



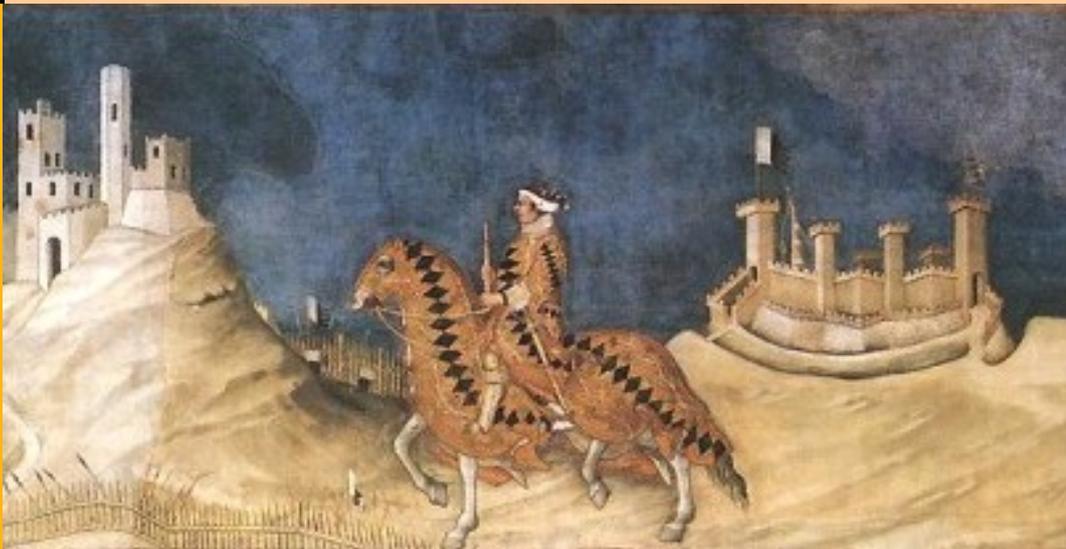
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The nature of the eurocrisis. A reply to Febrero, Uxò and Bermejo

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## **Abstract**

Febrero et al. (2017) criticise the balance of payments (BOP) view of the EMU crisis. I have no major objections to most of the single aspects of the crisis pointed out by these authors, except that they appear to underlie specific sides of the EMU crisis, while missing a unifying and realistic explanation. Specific semi-automatic mechanisms differentiate a BOP crisis in a currency union from a traditional one. Unfortunately, these mechanisms give Febrero et al. the illusion that a BOP crisis in a currency union is impossible. My conclusion is that an interpretation of the Eurozone troubles as a balance of payments (BOP) crisis provides a more consistent framework. The debate has some relevance for the policy prescriptions to solve the eurocrisis. Given the costs that all sides would incur if the currency union were to break up, austerity policies are still seen by European politicians as a tolerable price to pay to keep foreign imbalances at bay - with the sweetener of some ECB support, for as long as Berlin allows the ECB to provide it.

**Keywords:** European economic and monetary union, ECB, balance of payment crisis, Target2, Euro

**JEL classification:** E11, E12, E42, E58, F32, F33, F34, F36, N24

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## Introduction\*

Taken singly, there are not many specific aspects of the paper by Febrero et al. (2017) that I disagree with; it is the general interpretation of the eurocrisis, which they call monetary sovereignty view, that I regard as fragmented and unpersuasive. My conclusion is that an interpretation of the Eurozone troubles as a balance of payments (BOP) crisis provides a more consistent framework that encompasses and gives consistency to many aspects singled out by Febrero et al. and by the literature they refer to. The debate has some relevance for the policy prescriptions to solve the eurocrisis.

### 1. The monetary sovereignty view

The monetary sovereignty view of Febrero et al. (2017) reflects views expressed by Paul De Grauwe (2013), Marc Lavoie (2015a/b) and Randall Wray (2015), who all deny that EZ troubles are a BOP crisis. The authors also refer to Borio and Disyatat (2011), less directly concerned with the euro crisis. In this section, I assemble these various views to convene a consistent and encompassing summary of the monetary sovereignty view, allegedly opposed to the BOP view.

In the *first* place, the European crisis is a banking crisis due to macro or micro prudential “lack of regulation and supervision” by the authorities in charge (Febrero et al. 2017, p. 7), what heterodox authors often call *financialisation*. In this regard, Febrero et al. cite Borio and Disyatat’s (2011, 2015) criticism of identification of financial crises with BOP crises and the idea that current account (CA) imbalances fully explain international capital flows (with CA surplus financing CA deficit countries). More attention should rather be paid to *gross* international capital flows that lead to increasing financial fragility, not necessarily associated with CA deficits, due for instance to maturity or currency mismatch of assets and liabilities, respectively.

The dangerous expansion of credit in some member States has led in turn to Minskyan credit bubbles (Wray 2012), mainly in the construction sector. Once the bubble burst, the States bailed out the banking sector, transforming a banking crisis into a sovereign crisis. Without a national central bank acting as a lender of last resort (LOLR), and with the ECB refraining for too long from intervening, national sovereign debts were exposed to financial speculation and “sudden stops” of

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foreign loans. Austerity measures were imposed to reassure markets of national solvency (De Grauwe 2013). Those measures were counterproductive, making fiscal imbalances even worse, so that inaction by the ECB can be indicated as a *second* fundamental cause of the crisis. More generally, renunciation of monetary sovereignty, decoupling monetary and fiscal policy, can be seen as a *third* fundamental fault (Wray, 2015, p.273). Indeed, since summer 2012 when the ECB led by Mario Draghi took a more active stance, effectively acting as LOLR, speculative attacks retreated, but unfortunately not austerity measures. Although these events were accompanied by external flows and stock imbalances between the EZ core and periphery, they are dismissed, given the existence of Target 2 and the ECB refinancing operations, so it is misleading to talk of a BOP crisis (Lavoie 2015 a/b; Febrero et al. 2017 p.9).<sup>1</sup> From a policy point of view, endowed with a proactive central bank and no internal BOP problems, the European Economic and Monetary Union (EMU) might well engage in expansionary fiscal and monetary policies; the fact that it does not is therefore a further culprit of the current persistence of the crisis.

## 2. The balance of payments view

In actual fact, the EZ problems have various concurrent causes and it is therefore not surprising that I agree with a number of aspects of the preceding account, some of which are specific to particular troubled countries. A quote from Anna Karenina has been used in this regard: “Happy countries are all alike, whereas every unhappy country is unhappy in its own way.” Indeed, both the monetary sovereignty view and the BOP views mainly refer to the events of peripheral countries, much less to a former core-country like Italy. Although Febrero et al. (2017) provide an honest account of the BOP view (Cesaratto 2013; 2015a; 2017b), for the convenience of the reader let me review its chief features and indicate as I proceed, dis/similarities with the monetary sovereignty view. Let me begin with the most essential feature of the BOP view: the similarity of the EMU crisis with the foreign-debt financial crises in emerging economies. Let me do this by considering the case of Greece.

