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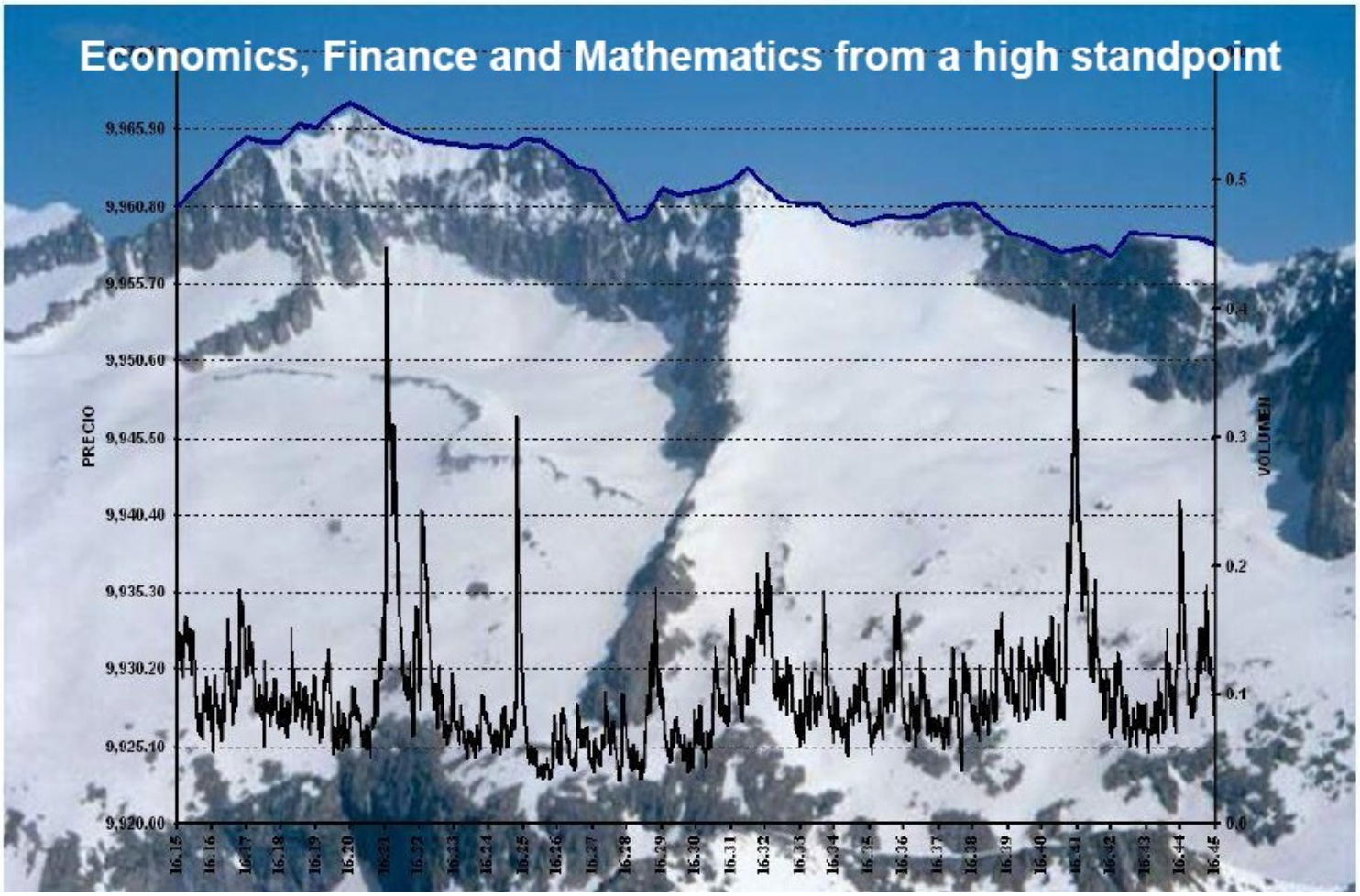

The financial crisis in the Euro Zone. A balance of payments crisis with a single currency?

