 5 published by the same source show that the expansion of Spanish and Italian borrowing from the ECB overlap with the increase of their Target 2 (T2) liabilities.²⁶

²⁶ As has already been stated in section 3, if the LB_Cs do not roll-over credit to the LB_Ps (see fn 9 for the symbols), these have to resort to ECB refinancing - MRO and LTRO – reinforced by the LTRO/3 years operation of December 2011. This explains the coincidence of the re-financing operations with increasing T2 liabilities: resorting to ECB lending takes place precisely at the moment when there are capital flights. The ECB refinancing assures that, on the one hand, deposits can smoothly move from the LB_Ps to the LB_Cs avoiding bank-runs in the former (and this creates T2 liabilities of the periphery and T2 net claims for the core-countries), and, on the other, the LB_Ps can roll-over the stock of credits (including those to the state).

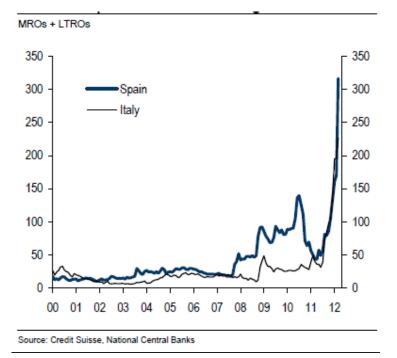


Figure 4: Spanish and Italian borrowing from the ECB

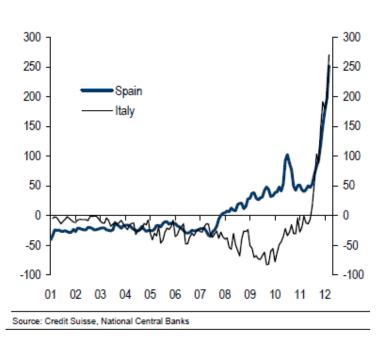
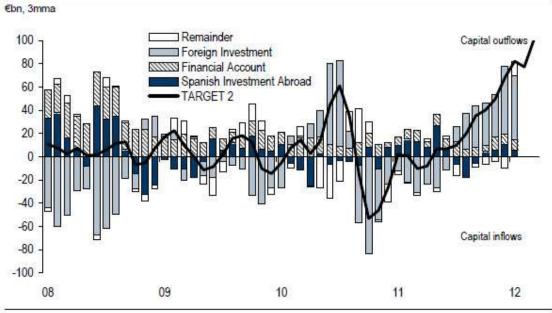


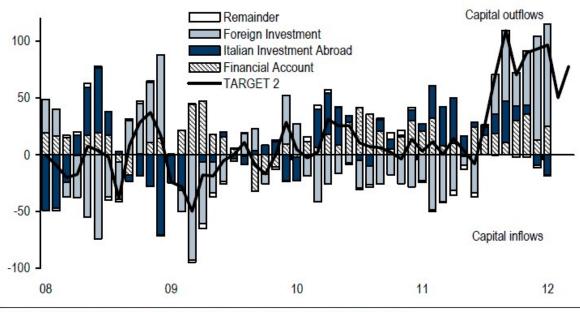
Figure 5 - Target 2 net liabilities - Italy and Spain

This is a phoney situation: the ECB is financing CA deficits at the same time as capital outflows, i.e. it is ex-post financing previous CA deficits that foreign investors do not want to rollover. This is clear from these two further figures, 6 and 7, again from Credit Suisse (in which the CA balance is indicated as a 'financial account'.