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<sup>1</sup> Quoting Febrero et al. (2017, p. 9): “what happens in the EZ is simply a financial instability problem, since governments do not have a lender of last resort. The irrelevance of the international reserves constraint invalidates the BoP view”. [quotations from Febrero et al. refer to the latest received, mimeo version of the paper; an earlier version of the paper is quoted below in the references].]

### 2.1. *De te fabula narratur*: the case of Greece

A paper by Reinhart and Trebesch (2015) provides an impressive historical perspective on the recent Greek crisis as the fourth (or perhaps fifth or sixth) episode of a foreign debt crisis since Greek independence in 1829. Their view is exemplary summed up in the abstract of the paper (my italics):

cycles of external crises and dependence are a perennial theme of Greek modern history – with repeating patterns: prior to the default, there is a period of *heavy borrowing from foreign private creditors*. As *repayment difficulties* arise [and sudden stops, SC], *foreign governments step in, help to repay the private creditors, and demand budget cuts* and adjustment programs as a condition for the official bailout loans. *Political interference* from abroad mounts and a prolonged episode of debt overhang and financial autarky follows.

The policy conclusion they draw from past experiences is that simple moratoria of debt repayments only postpone the day of reckoning, “results in decades of debt overhang, perpetuates external dependence and impedes a ‘fresh start’ for the over-indebted country” (ibid: 16). This happened, for instance, with the debt contracted by Greece to finance the independence war: “It started out as a loan from private creditors, which Greece could not repay. The 1833 Troika (France, Great Britain and Russia) repaid the private creditors and Greece’s debts shifted to official hands. After decades in default and financial autarky, Greece still faced repayment of that loan more than 100 years later” (ibidem). *De te fabula narratur*. Incidentally, this suggests that extension of the grace period to the entire Greek debt still does not give Greece a chance, and that only substantial debt relief – accompanied by a grace period on the remaining debt – can do the job, as repeatedly sustained by the IMF against the European Commission (e.g. IMF 2016, Blustein 2016).<sup>2</sup>

The Greek case is not, of course, isolated. Latin American countries and others (including Turkey and Egypt, but also Portugal and Spain) have been recurrent defaulters (ibidem). In this regard, Reinhart and Trebesch interpret the Euro area crisis as a balance of payments or foreign debt crisis:

The fact that the ongoing crisis is very much an *external* debt crisis has been largely overlooked. We concur with Gros (2013) and Sinn (2014), that the crisis in periphery Europe is not so much a crisis of public debt, but rather a crisis of external debt – and involving all the problems that

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<sup>2</sup> Chauvinism in the German political debate supported by the jingoism of German economists (e.g. Werner Sinn) impedes any rational solution to the Greek case.

come with an external crisis (in particular sudden stops, balance sheet effects and cross-border disputes between creditors and debtors) (ibid, p. 1).

They quote Eichengreen et al. (2014) who compare the Eurozone crisis with those in Latin America in the 1980s, as Roberto Frenkel (2013) has also done. On a similar vein, Bordo and James (2013) underline similarities between the gold standard and the European Economic and Monetary Union (EMU), pointing out that both regimes favoured external indebtedness: “Both arrangements are based on fixed exchange rates, monetary and fiscal orthodoxy. Each regime gave easy access by financially underdeveloped peripheral countries to capital from the core countries” (as aptly summed up in the abstract) – the difference being that in the EMU there is not an “escape clause”.

As outlined by Febrero et al. (2017), this view has become conventional since its tardy endorsement by influential *Vox* economists (Baldwin and Giavazzi 2015a). Dejuán and Febrero (2010), Uxó et al. (2011) and Febrero and Bermejo (2013) also endorsed this view.

## 2.2. Original sin

Among the authors referred to by Febrero et al. (2017), Wray (2015, pp. 124-128) does not disown the temptation (or rather, necessity) for developing countries to commit the “original sin” of issuing foreign debt denominated in a foreign currency although wavering from warning about the risks of this strategy to over-optimism.<sup>3</sup>

Interestingly, Reinhart and Trebesch (2015) refer to the experience of two other groups of countries. Some developing (or formerly developing) countries such as Japan, India and other Asian countries did not rely on foreign indebtedness to sustain their development. Indeed these countries have been very careful to avoid destabilising capital inflows by adopting forms of capital control and presumably some sort of financial repression, that is, strict control over the level and destination of endogenous credit/money creation by domestic banks. Chile should be added to the list. After the financial crisis of the late seventies –narrated in a masterly manner by Diaz-

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<sup>3</sup> Compare for instance these two assertions (ibid, pp. 127-28): “Many developing nations will not find a foreign demand for their domestic currency liabilities. Indeed, some nations could be so constrained that they must issue liabilities denominated in one of these more highly desired currencies in order to import. This can lead to many problems and constraints—for example, once such a nation has issued debt denominated in a foreign currency, it must earn or borrow foreign currency to service that debt... However, if such a nation runs a continuous current account deficit without enhancing its ability to export, it will almost certainly run into debt service problems.” (ibid, pp. 124-25); and, few lines below: “where the foreign demand for domestic currency assets is limited, there still is the possibility of nongovernment borrowing in foreign currency to promote economic development that will increase the ability to export”.

Alejandro (1985) – Chile introduced capital controls – the success of this country being politically too important for the U.S. to let it to follow the Washington consensus. Another group of debtor countries, including Australia, Canada and New Zealand, have been able to maintain the trust of creditors even in periods of distress. This was certainly due to their rich natural endowments of natural resources, in addition to being financially and politically reliable western offshoots (Bordo et al. 2003; Eichengreen et al, 2005).

Reinhart and Trebesch support a strategy for countries like Greece of relying on domestic rather than foreign savings to avoid foreign indebtedness. Reliance on “domestic savings” implies a strategy of “financial repression”. A State-led developmental strategy including pro-active industrial policy and a competitive exchange rate should complement State control of the banking sector. We doubt that Reinhart and Trebesch would go so far. The process of European integration, now and then, prevents peripheral countries from pursuing this strategy. Indeed, financial liberalisation and the EMU, with the (temporary) disappearance of exchange rate risk, were perceived by Greece and other peripheral countries as a chance to catch up by compulsive repetition of the original sin. The monetary sovereignty view overlooks the role that the EMU played in this regard during financial liberalisation and deregulation.