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DT 2016/1

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Edita:
Departamento de Análisis Económico y Finanzas de la UCLM
Teléfono: 34 967 599 200. Extensión 2143
http://www.uclm.es/dep/daef/
Depósito Legal: AB-351-2009
ISSN: 1989-4856

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07 February, 2016

Abstract
In a pegged exchange rate system, a balance of payments crisis happens when serious doubts arise about whether a debtor country holds sufficient international reserves to keep the country's fixed exchange rate. In the Euro Zone, doubts that banks and governments of peripheral countries could settle debts when they matured led to a massive capital outflow after the fall of Lehman Brothers. However, the ECB offset massive financial capital withdrawals with a huge inflow of reserves to the Euro Zone periphery.
In some contributions, Cesaratto holds that the situation in the Euro Zone resembled a balance of payments crisis, and that the ECB rescued peripheral countries through the TARGET2 system. He sees the Euro Zone as a fixed exchange rate regime.
Conversely, other authors reject this view, arguing that the Euro Zone crisis is more the consequence of bad bank behaviour, with a mistaken initial institutional design making things even worse.
In this paper we discuss whether the Euro Zone countries experienced a balance of payments crisis and if the ECB stealthily bailed out peripheral countries or whether it just did what it had to do to keep control over the overnight interest rate and to keep the payment system running smoothly. The fact that the Euro Zone is not a fixed exchange regime but a currency union, and the lack of some institutions are pivotal elements in this discussion.

Key-words: Euro Zone, Balance of payments crisis, Monetary sovereignty, TARGET2, capital flows, financialization, money manager capitalism

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1. Introduction

Is the Euro Zone experiencing a balance of payments crisis? What has been the role played by the TARGET2 system? These two questions are at the centre of this paper. A large number of economists from different theoretical backgrounds (see for instance Baldwin and Giavazzi, 2015) hold that there is a balance of payments (BoP) crisis in the Euro Zone (EZ) caused by excessive cross-border borrowing and lending amongst EZ countries to fund current account imbalances, followed by a sudden stop once a crisis of confidence hit investors. Governments of debtor countries had to be bailed out as their debt became unsustainable, often after transforming private debt into public debt, because neither devaluation nor the monetization of debt by central banks were an option. The existence of a payment system in the EZ, the so called TARGET2 system (T2), allowed GIIPS (acronym for Greece, Ireland, Italy, Portugal and Spain) to delay the adoption of painful measures to rebalance their external sector. However, T2 imbalances have been considered an unstable and transitory solution to the current mess and peripheral countries have had to implement fiscal consolidation and internal devaluation, in exchange for additional financial assistance. T2 imbalances are widely viewed as a stealth bailout by the ECB to troubled countries, which end up in real resource transfers from surplus to deficit countries.

This BoP view has been challenged by a minority of authors. There are, in essence, three arguments against this standpoint: the existence of the T2, the divorce between monetary and fiscal authorities and an oversized financial sector with economies relying too much on bank debt. This position has been defended, amongst others by De Grauwe, Lavoie and Wray. It is familiarly known as the monetary sovereignty view or the flawed monetary union view.

We find the monetary sovereignty view more coherent than the BoP view. In this paper we investigate the intricacies relating T2 imbalances and refinancing operations in the frame of the implementation of monetary policy, reaching the conclusion that the ECB had no alternative but to lend to banks when the interbank money market got fragmented and some segments had collapsed. We concede that the T2 combined with refinancing operations are not a panacea and the ECB had to combine refinancing operations with the purchase of public debt.

This paper is organized as follows. In section 2, we briefly review Cesaratto's view (Cesaratto, 2013, 2015a, 2015b) as a representative of the BoP view. Our decision to focus on his position is because his theoretical background is similar to that of Lavoie and Wray (i.e. he accepts the

endogenous money view –e.g. Moore, 1988, Graziani, 2003–and also the Keynesian principle of effective demand –Keynes, 1936). Next, section 3 outlines the main tenets of the monetary sovereignty view. In section 4, we offer an explanation of the connection between T2 imbalances and refinancing operations in the context of a collapsed interbank money market. In section 5, we deal with the problem of moral hazard, with special reference to the so called Grexit and also whether current account imbalances are relevant to what is at stake in this paper. In section 6, we wonder whether both views can be reconciled. Finally, section 7 concludes.

2. Cesaratto's Balance-of-Payments view.

Cesaratto (2013, 2015a, 2015b) holds that the crisis in the EZ can be understood as a BoP crisis. His arguments can be gathered into three strands.