Note: TARGET2 data available to March 2012; balance of payments data available to January 2012 Source: Credit Suisse, National Central Banks

Figure 6 - Accounting for Spanish Target2 changes - domestic vs. foreign investors



Note: TARGET2 data available to March 2012; balance of payments data available to January 2012 Source: Credit Suisse, National Central Banks

Figure 7 - Accounting for Italian Target2 changes – domestic vs. foreign investors

As a result, the ownership of PD is becoming pretty domestic, although this is backed not by domestic savings (this is impossible given the enduring CA deficit) but by the ECB. A prompt intervention of the ECB as a lender of last resort of peripheral states would have possibly avoided the capital outflow reducing the sovereign spread. This would not have solved, of course, CA imbalances and the recourse to T2 that, however, might also have been lower in a more confident

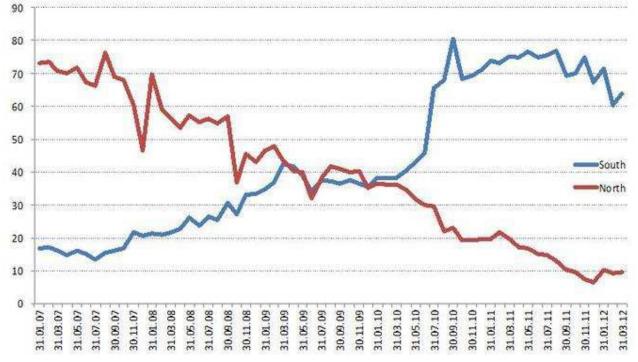
climate. The solution for CA imbalances would have required, as suggested above, reversing past patterns of domestic aggregate demand in the EZ with strong and moderate expansion in core and in peripheral Europe, respectively.

7. Epilogue: the hybrid nature of the EMU and its destiny

A traditional objection to the interpretation of the EZ crisis as a typical 'this time is different' crisis is that there cannot be a BoP crisis in a currency union. The question is that the EZ is a hybrid between a full currency union (which also implies a fiscal union) and a traditional fixed exchange agreement. One main difference with the latter is that in a currency union capital flights are automatically compensated by the CB, in the EZ by T2 (Mayer et al. 2012). As everybody knows, assuming zero variation of foreign currency reserves, the BoP sheet would read: CA + KA =0, where KA is the capital account. Normally, in a two countries world, if country A has (all magnitudes are balances) a negative CA_A -, country B symmetrically shows CA_B +, then KA_A + and KA_B- (country B is lending to country A). Suppose country B does not lend to country A (so the CA flow imbalance is not financed), and even worse that there are capital outflows from country A (so the stock of debt acquired by B in the past is not rolled-over as it expires). Then both CA_A- and KA_A. What happens in a currency union is that through T2: $CA_A + KA_A + T = 0$, where T > 0means that country A is overdrawing from its CB account. It is as if the ECB were creating foreign currency reserves in a fixed exchange rate system (Leppanen 2012); or as if the deficit countries were creating the international reserves, like the U.S. in Bretton Woods (I or II) (Kohler 2012); or better still, it is as if the EMU worked in an ultra-Keynesian fashion as an International Clearing Union (ICU), with even less prudence than Keynes envisaged.²⁷ With T2, the EZ country A has

²⁷ Indeed Keynes regarded the ICU as an extension of the principles that govern a national banking system, the same principle that informs T2. In 1941 he even called it 'Currency Union': 'The idea underlying my proposals for a Currency Union is simple, namely to generalise the essential principle of banking, as it is exhibited within any closed system ... This principle is the necessary equality of credits and debits, of assets and liabilities. If no credits can be removed outside the banking system but only transferred within it, the Bank itself can never be in difficulties. It can with safety make what advances it wishes to any of its customers with the assurance that the proceeds can only be transferred to the bank account of another customer. Its problem is solely to see to it that its customers behave themselves and that the advances made to each of them are prudent and advisable from the point of view of its customers as a whole.' (Keynes CW 1940-44: 44, emphasis in original). In famous passages, he later re-expressed the same concepts: 'In short, the analogy with a national banking system is complete. No depositor in a local bank suffers because the balances, which he leaves idle, are employed to finance the business of someone else. Just as the development of national banking systems served to offset a deflationary pressure which would have prevented otherwise the development of modern industry, so by extending the same principle into the international field we may hope to offset the contractionist pressure which might otherwise overwhelm in social disorder and disappointment the good hopes of the modern world. The substitution of a credit mechanism in place of hoarding would have repeated in the international field the same miracle, already performed in the domestic field, of turning a stone into bread' (CW

indeed an infinite overdraft possibility (Milbrandt 2012 CESifo). What has happened in the periphery from 2007/8 is that CA_A - and KA_A -, T+ and symmetrically in the core: CA +, KA +, T- (core-banks receiving hot money from the periphery and reducing their overdraft at their NCB as shown in figure 8).