### **2.3. A banking crisis?**

The BOP view does not deny that a banking crisis is one in the “series of unfortunate events” typical of financial crises in fixed exchange rates regimes (Reinhart, 2011; Frenkel 2013; Cesaratto 2017b). In addition, I agree with Borio and Disyatat (2011) that banking crises are not necessarily associated with BOP crises. A comparison between the Spanish and the U.S. financial crises is illuminating in this respect.

The two crises have various elements in common. Since the construction sector is an engine of the economy, politicians look favourably at tax and credit provisions that promote it.<sup>4</sup> Both in the EZ and U.S., the construction boom was localised in specific States. The EMU facilitated access to loans from the European interbank monetary market for Spanish banks and the construction

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<sup>4</sup> The construction sector is best included among autonomous spending (unless concerning productive capacity creation) as seminally suggested by the Sraffian supermultiplier approach (Serrano 1995; Cesaratto 2015c; Lavoie 2016). Barba and Pivetti (2008) link support to the construction sector via household indebtedness to increasing inequality in the U.S. (and avoid vague references to “money manager capitalism” and the like). Cesaratto and Stirati (2011) regard support to AD in the EZ periphery as functional to the German “monetary mercantilism”.

bubble was closely linked to easy credit, as Febrero et al. have sustained in various papers (e.g. Uxó et al., 2011; Paúl and Uxó 2013).<sup>5</sup> However, in the American case (a viable currency union as aptly defined by Barba and De Vivo 2013), the existence of a fully-fledged banking union and interregional fiscal transfers impeded transmission of the banking crisis to local governments that, like EMU members, lacks monetary sovereignty (Gros 2013). Moreover, at federal level, it is difficult to talk of an American BOP crisis given the credibility of the U.S. dollar as a reserve currency (Wray 2015, pp. 123-25). The EMU case (a flawed currency union) is different. Lacking monetary sovereignty, without a genuine banking union and federal fiscal transfers, peripheral banks and States combined in what has been called a “doom loop”.<sup>6</sup> The three-year Longer Term Refinancing Operations by the ECB in 2011/12, accompanied by the Target 2 mechanism, enabled ordered repatriation of core-bank capital from major peripheral countries (Cesaratto 2013), although it was not until Draghi famously intimated to financial markets in July 2012 that it was the ECB’s intention to avoid any euro break-up, that the financial crisis receded (without disappearing).

To sum up, the BOP view of the EZ crisis does not deny that a banking crisis is part of the EZ crisis, as argued by Febrero et al. (2017, pp. 12, 17-18):

the sudden stop was the *consequence* of governments indebted in a foreign currency (as Neochartalists have stated on several occasions) and not the *cause* of the crisis... the responsibility for external indebtedness should not fall on current account deficits (although these are relevant, of course) but mainly on the bank credit boom that banks refinanced in international markets... Current account deficits should be viewed as another consequence of a debt-led boom and not so much as the root cause of external imbalances.

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<sup>5</sup> As well describe by Febrero and Uxó (2013), credit can be endogenously generated by peripheral banks. Increasing imports due to the construction bubble determine a loss of reserves for these banks in favour of core economies banks. In turn, as long as the interbank loans market is functioning, these banks will lend their excess reserves to the peripheral banks. These loans mirror the CA surplus of core-countries.

<sup>6</sup> Famously, European government promised at the apex of the financial crisis in June 2012 to break the deadly embrace, with poor results – the European banking union has in fact only two of the three standard pillars in place: common supervision and resolution mechanisms, but it not has not put the money where the mouth is, that is it has not yet a common resolution and deposit insurance fund. This shows again the hopelessness of a mutually supportive European Federal State.

I merely complement this view with an international context, where relevant, to obtain a more encompassing view.<sup>7</sup> More specifically, I locate the banking crisis in a more organic “sequence of unfortunate events” story, adapting it to EMU historical conditions. But what have the authors quoted by Febrero et al. (2017) to say about infra-EMU CA imbalances?

#### **2.4. LORS limits**

Albeit in passing, Wray (2015, pp. 183-85) acknowledges the existence of BOP problems in the EZ. While he does not consider the “sequence of unfortunate events”, he attributes CA imbalances (at least in the cases of Italy and Greece) to loss of competitiveness in the euro area due a higher inflation rate than their EMU partners (ibid, p. 183), aided by German wage moderation (ibid, p. 187). He largely prefers to attribute the EZ troubles to decoupling of monetary and fiscal policy once the crisis (presumably due to an excess of “Money Manager Capitalism”) struck peripheral countries. Without a federal fiscal policy assisted by monetary policy, as in the U.S., and left to cope alone, “individual European nations tried to fill the gap with deficits by their own governments” creating “the problems we see in the Euro crisis” (ibid, p. 189). The problem, he concludes, “was that as deficits and debt rose, markets reacted by increasing interest rates, recognizing that unlike sovereign countries like the Unites States, Japan and United Kingdom, EMU members were users of an external currency”. This stance has striking similarities to that of Paul De Grauwe (who was presumably influenced by the web where Wray’s ideas have circulated since the late nineties).

De Grauwe (e.g. 2013, pp. 1-2), too, attributes the instability of capitalism to waves of optimism and pessimism of consumers and investors supported by the banking system (Minsky is duly cited).<sup>8</sup> The credit boom in the periphery, favoured also by ECB one-fits-all monetary policy, led to foreign imbalances and later, once foreign lenders lost confidence, to a sudden stop in capital flows (ibid, pp. 6-9). Unfortunately, De Grauwe concludes, EMU countries issued sovereign debt in a foreign currency (the euro), and the lack of a lender of last resort transformed a liquidity crisis

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<sup>7</sup> Nor does the BOP view claim that the case of Italy falls in the category of a banking crisis. The reader will appreciate that the present banking crisis in Italy is mostly due to prolonged austerity and not to a financial bubble in the last decade.