In the first place, he argues that the crisis in the EZ fits the following stylized facts of a BoP view. Firstly, with the launch of the euro, we find a highly deregulated financial sector, a liberalized external sector and a strong commitment to keep the exchange rate unaltered. Secondly, there is a high GDP growth rate in the EZ periphery (Greece, Ireland, Spain), growing indebtedness (private in Ireland and Spain, public in Greece and also in Portugal), and large capital inflows in search of higher profitability. Thirdly, wages grow faster than productivity and then inflation grows relatively more in the periphery, especially in the non-tradable sector, including some asset bubbles; this reinforces capital inflows. Inflation also causes, together with a rising GDP growth rate, a trade deficit which for a certain period of time is offset by capital inflows. Fourthly, sooner or later, the current account deficit outstrips the surplus in the financial account balance, so some problems in the BoP come to the surface. Investors begin to undo some positions, and capital inflows slow down because arbitrage opportunities disappear, the financial position of domestic borrowers becomes more fragile and/or because of the risk of returning to former currencies. This leads to some fears that the monetization of financial investments might happen at the expense of capital losses. This unleashes a massive capital outflow in search of a safer harbour.

The analogy with a financial crisis in emerging countries is rather apt, at least in the expansionary phase (Frenkel, 2012). In the contractionary phase, as we will see below, there are also some similitudes although the existence of the T2 system is the source of some differences.

The second argument providing support for the BoP view is that this financial assistance is considered quite similar to that usually provided by the IMF in the past to emerging countries during a financial crisis. Such conditionality has a double justification from the creditors mainstream standpoint. On the one hand, (wrongly, according to Cesaratto) as expected in the Washington Consensus and the efficient market hypothesis, sound finance and liberalized

markets will be expansive in the long run although the short term effects might be detrimental to economic growth. And on the other hand, fiscal consolidation-cum-wage deflation will restore external balance in those economies. This is a necessary condition to settle debts in a flawed, incomplete monetary union which does not have fiscal transfer mechanisms and a single bank resolution mechanism. Cesaratto adds another argument: moral hazard. Without conditionality peripheral countries could continue living beyond their means, increasing unilaterally their indebtedness to the core EZ countries, if they remained within the euro.

The third argument is that, despite there being a single currency in the EZ, it can be viewed as a group of countries whose currencies are connected by a fixed exchange regime. This is justified on the basis that, as an alternative to the austerity measures, in principle, troubled EZ countries could always opt for abandoning the euro, devaluing their currency and recovering monetary and fiscal autonomy. And this "convertibility risk" (to use apt words by Draghi, 2012) is causing bond yield spreads to increase with regard to the German *bund*.

However, there is an element which is rather alien to a BoP crisis within the EZ experience: the T2 system, the automatic settlement system within the EZ. The following figure helps explain how it works.

Figure 1

	Banco de España	
1.a		Reserve -100 T2 liability +100
2.a	+100 MRO, LTRO	Reserve +100
	Banco Santander	
1.b	-100 Reserve	Deposit -100
2.b	+100 Reserve	MRO, LTRO +100

Bundesbank	
+100 T2 claim	Reserve +100
Deutsche Bank	
+ 100 Reserve	Deposit +100

When someone wishes to transfer a deposit from a Spanish bank (e.g. Banco Santander) to a German bank (Deutsche bank, DB), Banco Santander orders the Banco de España to transfer her reserves to DB (1.b). Briefly, and omitting some details, the Banco de España assumes a liability to the T2 system when it debits the reserve account held by Banco Santander at the Central Bank of Spain (1.a). Simultaneously, the Bundesbank acquires a claim against the T2 system whilst it credits the reserve account of the DB. When the DB sees the balance of its account at the Bundesbank increase, it credits the deposit of the transfer recipient.[1]

[1] Some relevant aspects of T2 balances are: they are unlimited and do not prescribe; debtors to T2 have to pay the official interest rate to the system; T2 liabilities are not bilateral (i.e., in our example, the Banco

In a second stage, the ECB replenishes the reserves that Banco Santander had lost before, through a main refinancing operation (MRO) or a long term refinancing operation (LTRO), that the DB is not willing to lend in the interbank money market.