LTRO+MRO (% of total)

Source: http://www.bruegel.org/nc/blog/detail/article/761-chart-of-the-week-the-consequences-of-financial-disintegration/

Figure 8 - Financial disintegration and the mediating role of the ECB

Not so paradoxically, given the hybrid nature of the EMU: 'If, in the framework of a political union, the euro central banks were integrated as dependent branches of the ECB, the consolidation of the branches would dissolve the Target balances in thin air.' (Neumann 2012; also Ulbrich & Lipponer 2012 CESifo Forum). This makes clear that through T2 the ECB is acting as a regular CB: normally banks rely on the interbank market to finance their imbalances (when they fall short of reserves); if, in exceptional circumstances, this does not work the ECB just fills the gap. As

^{1940-44: 75).} But he was also very cautious: 'In only one important respect must an International Bank differ from the model suitable to a national bank within a closed system, namely that much more must be settled by rules and by general principles agreed beforehand and much less by day-to-day discretion. To give confidence in, and understanding of, what is afoot, it is necessary to prescribe beforehand certain definite principles of policy, particularly in regard to the maximum limits of permitted overdraft and the provisions proposed to keep the scale of individual credits and debits within a reasonable amount, so that the system is in stable equilibrium with proper and sufficient measures taken in good time' (CW 1940-44: 45).

Eladio Febrero wrote to me: 'If you move your savings from a deposit in Banca Intesa to Unicredit, and the former has no reserves deposited in the Banca d'Italia, the latter would create money and then credit the reserve account of Unicredit so your money would be there now. Then Banca d'Italia would acquire a claim on Banca Intesa. ...It should be noted that if Banca d'Italia in the example just above, or the European System of Central Banks (in this discussion on T2) does not provide the banking system with liquidity, the latter would collapse: there would be a bank run and the whole economic system would have very serious problems.' So, in this respect EMU is not like, say, the EMS. If the ECB interrupts T2 (i.e. it stops acting as a CB with the peripheral banks) this is the end of the EMU. Of course, T2 is not the cause of the problems, but it prevents the EMU from exploding as the EMS did in 1992.

Febrero also pointed out to me, however, that 'If the Banca Intesa has a solvency problem, then Banca d'Italia would force it to disappear (after selling its assets). If it just has a liquidity problem, Banca d'Italia probably would let it continue to operate and wait until it could pay back its debt.' In this regard one might think that if the EZ was a real Federal State, the financial crisis would be a 'normal' domestic crisis: if some local banks and some local governments (deprived of monetary sovereignty) are not solvent, nobody would talk of a BoP crisis. Even considering the grand scale of the EZ crisis, a 'normal' state would intervene by socializing part of the local government and banks' debt, imposing austerity and balanced budgets on them; saved banks would be nationalised, restructured or shut down. The CB would cooperate by sustaining the sovereign/federal debt. At the same time the Federal administration would use fiscal transfers to attenuate the crisis. Fine, but this is not Europe! If it were, it would manage to solve the situation without too much hardship.²⁸

The question is that the EZ is a hybrid, in between a fixed exchange rate system among independent countries and a fully integrated economy, sharing the possibility of a BoP crisis with

²⁸ According to Sinn (2012) and his disciples (Kohler 2012) the situation is bound by the limits the Bundsbank meets in sterilizing the liquidity flooding to Germany once the BuBa has sold all its assets (including gold, foreign currencies etc), with dubious inflationary consequences. Others, including ECB economists (Bindseil et al 2012), say that this money can remain deposited at the ECB. Perhaps the question is that at some point German savers might become unhappy with the returns on tesaurized liquidity and start to spend it. According to Ifo this is already beginning to happen (http://www.cesifo-

group.de/portal/page/portal/ifoHome/epr/e1pz/_generic_press_item_detail?p_itemid=17914122), although other sources (http://www.zeit.de/2012/19/Bundesbank-Weidmann/seite-1) inform that both the German Ministry of Finance and the Bundesbank are quite vigilant as to a possible housing bubble in Germany. The BuBa is the watchdog of the German 'monetary mercantilist' model, but perhaps German banks might be interested in this bubble and certainly the Deutsche Bank has a political influence on the Bundesbank whose managers are the least independent of the world (De Cecco http://temi.repubblica.it/micromega-online/quella-lobby-della-buba/?printpage=undefined). So, we should perhaps hope in the DB to get a Buba benign neglect.