<sup>8</sup> For an early criticism of these “subjective” explanations of trade cycles as opposed to the investigation of more objective circumstances, see D.H. Robertson (1915, p. 9), a book written when Robertson was very close to Keynes. (On the Sraffian scepticism about both marginalist and post-Keynesian subjective elements in Political Economy, see Bharadwaj 1986; Garegnani 1983a, p. 140; Cesaratto 2016).

into one of solvency. This was then transmitted to the domestic banking system, a main holder of government bonds (ibid, p. 10). The lack of a LOLR eventually forced those countries to implement counterproductive austerity measures. Notably, De Grauwe ignores the circumstances (irrevocable exchange rates and financial liberalisation) that favoured the credit boom in the periphery, and reduces the crisis to a “liquidity problem” (see also Febrero et al. 2017, p. 7);<sup>9</sup> finally, he fails to consider the other side of the “doom loop”, the State bail-out of troubled peripheral banks.<sup>10</sup>

Following De Grauwe, Febrero et al. (2017, p. 15) correctly argue that: “a sudden stop took place *because* of the ECB’s unwillingness to give support to sovereign debt. As the announcement of the OMT [Outright Market Transactions programme] showed (...), once the ECB threatened markets with the purchase of unlimited amounts of public debt, financial flows were reactivated and the price of sovereign debt fell markedly.” Surprisingly, however, Febrero et al. do not explain the need for austerity measures as being due to the implausibility of unlimited LOLR support by the central bank to local States in the currency union, due to clear moral hazard problems.<sup>11</sup> Of course, if they believe, as De Grauwe does, that peripheral Europe just suffered a “liquidity problem”, then

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<sup>9</sup> After having attributed the cause of the crisis to the mantra of financialisation expressed by “gross capital flows”, Febrero et al. (2017, p. 6) follow De Grauwe and reduce it to “a shift from a liquidity problem to a solvency problem”:

“fiscal authorities running budget deficits may experience a shift from a liquidity problem to a solvency problem, dragging along banks burdened with sovereign debt” (note that the banking crisis appears here as the result of a liquidity problem of governments and not of “money manager capitalism”).

They add that (ibid, pp. 6, 9, my italics):

“fiscal consolidation and internal devaluation through wage deflation– has been experienced not because peripheral countries have outstripped any hypothetical threshold of indebtedness to core EZ countries after having lived beyond their means, but as a consequence of self-imposed restrictions on the ECB to act as buyer of last resort of public debt... *what happens in the EZ is simply a financial instability problem, since governments do not have a lender of last resort.*”

<sup>10</sup> De Grauwe denies that there can be a BOP crisis in the EZ since “in a monetary union internal foreign exchange markets have disappeared” (ibid, p. 26), an untenable stance in the light of Draghi’s famous speech in July 2012 on “convertibility risk”. To the frustration of the reader, elsewhere De Grauwe (2011, pp. 7-10) acknowledges the existence of “competitiveness problems” in the EMU that member countries are compelled to solve by internal devaluation.

<sup>11</sup> Wray (2015, p. 178) is crystal clear on this: the Maastricht Treaty and later regulations on local public balances made absolute sense, as similar principles do in the U.S. (where, however, a significant Federal budget subject to the democratic control of Congress can be supported by monetary policy). Febrero et al. acknowledge that moral hazard is relevant, but without saying why (see below).

unrestricted support ought to be conceivable. However, if deeper foreign imbalances, in various ways caused by the EMU, are at the bottom of the crisis, then unlimited support by the ECB to such disequilibria is inconceivable. It is not by chance that austerity measures accompanied both the OMTs and later Asset Purchase Programme (APP aka QE) with the precise objective of reversing foreign imbalances (as they actually did).<sup>12</sup>

Let me be very clear about this: the above positions, willy-nilly, may transmit the illusion, especially to the general public, that had the EMU peripheral countries retained their monetary sovereignty, they could have financed their external imbalances in their own national currencies. This alternative does not exist: only a handful of countries, that do not include peripheral European countries, can do this. Nonetheless, certain unrepentant southern European nations repeated the original sin and were later obliged by the EMU to address their foreign imbalances, with limited assistance from the ECB to avoid collapse.

## **2.5. Is Target 2 a bottomless pit?**

While the above arguments to dismiss the possibility of a BOP crisis in the EMU are clearly poor, Febrero et al. (2017) follows Lavoie (2015a/b) in arguing that it is the existence of TARGET 2 (T2) that sidesteps that possibility. We risk repetition here (see Cesaratto 2015a/b; 2017b). We all agree that the combination of T2 and the standard and unconventional monetary measures of the

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<sup>12</sup> Among other post-Keynesian economists, Constantine et al. (2016, p. 26) acknowledge the existence of a BOP crisis in the EMU, arguing that the cure would be a fully-fledged currency:

The common currency turned what would otherwise have been an exchange rate crisis into a sovereign debt crisis. ...At the root of the crisis is a build-up of debt, fuelled by financialisation and, in this particular case, manifesting itself in demand booms underlying the debt-driven and export-driven variants of neoliberal growth models and reflecting current account imbalances. However, the key to explaining the crisis does not lie in explaining these imbalances, but rather the flaws of the EMU policy architecture which differentiate the Eurozone from economies such as the UK and the USA which similarly experienced debt-fuelled booms and financial crises, but did not suffer a sovereign debt crisis since they possess less dysfunctional fiscal and monetary policy regimes." (p. 24).

While I agree that there cannot be a BOP crisis in a viable currency union, I do not see any deeper, progressive union in sight in Europe (Cesaratto 2017b). I believe that reasoning like: "the EMU suffered a BOP crisis... but this was not the main trait of the crisis because if the EMU had been the U.S. a BOP crisis would have been impossible", is just answering fact with fantasy, or to put it mildly, answering fact with an abstract policy option.

ECB are a sort of international regeneration reserve in favour of foreign-indebted countries that can sustain a sudden stop in capital flows and even continue to carry CA deficits.<sup>13</sup>

Whittaker (2016), one of the first European economists to become aware of the role of T2, explains this most clearly. He points out how the mere working of the EMU seems to elude any potential exchange rate crisis due to the depletion of official reserves, as happens in a standard fixed exchange rate regime (FERR) where this disciplinary force is at work, while in a currency union regeneration of reserves is apparently limitless (ibid, all quotations from p.6, my italics):

under monetary union, the ‘fix’ (of the value of euros in banks in one country to those in another) is maintained by the commitment of all NCBs to accept unlimited intra-eurosystem claims against each other. A country’s NCB does not need to be concerned about keeping ‘foreign’ reserves to maintain its fixed exchange rate, because other NCBs automatically lend to it as necessary. This structure has a problem. When a country fixes its currency against some different currency, its government has an incentive to avoid policies such as large budget deficits that lead to financial outflows and the depletion of its central bank’s foreign reserves. In monetary union, this incentive is absent as *there is no corresponding limit to the growth of eurosystem balances*.

True, he continues, collateral and fiscal rules should limit moral hazard, but they have both been to some degree relaxed, although not in the case of countries under “financial assistance” where fiscal conditionality tries to reproduce the incentive to fiscal prudence of FERRs:

In its place, eurosystem liabilities should have been restrained by the collateral requirements for NCB lending to banks but, as discussed above, these requirements have always been diluted as necessary to allow NCB lending to continue, or lending has been allowed via ELA. And the Stability Pact rules which should have restricted budget deficits have not been consistently applied. For those countries that have received official loans, *the ‘austerity’ conditions attempt to reproduce the incentive for prudent fiscal behaviour which exists naturally under a fixed regime*.