The existence of T2 makes the evolution of the BoP crisis in the EZ different from what happens in emerging countries, because in the former countries international reserves never get exhausted. This mechanism, and on this Cesaratto agrees with Sinn, 2011, is a stealth bail out of the ECB to peripheral EZ countries, because through it banks settled in the deficit countries obtain the necessary reserves to monetize the capital withdrawal which happens in a BoP crisis. Hence, they can delay the adoption of painful measures to rebalance their external sector and they could keep on running current account deficits, or refinancing outstanding debt without any limit.[2]

Notwithstanding, although T2 delays the consequences of a BoP crisis, it does not stop it. As Cesaratto (2015b, p. 16) states: 'In theory the [T2] system could continue indefinitely. However, faced with a lack of any peripheral foreign rebalancing perspective and mounting [T2] imbalances, what actually happened in Europe was a sort of political halt to current account imbalances calling for correction through austerity measures. […] ECB support was intolerable for core countries without continuation of austerity measures in order to avoid any moral hazard incurred by peripheral countries that could otherwise rely on [T2] and refinancing operations to endlessly increase their foreign imbalances'.

The Italian author concedes that in a viable monetary union (see Barba and De Vivo, 2013, for an explanation of the concepts viable and flawed monetary unions), including fiscal transfer mechanisms and a proactive central bank, external imbalances could have continued forever and, therefore, the BoP view would have become meaningless. However, this idea is a chimera because Germany fully rejects the abandonment of her neo mercantilist model and the public opinion in the core countries does not welcome solidarity measures for the periphery.

Finally, the economic policy recommendation which can be drawn from this interpretation of the EZ crisis is that, without any hope that a banking, fiscal and finally political union will be reached soon, it is better for countries that cannot keep apace on productivity and inflation with Germany and other core EZ countries to leave the euro and recover autonomy to manage fiscal, monetary and exchange rate policies.

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de España is not indebted to the Bundesbank) but to all the *owners* of the ECB according to their capital prorrata.

[2] As Garber (2010) noted, and Cesaratto reiterates, banks in the periphery could grant new credit to agents already indebted to the rest of the EZ, and the corresponding deposits (newly created as endogenous money theorists hold) could be used to repay maturing debts that international creditors do not wish to roll over, through the combination of T2 and refinancing operations. See below.

3. The monetary sovereignty view.

There are three main arguments supporting this view: (*i*) the existence of the T2 system, which means the irrevocable shift from a pegged exchange rate system to a unique currency, (*ii*) the divorce between the monetary and the fiscal authorities, and (*iii*) financialization or money manager capitalism, which shifts the origin of the crisis from profligate agents to a slow transformation of the capitalist system, where finances play a more and more relevant role. With due caution, we link the first argument to Lavoie, whilst the second one is usually connected to De Grauwe,[3] and Wray is a representative of the third one.

In Lavoie (2015a) the Canadian author compared the T2 system with Keynes' Plan for an International Currency Union (Keynes, 1942 [1969]), reaching the conclusion –of secondary relevance in his paper– that the crisis in the EZ was not due to BoP constraints, but a banking crisis which transformed itself into a public debt problem (p. 10). In his view, the solution to the mess in the EZ requires, besides a payment system like the T2, a supranational fiscal authority able to implement expansionary fiscal policies, particularly focused on troubled countries, and a central bank willing to act as buyer of last resort of public debt (p.13). Unfortunately, such a centralized fiscal authority does not even exist, and the central bank does not play the role of buyer of last resort of sovereign debt (and when it gets committed to doing so, as within the Outright Monetary Transactions (OMT) in 2012, it requires fiscal austerity-cum-wage deflation from those countries whose debt it is going to buy). Moreover, the European Union (EU) has self-imposed a set of rules forbidding the bailout of a fiscal authority by other EU members.

In his response to Cesaratto (2015a), Lavoie (2015b) rejected the BoP view quite persuasively: a BoP crisis requires the fulfilment of four requirements: (*a*) a country experiences a massive financial capital withdrawal; (*b*) her holdings of international reserves pose a limit to such a withdrawal; (*c*) her holdings of international reserves get exhausted; and (*d*) that country has to adopt a contractionary adjustment (fiscal consolidation, wage deflation, debt default and debt restructuring) with a view to shifting her economy towards a balanced or surplus external position. Peripheral EZ countries have experienced (*a*) and (*d*) but neither (*b*) nor (*c*), because of the existence of the T2 system. And (*d*) –particularly, fiscal consolidation and internal devaluation through wage deflation– is not because peripheral countries had outstripped any hypothetical threshold of indebtedness to core EZ countries after having lived beyond their

[3] Notwithstanding, many post-Keynesian authors had already warned of real problems caused by the divorce between fiscal and monetary authorities, regarding liquidity preference and the yield of public bonds. See for instance Parguez (1999, pp. 93-95) or Kelton and Wray (2009).

means, but the consequence of self-imposed restrictions on the ECB to act as buyer of last resort of public debt.