the former and national banking principles with the latter. In this spurious set up the ECB has acted somewhat similarly to the FED: through T2 and LTRO it is injecting liquidity and absorbing toxic assets as collateral, letting insolvent local banks and governments survive. A fiscal pact has been imposed, but there is no Federal government assisted by a SCB on hand to heal the local states and banks.²⁹ To sum up, the EZ crisis is not a classical fixed exchange rate crisis; it is not a domestic financial crisis; it is what it is: a BoP crisis in an imperfect currency union. If the union were perfected, the crisis could be solved in the same way as a traditional domestic crisis. If it is not perfected, it is an unedited BoP crisis with a still unwritten final.

Through T2, peripheral public and private toxic assets are progressively coming to be held by the ECB and not by core-Europeans, 'a swap of claims against private banks in the periphery against a claim against the central bank in the periphery' as Dullien and Schieritz (2012) put it pointing out that in 'the fourth quarter of 2011, the [German] net foreign investment position stood at €933 billion, of which €483 billion was TARGET claims'. These authors see this as advantageous for German savers. If core-Europeans continued to lend to the periphery, and this defaulted, they would lose (at least partially) their investments when, hypothetically, all the Eurosystem CBs are pro-quota responsible for the Eurosystem liabilities (so that, in principle, even countries with T2 liabilities share the risk of countries with T2 claims). But who is going to pay out for Eurosystem losses if some periphery countries default, so that the value of the collateral they posted when refinanced by the ECB dramatically falls while the others are unable to meet the risksharing obligations, or if the Eurosystem collapses? Take this extreme case. Whelan (2012) has argued that the Bundesbank can easily guarantee the nominal value of the deposits of German savers in, say Neu-DM (CBs do not need capital in a fiat-money regime). The question is that as long as one or more deficit-countries recognize their financial obligations, they can be obliged to sell their assets (real or financial) to the surplus-countries in order to redeem their debt, or to obtain prolonged CA surpluses themselves. Once they default from their obligations, the BuBa can, of course, guarantee the nominal value of the German deposits, and this can be used to buy peripheral assets. But having defaulted on its obligations with the ECB, now the periphery can use these proceeds to re-buy those assets. One may well ask why the Germans did not buy those assets before. Probably foreign direct investment is felt too risky in countries with bleak economic and social perspectives. Perhaps the Germans should recognize that, sic rebus stantibus, they have already lost most of their T2 claims. As blogger Daniel Alpert (2012) put it: 'Germany and, to a far lesser extent, some others in the core have achieved a false prosperity by foolishly funding consumption by nations willing to buy and consume German goods and take core money to do

²⁹ As said above, the EZ would be a perfect MMT country.

so....Germany self-financed its own so-called economic miracle. It will prove to have been no miracle when the ultimate losses of having done so are netted out.'