The threat of forcing a country to leave by turning off the liquidity tap is another disciplinary device, but is costly for the leaving country, as well as for the credibility of the currency union.

These costs make a monetary union more resilient than a FERR:

In the absence of effective restraints on the rise of eurosystem liabilities, there is nonetheless a disciplining force. That is the threat of expulsion from monetary union. A fixed exchange rate breaks when the country defending it runs out of foreign reserves; monetary union breaks when the country is denied eurosystem credit. The departure of any country from monetary union would involve large political and financial costs and uncertainty, particularly for that country but also for other eurozone members, given the absence of agreed exit procedures.

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<sup>13</sup> Bordo (2014), Lavoie (2015a) and Cesaratto (2013) underline the similarities between T2 and Keynes’s clearing union.

This makes monetary union more durable than a fixed rate regime between separate currencies.

However, there must be some “limit to tolerance”, and either debtor countries accept strict fiscal conditionality or creditor countries accept losses and expel the violating country, showing an ultimate similarity between currency unions and FERRs:

Yet, there must be a limit to the tolerance of creditor countries. There must be some threshold level of exposure to Greece or any other debtor country, or expected future exposure, beyond which Germany and the other creditors would refuse further credit either via the eurosystem or official loans, accept their losses, and expel. Despite the ECB’s assertion that monetary union is irreversible, exit risk will always be present, just as it is in any ordinary fixed exchange rate regime. The difference with monetary union is that it raised the stakes by in cementing all financial claims into a ‘foreign’ currency.

As Oliver Landman (University of Freiburg) pointed out in a private comment on a working paper version of Febrero et al. (2017), the events of June-July 2015 in Greece showed the firm will of European institutions to put a break to what Febrero et al., De Grauwe, Lavoie and Wray regard as the inexhaustible refinancing of a bottomless pit, be it through the combination of T2/RO (Lavoie/Febrero et al. version) or through outright market operations by the ECB (De Grauwe/Febrero et al. story). To be sure, the ECB intervened to avoid break-up of the euro, but with strong conditionality.

With their typically irresolute arguments, Febrero et al. (2017) argue on one hand that the “irrelevance of the international reserves constraint invalidates the BOP view” (ibid, p. 9) since T2 “imbalances are unlimited, uncollateralised and can be rolled over as many times as needed” (ibid, p.7).<sup>14</sup> On the other hand, it is not precisely so because the “ECB can even cut the access to reserves” (p. 14), as it did with Greece, although this has little to do with moral hazard since it was “a measure to press a government to adopt some painful measures” (ibid, p. 14). They add: “There was a strong political motive behind the decision not to accept Greek public debt as collateral and then to freeze ELA... it can hardly be claimed that the [threatened] *Grexit* was the consequence of a moral hazard problem.” Nonetheless “we agree with Cesaratto that moral hazard is relevant” (ibid, p.15).<sup>15</sup> The political threat of forcing *Grexit* by suffocating the banking system was clearly

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<sup>14</sup> See also: “the existence of the T2 combined with refinancing operations (RO) invalidates the main requisite for a BoP crisis: there is no limit for international reserves” (Febrero et al. 2017, p. 2), p. 7 “can be rolled over as many times as needed”.

<sup>15</sup> De Grauwe (2013, p. 18) acknowledges moral hazard (“The OMT program however makes it clear that the ECB both wants to provide liquidity and for policing moral hazard risk”). In a similar vein, referring *mutatis mutandis* to another popular “solution” to the EMU troubles, Gibson et al.

aimed to impose what has traditionally been called “conditionality”. Febrero et al. do not accept this and take refuge in the Degrauwian fantasy world in which unlimited support by the ECB is consistent with a currency union, irrespective of any moral hazard problem: “The sudden stop and the capital reversal observed since 2009 are the consequence of increasing risks from self-inflicted rule” that deterred the ECB intervention in support of “sovereign debt either in primary or secondary markets. Without such a safety net, it is well known that national banking industries and sovereigns can default” (p. 15).

### **3. A neo-Wicksellian view**

The main difference between the mainstream and heterodox interpretations of the EMU BOP-crisis concerns the nature of international capital flows. According to the former (e.g. Baldwin and Giavazzi 2015a), capital flows hide saving flows from core to peripheral countries. Initially seen as an equilibrium phenomenon (Blanchard and Giavazzi 2002), it was later interpreted as an opportunity to catch up, somehow dissipated by peripheral countries. Baldwin and Giavazzi (2015b, p. 23) endorse the saving glut interpretation of the global crisis (Bernanke 2005). They refrain, however, from applying a similar scheme to the EMU crisis, that would have led them to indicate the German policy of repression of domestic demand as a main culprit of the crisis.<sup>16</sup> Be this as it may, Baldwin and Giavazzi look at the international capital flows through the lenses of the time-honoured Robertsonian theory of loanable funds, according to which banks intermediate savings. According to heterodox economists, endogenous credit creation by the banking system is the ultimate source of international capital flows.

For instance, Febrero and Uxò (2013, pp. 3-5) provide a clear example of a Spanish import from Germany financed by credit creation by a Spanish bank; the payment leads to a transfer of reserves from the Spanish to a German bank that in turn lends its excess reserves to the Spanish bank (provided the interbank loan market is functional). This loan corresponds, *ceteris paribus*, to the CA surplus of Germany, so we can well say that *ex post*, but only *ex post*, German excess saving over domestic investment is financing the Spanish CA deficit.

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(2013, p. 10) point out that: “Debt mutualisation on its own ... would not solve the problem of national current-account deficits since some countries could view debt mutualisation as a license to ignore the external constraint. Hence, debt mutualisation would need to be accompanied by strong disciplinary mechanisms to be effective.”

<sup>16</sup> Inconsistently, Baldwin and Giavazzi (2015b, p. 24) argue that “the global saving glut was not the main source of foreign borrowing” in the EMU, trivially adding that the main source “was lending and borrowing among members of the Eurozone”.

To support their criticism to the BOP view, Febrero et al. (2017) quote two respected mainstream economists, Borio and Disyatat (2011, 2015, henceforth B&D) who also endorse an endogenous money view. These two authors undoubtedly make many stimulating observations. They clearly associate the “saving glut” hypothesis with the international loanable fund theory, arguing that this stance leads to considering financial crises *exclusively* as BOP crises. To appreciate their argument, let us start with a closed economy. In line with Keynes’s advice that the ‘investment market can become congested through a shortage of cash’, but it ‘can never become congested through shortage of saving’ (1937, p. 222; Cesaratto 2017a/c), B&D reject the traditional view that investment is financed by saving through the intermediation of commercial banks. Rather, investment spending is financed by purchasing power creation by banks, and “it is only once expenditures take place that income, investment, and hence saving, are generated” (B&D, 2011, p. 7). They do not attribute their analysis to Keynes but to Wicksell, who notoriously severed the volume of bank loans from the supply of saving (e.g. Garegnani, 1983b, p. 45).