Regarding points (*b*) and (*c*) mentioned above, Lavoie holds that the mere existence of the T2 system makes the BoP view simply wrong, because the holding of international reserves is no longer a relevant constraint within the EZ: capital outflows automatically lead to T2 imbalances. And these imbalances are unlimited, uncollateralized and can be rolled over as long as needed.[4] Furthermore, T2 imbalances can monetize capital reversals and also newly created external imbalances, in the sense that if peripheral banks are able to provide resident agents with fresh finance (initial finance) to fund current account deficits, the transfer of reserves through the T2 system to exporting countries will lead to final finance, which next may or may not be lent to the bank in the peripheral EZ country in the form of an overnight loan.

Of course, Lavoie realizes that T2 is not the solution for all the problems in the EZ: banks granting *too much* credit may become insolvent, leading to huge losses to equity holders and depositors, and, again, an excessive public debt may cause big losses to its holders but, all in all, we are not dealing with a BoP crisis.

The second argument, complimentary to the T2 one, which justifies why there is not a BoP crisis in the EZ, turns around the notion of the divorce between the central bank and national fiscal authorities. In essence, the argument is that governments need a lender of last resort the same way as private banks do. As De Grauwe (2013) has put it, there are two reasons for this. Firstly, because of the need to stabilize an unstable economy through automatic stabilizers without the fear of a budget deficit ending up as a self-fulfilling insolvency crisis. And secondly, to break the doom loop between banks and fiscal authorities once a banking crisis happens and the fiscal authority has to rescue them.

In the absence of a central bank able and willing to play the role of buyer of last resort of public debt, fiscal authorities running budget deficits may experience a shift from a liquidity problem to a solvency problem, dragging banks burdened with sovereign debt, if financial markets strongly believe that sovereigns are unable to return to sound finances. That is what happened to peripheral EZ countries (see for instance De Grauwe and Ji, 2013). The endeavour to rebalance the public budget simply worsens the situation. This leads De Grauwe (2013, pp. 26 and ff.) to reject the argument of a BoP crisis as well.

[4] It should be noted, also, that when investors transferred their funds from the periphery to core EZ countries, they exchanged risk free central bank reserves for *risky* assets at no cost (Dullien and Shieritz, 2012). Further, the risk implicit in the refinancing loans that go hand in hand with T2 imbalances mean no loss for the European System of Central Banks since their liabilities are not covered by their assets (e.g. De Grauwe and Ji, 2013).

The third argument mentioned above points out to an alternative interpretation of the origin of the current financial crisis. The increasing relevance of finances in the corporations' profitability, income distribution shifts in favour of profits, and the weakening of the corporate profits-productive investment channel had made advanced market economies more and more dependent on bank debt, especially household debt (Turner, 2016, calls this wrong debt. See chapter 4). Wray (2012a) points to a banking crisis, once indebtedness becomes unsustainable, as the initial cause of the crisis in the Euro Zone: 'Any EMU nation can be blown up by its banks even while running a current account surplus. […] This is the "financialization" or "Money Manager Capitalism" story that comes from Hyman Minsky'. The divorce between fiscal and monetary authorities, or chronic current account imbalances were amplifiers of the crisis. A great deal of cross-border borrowing before the Great Financial Crisis was not recorded in financial accounts (see for instance Borio and Disyatat, 2015).[5] Growing bank balance sheets was possible because of the lack of regulation and supervision and because the removal of barriers to the circulation of capital allowed banks to buy assets and issue liabilities –often related to speculative operations– across the whole EZ. When those operations went bad, national governments had to bail them out.

The recommendations of economic policy which can be drawn from this standpoint are that the EZ should increase its degree of integration, towards an economic, fiscal, banking and finally political union. Fiscal harmonization and transfers, and a unique guarantor of bank deposits appear to be essential elements to deal with the crisis. If this is not possible, troubled countries might seriously think about abandoning the euro.[6] In any event, downsizing, regulating and supervising the financial sector across the Euro Zone is an essential ingredient to return to stability and growth.