References

- Aldo Barba (2012), La redistribuzione del reddito nell'Italia di Maastricht, in Un'altra Italia in un'altra Europa-Mercato e interesse nazionale, Carocci, Roma
- Daniel Alpert (2012) Challenge to Austerity Deepens, the Handwriting is on the Wall, http://www.economonitor.com/blog/2012/05/whats-on-your-mind-thoughts-from-theeconomonitor-community-2/
- Bagnai A. (2012) Unhappy Families are All Alike: Minskyan Cycles, Kaldorian Growth, and the Eurozone Peripheral Crises, mimeo.
- Bibow, J. (2012), The Euro Debt Crisis and Germany's Euro Trilemma. Levy Economics Institute, Working Papers Series, no. 721.
- Bindseil U., Cour-Thimann P. and König P. (2012), Target2 and Cross-border Interbank Payments during the Financial Crisis, in CESifo (2012): 83-101
- Blanchard, Olivier. Adjustment within the euro (2007) The difficult case of Portugal, Portuguese Economic Journal, Vol. 6, No. 1, pp. 1-21
- Blanchard O. and Giavazzi F. (2002) Current Account Deficits in the Euro Area: The End of the Feldstein-Horioka Puzzle?, Brookings Papers on Economic Activity, pp.147-186
- Carlin W., Soskice D. (2009), German economic performance: disentangling the role of supply-side reforms, macroeconomic policy and coordinated economy institutions, Socio-economic Review 7 (1): 67-99.
- Cesaratto (2012a) Harmonic and Conflict Views in International Economic Relations: a Sraffian view, mimeo
- Cesaratto (2012b) Neo-Kaleckian and Sraffian controversies on accumulation theory, mimeo.
- Cesaratto S. (2011), Europe, German Mercantilism and the Current Crisis, Quaderni del dipartimento di economia politica, in Brancaccio E., Fontana G. (a cura di), The Global Economic Crisis. New Perspectives on the Critique of Economic Theory and Policy, Routledge, London. Working paper version Quaderni del Dipartimento di Economia politica, n. 595 (www.econpol.unisi.it/dipartimento/it/quaderni
- Cesaratto S., Stirati A. (2011) Germany in the European and Global Crises, International Journal of Political Economy, vol. 39, no. 4, Winter 2010–11, pp.56–87; working paper version: http://www.econ-pol.unisi.it/dipartimento/it/node/1267
- CESifo (2011) Bogenberg Declaration: Sixteen Theses on the Situation of the European Monetary Union, http://www.cesifo-group.de/cesifo/newsletter/Bogenberg_Declaration.htm
- CESifo (2012), Forum Volume 13, Special Issue January.
- Ciccone R. (2002) Debito pubblico, domanda aggregata e accumulazione, Roma, Aracne
- Credit Suisse (2012), TARGET2: I'm a euro, get me out of here!, Economics Research.
- Crouch C. (2008) What Will Follow the Demise of Privatised Keynesianism, The Political Quarterly, 79 (4), 476-487.
- Dalziel, P.C. and Harcourt, G.C. (1997), A Note on 'Mr Meade's Relation' and International Capital Movements, Cambridge Journal of Economics, 21, 621-631.
- De Grauwe Paul (1998), The Euro and the Financial Crises, Financial Times, February.
- De Grauwe Paul (2011) Managing a fragile Eurozone, CESifo Forum, 2, http://www.econ.kuleuven.be/ew/academic/intecon/Degrauwe/PDG-

papers/Recently_published_articles/CESifo-Forum-Managing-Fragility-Eurozone.pdf

Diaz-Alejandro, C. (1985)Good-bye financial repression, hello financial crash, Journal of Development Economics 19, 1-24.