By extension, B&D reject the view that in open economies, excess saving over domestic investment by CA surplus countries, intermediated by the financial system, is the prerequisite for international capital flows and financial instability, and suggest that these are generated endogenously by the financial system. In other words, B&D reject the traditional view that attributes credit booms like that experienced by the U.S. in the pre-GFC period, to exogenous (foreign) destabilizing availability of saving<sup>17</sup> and not, as it is more correct to do, to what they define as excess “elasticity of credit” (2011, p. 24). This has three implications:

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<sup>17</sup> According to the saving glut hypothesis, excess full employment saving from CA surplus economies (say China) was the cause of the low (natural) global interest rate that fed the credit booms in CA deficit countries (the U.S.) (B&D 2011, p. 20). B&D ironically observe: “Since by definition the natural interest rate is an equilibrium phenomenon, it is hard to see how market rates roughly in line with it could have been at the origin of the financial crisis” (2011, p.2; cf. also p. 23). Consistent Wicksellian economists, B&D interpret the U.S. financial crisis as due to a discrepancy between market ( $i_m$ ) and natural ( $i_n$ ) interest rates: lax monetary policy let  $i_m$  fall below  $i_n$  (ibid p. 20-3) and this led to a credit boom. Contrary to Wicksell’s as well as standard theory expectations, however, the discrepancy did not manifest as high inflation (quite the opposite during the “moderation era”, ibid, p. 22) (B&D are interesting irrespective of their Wicksellian stance; nonetheless, for a criticism of the inconsistent capital-theory underpinnings of the notion of natural interest rate, see Garegnani 1983b, pp. 39-41).

- (i) national credit bubbles are not necessarily associated with CA deficit, as the experience of construction bubbles in Japan and China show (2011, p. 8);<sup>18</sup> nor are CA surplus account countries the necessary source of (potentially) destabilizing international capital flows: in the case of the U.S. crisis, for instance, B&D (2011, p.15) observe that:
- the geographical breakdown of capital inflows into the US in the run-up to the crisis is hardly consistent with the [excess saving] view. By far the most important source was Europe, not emerging markets. Europe accounted for around one-half of total inflows in 2007 (Graph 6, bottom left-hand panel). Of this, more than half came from the United Kingdom, a country running a current account *deficit*, and roughly one-third from the euro area, a region roughly in balance. This amount alone exceeded that from China and by an even larger margin that from Japan, two large surplus economies.
- (ii) if associated with CA deficit, this does not imply that bubbles are elicited by CA surplus countries: they can well be sparked off by local banks, or by banks in surplus economies, or by banks in third countries (that generate credit in favour of deficit countries and collect deposits from surplus countries). In the EMU experience, for instance, French banks played the role of intermediaries between CA surplus and deficit countries;<sup>19</sup>
- (iii) endogenous credit creation not only concerns financing spending in the real sector (autonomous consumption, investment, imports or, say, vendor finance), but also trade in existing financial and real estate assets (Cesaratto 2017c).<sup>20</sup>

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<sup>18</sup> Nor was the U.S. 2007-8 crisis connected to a BOP crisis, in spite of the periodic alarms about American CA deficits. The status of the U.S. dollar as international reserve currency allows the U.S. to ignore the foreign constraint.

<sup>19</sup> B&D (2011, p. 10) are worth quoting: “The distinction between saving and financing implies that countries running current account surpluses are *not* financing those running current account deficits. In terms of national income accounting, deficit countries are compensating for the non-consumption of surplus countries. In this sense, current account deficits are matched by saving in other regions. But the underlying consumption and investment expenditures that generate such imbalances may be financed in a myriad of ways, both domestically and externally. And while by exchanging financial claims for goods and services, the deficit country is effectively, on net, “borrowing” from, or drawing down assets on, the rest of the world, the ultimate counterpart of changes in those claims need not be countries running current account surpluses.” This “myriad” of financial relations, in particular the role of “third countries” in the intermediation of funds between CA surplus and deficit countries is described for the EMU case by Chen et al. (2012) and by Hobza and Zeugner (2014).

<sup>20</sup> Jakab and Kumhof (2015, p. 12) regard the role of banks not only as creating purchasing power in favour of the “real sector”, that is to sustain investment and autonomous consumption, but also as supporting trade in existing financial and real estate assets, often for speculative reasons (Cesaratto 2017c). Notoriously, a source of destabilizing international capital flows to emerging

For all these reasons, B&D suggest examining the complex of gross capital flows generated by the financial sector that only partially overlap with financing of CA imbalances.<sup>21</sup>

This said, I do not regard these important pointers as objections to a BOP crisis as a dominant feature of the EMU crisis that, as I have always adamantly pointed out, has many national idiosyncrasies. Moreover, the object of B&D's criticism is the saving glut hypothesis as an explanation of the American crisis, and not the EMU crisis. After all, B&D are keen to underline that CA imbalances "matter greatly" (2015, p. 3) and that

current account deficits may go hand in hand with elevated risks of sudden stops (...), ... Specifically,[they] may be an indication of the underlying build-up of financial risks and exposures, either domestically or abroad, *which typically takes place* in conjunction with macroeconomic outcomes that coincide with a current account deficit (e.g. credit-fuelled consumption booms). (ibid, p. 26).

Finally, their welcome invitation is not to reject the notion of BOP crisis, but rather to take "[l]arge current account imbalances" as "useful indicators that can signal elevated macroeconomic risk" and that "must be complemented by examination of gross flows and gross positions to fully assess financial stability risks" (ibid, p. 29).

## Conclusions

Based on scattered suggestions from B&D, De Grauwe, Lavoie and Wray, Febrero et al. criticise the BOP view of the EMU crisis. I have no major objections to most of the single aspects of the crisis pointed out by these authors, except that they appear to underlie specific sides of the EMU crisis, while missing a unifying and realistic explanation. These authors all share some Minskian-Wicksellian explanation of the EMU crisis as a banking crisis. While this is a typical feature of most crises in the capitalist system, I find that the events of the EMU are put in a clearer light by stressing analogies with previous international financial crises that involved financial liberalisation, fixed exchange rate regimes and core-periphery relations. Specific semi-automatic mechanisms differentiate a BOP crisis in a currency union from a traditional one (another characteristic of the EMU is the mercantilist power at its core, mighty but unable to provide leadership). Unfortunately,

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economies have been also the non-conventional, quantitative easing measures undertaken by major central banks.