4. The implications of T2 imbalances for the implementation of monetary policy.

As it is widely accepted, monetary policy is conducted through the management of the interest rate. To do so, once its level has been set, the central bank has to intervene in the interbank money market in order to keep the overnight interest rate close to its target level (see for instance Bindseil, 2004 or Lavoie 2014, chapter 4).

The demand for reserves can be conceived as a function of deposits held by banks whilst the supply of reserves is the item in the central bank balance sheet that equalizes the sum of assets

[5] According to data provided by the ECB, at the end of 2007, Irish gross external debt in absolute levels was roughly the same as the Spanish one, and barely 12% less than the Italian one. However, its GDP was 18% and 12% of Spain and Italy's. Irish monetary and financial institutions had accumulated a gross external debt around 400% of GDP in that time, half of total gross external debt.

[6] On this issue, see Heise (2014).

and liabilities. In the central bank balance sheet we can distinguish three groups of items: autonomous liquidity factors, monetary policy operations and reserves (e.g. Bindseil, *op.cit.* p. 48). When the central bank faces a change in an autonomous liquidity factor (for instance, banks demand more banknotes because of a change in the preferences of their clients) the supply of reserves changes *pari passu*. Consequently, the overnight interest rate changes. In symmetric corridor systems with a reserve requirement, when the supply of reserves falls, the overnight rate of interest goes to the credit facility rate, and banks as a whole have to borrow from the credit facility to comply with the reserve requirement. In this situation, the central bank loses control of the interest rate. In order to recover it, it has to provide additional reserves.

In the EZ, the T2 balances are not present in the ECB's balance sheet, but they are in the balance sheets of national central banks making up the European System of Central Banks, in the form of autonomous liquidity factors. Hence, when a deposit is transferred from, for instance Banco Santander to Deutsche Bank in Germany, the Spanish central bank loses reserves whilst it acquires a liability to the T2 system, and the opposite happens in Germany. The creation of reserves in Germany is not an unwilling favour that Germany grants to Spain but the consequence of the redistribution of a given amount of reserves within a decentralized central bank.[7]

When the interbank money market gets fragmented, with some segments having almost collapsed, and deposits flowing from the EZ periphery to Germany, the overnight interest rate should go to the ceiling rate in the periphery, and to the floor because of the deposit facility, in the core EZ (see Febrero *et al.* 2015).

The ECB has avoided such an outcome introducing the so-called full allotment of reserves at a fixed rate (see ECB, 2011 for an explanation) in October 2008 as part of the enhancing credit support measures to improve the working of the interbank money market with a view to keeping bank credit flowing (see for instance Trichet, 2013). This can be viewed as a horizontal supply of reserves in the peripheral segments of the interbank money market, matched by a vertical demand for reserves which are then transferred through the T2 system to the core EZ, where we have an overnight interest rate gravitating around the deposit facility rate.

[7] When a bank deposit is transferred from one bank to another within national borders, the central bank in that jurisdiction transfers reserves from one account to another. When this transfer involves banks in two different countries within the EZ, the operation is essentially the same with the difference that one central bank debits one reserve account and another one credits another account. The central bank acquiring a claim against the T2 is not forced to create reserves by the other central bank. When that central bank annotates a reserve in favour of the recipient bank, another central bank is destroying the same amount of reserves in another part of the EZ.

One of the conclusions that we may draw from this account is that T2 imbalances are the drivers for refinancing operations which have been the main cause of the expansion of the ECB's balance sheet since 2008. And these refinancing operations are not an ECB stealth bail out of peripheral countries, as Cesaratto (2013, p. 372) has put it, but the unavoidable consequence of the implementation of monetary policy. Hence, we keep our 2013 position quoted by Cesaratto, *ibid*: 'T2 imbalances are the natural outcome of a massive transfer of deposits from the EZ periphery towards Germany; and *the refinancing loans (MRO and LTRO) to Spanish banks are not a separate, voluntary monetary policy of the ECB, but the logical consequence of aiming at keeping a uniform very short term interest rate for the whole EZ and running a smooth settlements system*" (Febrero and Uxó, 2013, pp. 18-19, italics in the original).

The ECB had no choice but to provide reserves to countries experiencing a massive capital outflow. Otherwise: (*i*) it could have lost control over the overnight interest rate, (*ii*) the payment system would have collapsed because deposits in euros in the periphery could not have been used as means of payment in the whole EZ, and (*iii*) it could not deny the provision of reserves to banks holding eligible collateral.