- Dullien S., Schieritz M. (2012), German savers should applaud the growing TARGET balances, http://www.voxeu.org/index.php?q=node/7953
- European Commission (2009), Competitiveness developments within the euro area, Quarterly Report on the Euro Area, vol.8, n.1.
- European Commission (2010) The impact of the global crisis on competitiveness and current accounts divergences in the euro area, Quarterly Report on the Euro Area, vol.9, n.1.
- Febrero E., Uxó J., Bermejo F. (2012), El funcionamiento del sistema TARGET2 desde la Gran Recesión. Una aproximación desde la óptica del circuito monetario, XIII JORNADAS DE ECONOMÍA CRÍTICA, Sevilla, February.
- Franzese, R.J., and P.A. Hall. (2000). Institutional Dimensions of Coordinating Wage-Bargaining and Monetary Policy. In Unions, Employers, and Central Banks: Macroeconomic Coordination and Institutional Change in Social Market Economies, eds. T. Iversen, J. Pontusson, D. Soskice, pp. 173-204. Cambridge: Cambridge University Press.
- Frenkel R. and Rapetti M. (2009) A developing country view of the current global crisis: what should not be forgotten and what should be done, Cambridge. Journal of. Economics. (2009) 33 (4): 685-702.
- Frenkel R. and Taylor L. (2006) Real Exchange Rate, Monetary Policy and Employment, DESA Working Paper No. 19, ST/ESA/2006/DWP/19
- Garber P. (2010) The Mechanics of Intra Euro Capital Flight, Deutsche Bank, http://fincake.ru/stock/reviews/56090/download/54478
- Garegnani, P. (1983), Notes on Consumption, Investment and Effective Demand, in Eatwell J. and M.Milgate (eds.) (1983), Keynes's Economics and the Theory of Value and Distribution, London: Duckworth.
- Garegnani, P. (1984) Value and Distribution in the Classical Economists and Marx Oxford Economic Papers, 36, 291-325
- Gourinchas Pierre-Olivier (2002), Comments and Discussions, Brookings Papers on Economic Activity, Vol. 2002, No. 2 (2002), pp. 187-209
- Gros D. (2011) External versus domestic debt in the euro crisis VOX
- Holtfrerich, C-L. (1999) Monetary Policy under Fixed Exchange Rates (1948-70). In Fifty Years of the Deutsche Mark. Central Bank and the Currency in Germany since 1948, ed. E. Baltensperger. Deutsche Bundesbank, New York: Oxford University Press.
- Holtfrerich, C-L. (2008). Monetary Policy in Germany since 1948 National Tradition, International Best Practice or Ideology. In Central Banks as Economic Institutions, ed. J.P.Touffut. Cheltenham: Edward Elgar.
- Holinski N., Kool C., and Muysken J. (2012)Persistent Macroeconomic Imbalances in the Euro Area: Causes and Consequences, Federal Reserve Bank of St. Louis REVIEW January/February 1, 1-21.
- Kalecki M. (1934), On Foreign Trade and 'Domestic Exports', in Kalecki (1971)
- Kalecki M. (1967), The Problem of Effective Demand with Tugan-Baranowski and Rosa Luxemburg, in Kalecki (1971)
- Kalecki, M. (1971). Selected Essays on the Dynamics of the Capitalist Economy 1933 1970. Cambridge: Cambridge University Press.
- Kalecki M. (1943) Political Aspects of Full Employment, Political Quarterly, 1943. 14 (4), 322-31; repr. in Kalecki, 1971, 138-45 and in Osiatynski (ed), Osiatynski, J. (ed). Collected Works of Michal Kalecki, Volume I, Oxford: Oxford University Press, 1990, 347-56.
- Keynes, J.M. 1980. Activities 1940–1944. Shaping the Post-War World: The Clearing Union, Collected Writings of John Maynard Keynes, A. Robinson and D. Moggridge (eds), volume 25. London: Macmillan.
- Kohler K. (2012) The Eurosystem in Times of Crises: Greece in the Role of a Reserve Currency Country?, in CESifo (2012) 14-22