<sup>21</sup> For instance, the Irish, Icelanders and Cypriots intermediated an amount of funds that was oversized in relation to their GDPs. However, no large troubled European economy has seen such disproportions in gross capital flows, while in Spain, the level of net liabilities (explained by accumulated CA deficits) reached alarming levels.

these mechanisms give De Grauwe, Lavoie, Wray and Febrero et al. the illusion that a BOP crisis in a currency union is impossible.<sup>22</sup> However, just as in a FERR, and in spite of T2, refinancing operations and ELA, the EMU is potentially reversible, as the Greek case demonstrated (Whittaker, 2016, p. 2 and passim), although this would be the extreme political decision. Given the costs (at least temporary) that all sides would incur if the currency union were to break up, austerity policies are still seen by European politicians as a tolerable price to pay to keep foreign imbalances at bay - with the sweetener of some ECB support, for as long as Berlin allows the ECB to provide it. The austerity measures that accompanied the ECB's more proactive stance are clearly to police a moral hazard problem. De Grauwe, Lavoie and Wray finally also denounce the lack of the "right institutions" in the EMU as the ultimate cause of its crisis. It is well to reason that "if-the-EMU-were-the-U.S. we would not have had a crisis, or we would have already solved it", though I prefer to look at the EMU for what it is, the result of a deliberate, conservative political design without feasible alternative except its break up (Cesaratto 2017b).

## References

- Baldwin, R. and Giavazzi (eds.), F. (2015a), 'The Eurozone Crisis: A Consensus View of the Causes and a Few Possible Solutions', available at: <http://voxeu.org/print/59421>
- Baldwin, R. and Giavazzi, F. (2015b), 'Introduction' to Baldwin and Giavazzi (2015a), available at: <http://voxeu.org/article/eurozone-crisis-consensus-view-causes-and-few-possible-solutions>
- Barba, A. and De Vivo, G. (2013), 'Flawed currency areas and viable currency areas—external imbalances and public finance in the time of the euro', *Contributions to Political Economy*, **32** (1), 73–96
- Barba, A. and Pivetti M. (2009), 'Rising Household Debt: Its Causes and Macroeconomic Implications—A Long-Period Analysis', *Cambridge Journal of Economics*, **33** (1), 113-137.
- Bernanke, B. (2005), 'The global saving glut and the U.S. current account deficit', speech at the Sandridge Lecture, Richmond, 10 March.

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<sup>22</sup> Since problems of balance of payments are supposed to be non-existent, or not relevant, aggregate demand might be sustained in all countries, ignoring their external balances. However, in a policy-oriented paper (Uxó and Álvarez 2016), one of the authors takes the BOP problems very seriously, pointing out that: "higher growth ... necessary for reducing the Spanish unemployment rate as fast as possible ... will probably be translated into a deterioration in the current account balance as well. This raises some concerns on the possible limits of 'one country Keynesianism', whose potential relevance is highlighted by the current account imbalances registered within the European Monetary Union between 2000 and 2007. Those (unsustainable) imbalances were mostly related to persistent differences in the growth rates of its members, and they can be considered one of the main causes of the current crisis and its severity (Uxó et al., 2011)". Current account deficits are seen as acceptable if associated with faster capital accumulation, accompanied by industrial policies aimed at reducing the propensity to import and to sustain exports (policies unfortunately prohibited by the EU).

- 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*, **33** (2), 147–210
- Blustein, P. (2016), *Laid Low. Inside the Crisis That Overwhelmed Europe and the IMF*, Waterloo (Ca): CIGI.
- Bordo, M. D. (2014), 'Tales from the Bretton Woods', NBER Working Paper No. 20270.
- Bordo, M. D. and James, H. (2013), 'The European Crisis in the Context of the History of Previous Financial Crises', NBER Working Paper no. 19112
- Bordo, M. D., Meissner, C. and Redish, A. (2003), 'How <original sin> was overcome: the evolution of external debt denominated in domestic currencies in the United States and the British dominions, NBER Working Paper No. 9841.
- Borio, C. and Disyatat, P. (2011), 'Global imbalances and the financial crisis: Link or no link?', BIS Working Papers no. 346.
- Borio, C. and Disyatat, P. (2015), 'Capital flows and the current account: Taking financing (more) seriously', Bis Working Papers no. 525.
- Cesaratto, S. (2017a), 'Initial and final finance in the monetary circuit and the theory of effective demand', *Metroeconomica*, 68 (2), 228–258, available at: <http://onlinelibrary.wiley.com/doi/10.1111/meca.12132/full>
- Cesaratto, S. (2017b), 'Alternative Interpretation of a Stateless Currency Crisis', *Cambridge Journal of Economics*., <https://doi.org/10.1093/cje/bew065>, working paper version available at: <https://www.deps.unisi.it/it/ricerca/publicazioni-deps/quaderni-deps/anno-2016-da-n725-n/736-alternative-interpretations>
- Cesaratto, S. (2017c), 'Beyond traditional monetary circuit: endogenous money, finance and the theory of long-period effective demand', Storep annual conference, Piacenza, June, mimeo.
- Cesaratto, S. (2016), 'The modern revival of the Classical surplus approach: implications for the analysis of growth and crises', Quaderni DEPS no. 735.
- Cesaratto, S. (2015a), 'Balance of Payments or Monetary Sovereignty? In Search of the EMU's Original Sin – Comments on Marc Lavoie's The Eurozone: Similarities to and Differences from Keynes's Plan', *International Journal of Political Economy*, **44** (2), 142-156.
- Cesaratto, S. (2015b), 'Unlimited Targets? Some pointers', available at: <http://nakedkeynesianism.blogspot.it/2015/10/unlimited-targets-some-pointers.html>, 1 October (accessed 8 February 2016).
- Cesaratto, S. (2013), 'The implications of TARGET2 in the European balance of payments crisis and beyond', *European Journal of Economics and Economic Policy: Intervention*, **10** (3), 359-382.
- Cesaratto, S. and Stirati, A. (2011), 'Germany in the European and global crises', *International Journal of Political Economy*, 39 (4), 56–87.
- Constantine, C., Reissl, S. and Stockhammer, E. (2016), 'Neoliberalism, trade imbalances and economic policy in the Eurozone crisis', Kingston University London, Economics Discussion Papers no. 2016-3.
- Chen, R., Milesi-Ferretti, G. M., and Tressel, T. (2012), 'External Imbalances in the Euro Area', IMF Working Paper 12/236. Washington, DC.
- De Grauwe, P. (2011), 'The Governance of a Fragile Eurozone', CEPS working document no. 346.