It should be noted that whilst (*i*) holds that the ECB accommodates the demand for reserves in a defensive reaction, as held by post-Keynesian endogenous money theorists, (*ii*) invalidates the BoP view. If the ECB witholds the provision of central bank reserves to peripheral EZ banks, this means the end of the euro.

There is one additional point that deserves some qualification, regarding the possibility of banks rolling over national public debt through refinancing operations provided by their corresponding central bank. The following figure may be useful.

Figure 2

Banco de España	
	- Reserve + T2 liability
+ MRO	+ Reserve
Banco Santander	
+ B(*t*)	+ Deposit
- Reserve	- Deposit
+ Reserve	+ MRO

Bundesbank	
+ T2 liability	+ Reserve
Deutsche Bank	
B(*t*-1)	
+ Reserve - B(*t* -1)	

We assume that, initially, Deutsche Bank holds some Spanish public debt (B(*t*-1)) because of a Spanish trade deficit with Germany. Next, Banco Santander grants a loan to the Spanish government and the latter gives, in exchange, newly issued bonds (B(*t*)). Once B(*t*-1) matures, the Spanish government redeems those bonds using its deposit at Banco Santander. As commented before, this deposit is transferred to Deutsche Bank through the T2 system. Finally, Banco de España provides additional reserves to Banco Santander through an MRO.

Through this mechanism, banks in the periphery became burdened with public debt when governments cannot find buyers for their bonds, preceding the doom loop linking sovereign debt and banking crises.

Cesaratto (2013, p. 372), echoing Garber (2010), points out that (long term) refinancing loans provided by the ECB (particularly in December 2011 and February 2012) refinanced peripheral governments which, combined with T2, could next be transferred to core countries, avoiding a euro bust. With this account, we have seen that (*i*) banks grant credit *ex nihilo* to *creditworthy* borrowers as usual,[8] (*ii*) refinancing operations follow changes in autonomous liquidity factors, (*iii*) the international investors holding peripheral assets benefit from this mechanism because it allows them to change ECB reserves for those troubled assets, and (*iv*) public debt is eligible collateral for refinancing loans.

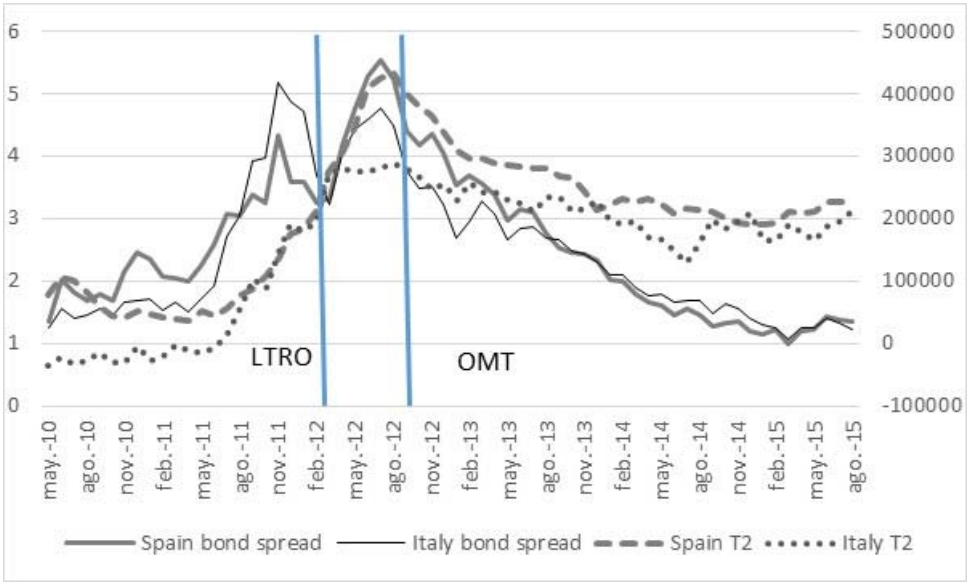
Some additional points regarding this discussion are the following. The reader may realize that refinancing loans to banks experiencing a massive withdrawal of deposits entails no risk for central banks, because central bank liabilities are not supported by central bank assets when the former are denominated in *national* currency (De Grauwe and Ji, 2013). Further, in the event that banks indebted to central banks default, the corresponding central bank might stop paying interest on T2 liabilities and, therefore, central banks holding T2 claims would stop receiving payment. Although this is a risk, we concede that the alternative i.e. denying refinancing loans to banks in the periphery, would mean a much higher risk for investors in the core EZ because the only possibility of recovering their investments in the absence of a T2 system would be that banks monetized their assets.