- Krugman P. (2011), Italy Versus Japan, http://krugman.blogs.nytimes.com/2011/07/16/italy-versus-japan/
- Irvin G. (2012) The Riddle of German Neo-liberalism, Social Europe Journal, http://www.socialeurope.eu
- Jaumotte F., Sodsriwiboon P. (2010) Current Account Imbalances in the Southern Euro Area, IMF Working Paper, 10/139.
- Lavoie M. (2011) The monetary and fiscal nexus of neo-chartalism: A friendly critical look Department of Economics, University of Ottawa, mimeo.
- Leppänen O. (2012) Eurosystem TARGET balance deviations call for cautious changing of the EU banking landscape, http://www.voxeu.org/index.php?q=node/7884
- Makoto I. (2012) From the Subprime to the Sovereign Crisis; Why Keynesianism Does Not Work?, paper presented at the Congreso de economistas heterodoxos, Buenos Aires, March.
- Mayer T., Möbert J. and Weistroffer C. (2012) Macroeconomic Imbalances in EMU and the Eurosystem in CESifo (2012) 35-42.
- Merler S., Pisani-Ferry J. (2012), Sudden stops in the euro area, Bruegel Policy Contribution, March.
- Milbradt G. (2012) The Derailed Policies of the ECB, in CESifo (2012), 43-49.
- Mundell R.A. (1957) International Trade and Factor Mobility, American Economic Review, 47: 321-335.
- Nechio, F. (2011) Monetary Policy When One Size Does Not Fit All, Federal Reserve Bank of San Francisco Economic Letter 2011-18.
- Nersisyan Y., Wray R.L. (2010), Does Excessive Sovereign Debt Really Hurt Growth? A Critique of This Time Is Different, by Reinhart and Rogoff, Working Paper No. 603, Levy Institute June 2010 http://www.levyinstitute.org/pubs/wp_603.pdf
- Neumann M.J.M. (2012) The Refinancing of Banks Drives Target Debt, in CESifo (2012), 29-32
- Pivetti M. (2001) Money Endogeneity and Money Non-Neutrality: A Sraffian Perspective, in Louis-Philippe Rochon, Matías Vernengo, Credit, Interest Rates And The Open Economy -Essays on Horizontalism, Edward Elgar, Cheltenham.
- Prasad E.S., Rajan R.G., Subramanian A. (2007) Foreign Capital and Economic Growth, National Bureau of Economic Research, Working Paper 13619.
- Ramanan (2012), The Monetary Economics Of Sovereign Government Rating, http://www.concertedaction.com/2012/05/04/the-monetary-economics-of-sovereigngovernment-rating/
- Reinhart C.M., and Rogoff K.S. (2009) This Time Is Different: Eight Centuries of Financial Folly, Princeton University Press, Princeton.
- Reinhart C.M., (2011) A Series of Unfortunate Events: Common Sequencing Patterns in Financial Crises, Rivista di Politica Economica, Vol 100: 11-36
- Riha T. (1985) German Political Economy: The History of an Alternative Economics, MCB University Press, Bradford.
- Sinn H.W. (2012) The European Balance of Payments Crisis: An Introduction, in CESifo Forum Volume 13, Special Issue January 2012
- Tilford, S. and Whyte, P. (2011) Why Stricter Rules Threaten the Eurozone, Centre for European Reform,

http://www.cer.org.uk/sites/default/files/publications/attachments/pdf/2011/essay_eurozone_ 9nov11-4084.pdf

- Ulbrich J. and Lipponer A. (2012) Balances in the Target 2 Payments System A Problem?, in CESifo (2012): 73-76.
- Vianello F. (2005), La moneta unica europea, Università di Roma La Sapienza, mimeo.
- Waffel M. (2008), Real Estate Doldrums Why the Global Housing Market Boom Bypassed Germany, http://www.spiegel.de/international/business/0,1518,552901,00.html

- Whelan K. (2012), TARGET2: Not why Germans should fear a euro breakup, http://www.voxeu.org/index.php?q=node/7921
- Wray L.R. (2006) Extending Minsky's Classifications of Fragility to Government and the Open Economy by. Working Paper No. 450 The Levy Economics Institute.
- Wray L.R. (2009) An Alternative View of Finance, Saving, Deficits, and Liquidity, Working Paper No. 580 The Levy Economics Institute.
- Wray L.R. (2011a) Sovereign Currency and Government Policy in the Open Economy, http://neweconomicperspectives.org/2011/11/mmp-blog-26-sovereign-currency-and.html
- Wray L.R. (2011b), MMT, Sectoral balances and behaviour, http://neweconomicperspectives.org/2011/06/mmt-sectoral-balances-and-behavior.html
- Wray L.R. (2011c), Currency Solvency and the Special Case of the US Dollar http://neweconomicperspectives.org/2011/11/mmp-blog-25-currency-solvency-and.html
- Wyplosz C. (2012) The ECB's trillion euro bet, Vox, 13-2.
- Wolf M. (2012), Why the Bundesbank is wrong, Financial Times 10 April.