- De Grauwe, P. (2013), 'Design Failures in the Eurozone: Can they be fixed?' London School of Economics and Political Science, LEQS Paper no. 57/2013.
- Dejuán Ó., Febrero E. and Uxó J. (eds.) (2013), *Post-Keynesian Views of the Crisis and its Remedies*, London: Routledge.
- Dejuán Ó. and Febrero, E. (2010) The failure of a path of growth driven by household indebtedness (Spain, 1997–2009), *Economie appliquée*, vol. 63, no. 1, 63–78
- Diaz-Alejandro, C. (1985), 'Good-bye financial repression, hello financial crash', *Journal of Development Economics*, **19**, 1–24.
- Draghi, M. (2012), 'Speech at the Global Investment Conference in London', 26 July, available at: <https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>
- Durand, C. and Villemot, S. (2016), 'Balance sheets after the EMU: an assessment of the redenomination risk', Documents de Travail de l'OFCE no 2016-31,.
- Eichengreen, B., Jung, N., Moch, S., and Ashoka M. (2014), 'The Eurozone Crisis: Phoenix Miracle or Lost Decade?' *Journal of Macroeconomics*, **39**, part B, 288-308.
- Eichengreen, B., Hausmann, R. and Panizza, U. (2005), *Other Peoples' Money: Debt Redenomination and Financial Instability*, Chicago: University of Chicago Press
- Febrero, E., Uxó, J. and Bermejo, F. (2017), 'The financial crisis in the Euro Zone. A balance of payments crisis with a single currency?' *Review of Keynesian Economics*, forthcoming; working paper version available at: <https://previa.uclm.es/dep/daef/Docs.%20trabajo.asp>
- Febrero, E. and Bermejo, F. (2013), 'Spain during the Great Recession: teetering on the brink of collapse', in Dejuán et a.(2013), pp. 266-293.
- Febrero, E. and Uxó, J. (2013), 'Understanding TARGET2 Imbalances from an Endogenous Money View', Working Paper no. DT-DAEF 2013/2, University of Castilla-La Mancha
- Febrero, E., Uxó, J. and Dejuán, Ó. (2015), 'The ECB during the Financial Crisis. Not so unconventional!', *Metroeconomica*, **66** (4), 715-739.
- Frenkel, R. (2014), 'What have the crises in emerging markets and the euro zone in common and what differentiates them?', in Stiglitz, J. E. and Heymann, D. (eds), *Life After Debt: The Origins and Resolutions of Debt Crisis*, Basingstoke: Palgrave Macmillan.
- 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.
- Gibson, H., Palivos, T. and Tavlas, G. (2013), 'The Crisis in the Euro Area: An Analytic Overview', Bank of Greece conference on "The Crisis in the Euro Area", Athens, available at: [www.bankofgreece.gr/BogEkdoseis/SCP201328.pdf](http://www.bankofgreece.gr/BogEkdoseis/SCP201328.pdf)
- Gros, D. (2013), 'Foreign debt versus domestic debt in the euro area', *Oxford Review of Economic Policy*, **2** (3), 502–17
- Hobza, A and S Zeugner (2014), 'The <imbalanced balance> and its unravelling: Current accounts and bilateral financial flows in the euro area', *European Commission Economic Papers*, no 520.
- Jakab, Z. and Kumhof, M. (2015), 'Banks are not intermediaries of loanable funds - and why this matters', Bank of England, Working Paper No. 529.

- Keynes, J. M. (1937), 'The <ex ante> theory of the rate of interest', in *The Collected Writings of J. M. Keynes* (D. Moggridge ed.), vol. XIV, part II, London: Macmillan, 1973, pp. 215–23 (originally in the *Economic Journal*, vol. 47, 663–9)
- IMF (2016), 'Greece: Staff Concluding Statement of the 2016 Article IV Mission', September 23, <https://www.imf.org/en/News/Articles/2016/09/23/MS092316-Greece-Staff-Concluding-Statement-of-the-2016-Article-IV-Mission>
- Lavoie, M. (2015a), 'The eurozone: similarities to and differences from Keynes's plan', *International Journal of Political Economy*, **44** (1), 3–17
- Lavoie, M. (2015b), 'The eurozone crisis: a balance-of-payments problem or a crisis due to a flawed monetary design? A reply to Sergio Cesaratto', *International Journal of Political Economy*, **44** (2), 157–60
- Lavoie, M. (2016), 'Convergence towards the Normal Rate of Capacity Utilization in Neo-Kaleckian Models: the Role of Non-Capacity Creating Autonomous Expenditures', *Metroeconomica*, **67** (1), 172–201.
- Mundell, R. (1961), 'A theory of optimum currency areas', *American Economic Review*, **51** (4), 657–65.
- Paúl J. and Jorge Uxó, J. (2013), 'The adjustment of current account imbalances within the European Monetary Union since the beginning of the Great Recession,' in Dejuán et al. (2013), pp. 178-196.
- Reinhart, C. M. (2011), 'A series of unfortunate events: common sequencing patterns in financial crises', *Rivista di Politica Economica*, **100** (4), 11–36.
- Reinhart, C. M. and Trebesch, C. (2015), 'The Pitfalls of External Dependence: Greece, 1829–2015', NBER Working Paper no. 21664.
- Serrano, F. (1995) *The Sraffian Supermultiplier*, PhD dissertation, Faculty of Economics & Politics, University of Cambridge.
- Sinn, H-W. (2014), *The Euro Trap: on Bursting Bubbles, Budgets, and Beliefs*, Oxford University Press.
- Uxó, J. and Álvarez, I. (2016), 'Is the end of fiscal austerity feasible in Spain? An alternative plan to the current Stability Programme (2015-2018)', *Documentos de Trabajo del DAEF*, *DT2016/2*, University of Castilla – La Mancha.
- Uxó, J., Paúl, J. and Febrero, E. (2011), 'Current Account Imbalances in the Monetary Union and the Great Recession: Causes and Policies', *Panaeconomicus*, **5**, Special Issue, 571-572.
- Whittaker, J. (2016), 'Eurosysteem debts do matter', MPRA Paper no. 69235, University Library of Munich, Germany.
- Wray, L.R. (2015), *Modern Monetary Theory* (2<sup>nd</sup> edition), Basingstoke: Palgrave Macmillan.
- Wray, L.R. (2012), 'MMT and the euro: Are Current Account Imbalances to Blame for the Euro Disaster? Part 1', available at: <http://www.economonitor.com/lrwrap/2012/07/12/mmt-and-the-euro-are-current-account-imbances-to-blame-for-the-euro-disaster-part-1/>