Finally, it should be noted that T2 imbalances begin to decline once the ECB announces the OMT programme (see for instance Purificato and Astarita, 2015), whereby it is committed to purchasing unlimited amounts of public debt from troubled countries that accept the conditionality imposed by the European Stability Mechanism. With the OMT, the ECB fully assumes its role as buyer of last resort of public debt. Not only do T2 imbalances decline

[8] With those operations, banks assumed some risks associated to public bonds but they also made big gains through *carry trade*. See Acharya and Steffen (2013).

substantially, but also the yield spread with respect to German *bunds* falls as well (De Grauwe and Ji, 2013), despite debt-to-GDP ratios increase.

Figure 3: 10 year bonds spread with German bunds and T2 imbalances. Italy and Spain.



Source: Euro crisis monitor, Banco de España and authors' calculations.

The reader may observe that the large LTRO implemented by the ECB in December 2011 and February 2012 did not prevent either the T2 imbalances or the bond spread with respect to German *bunds* in Italy and Spain from rising. It was the introduction of the OMT (although the financial assistance to Spain, for the recapitalization of insolvent banks made a substantial contribution to improving the situation), that made those variables decline. This is an illustration that T2 imbalances are not a panacea for permanent external imbalances and that a lender of last resort is absolutely necessary.

5. Two caveats

In this section we deal with two arguments that are relevant to our discussion; moral hazard and the relevance of current account imbalances.

5.1. *T2 imbalances, moral hazard and the BoP view.*

Cesaratto (2013, 2015a, 2015b) has pointed out that although T2 imbalances are unlimited and uncollateralized so that debtor countries might run very large trade deficits, there are blurred limits to external indebtedness within the EZ, grounding such a statement on moral hazard problems. The so-called *Grexit* –the threat that Greece might have to leave the euro if she did not accept the Troika's conditions in exchange for (rolling over) financial assistance– can be understood as an example of this situation, with the exception that it is not the debtor country that decides whether or not to leave a presumed fixed exchange rate but the creditor countries that force her to leave the single currency.

In February, 2015, the ECB decided to stop accepting Greek public debt as collateral in refinancing operations (see ECB, 2015a). This forced Greek banks to obtain central bank reserves through the Emergency Liquidity Assistance (for details about ELA see for instance ECB,2007, p. 80, or The Economist, 2015). In late June, 2015, the ECB refused to extend the amount of liquidity that the Central Bank of Greece could lend to Greek banks (ECB, 2015b). This meant that without the liquidity support of the ECB to Greek banks, Greece would have been forced to leave the euro in a short period of time: despite some capital controls and bank holidays, the Greek banking system was doomed to collapse because bank deposits could no longer be used as a means of payment; the only solution would have been to return to the old drachma. And without the ECB's support to banks, the Greek government would also have defaulted on all debts maturing from mid 2015 onwards, denominated in euros (Wyplosz, 2015).[9]

This appears to run against Lavoie's argument, 2015b, p. 159, that if a resident agent in a country hit by the crisis, in this case the Greek government, obtains initial finance from commercial (Greek) banks, then it can make cross-border payments through the T2 system combined with refinanced operations by the ECB, despite payment-recipients (e.g. in Germany or France) not wishing to lend their excess reserves to (Greek) banks. With banks disconnected from the ECB, this is no longer possible.

In our view, the threatened Grexit does not prove the BoP view for two reasons. Firstly, and more relevant, Grexit was a serious Troika threat, a form of blackmail to force Syriza's government to accept the conditions linked to a third bail out, mainly needed to recapitalize her banks and to settle debts to the Troika. During the negotiations, the ECB, which is the central bank of Greece as well, was on the creditors' side. Without any possibility of Greek banks getting central bank reserves, the ECB blew up the T2-refinancing operations mechanism, so the Greek

[9] The Greek government ended up accepting the conditionality on the third bailout, avoiding default in July 2015 (European Council, 2015).

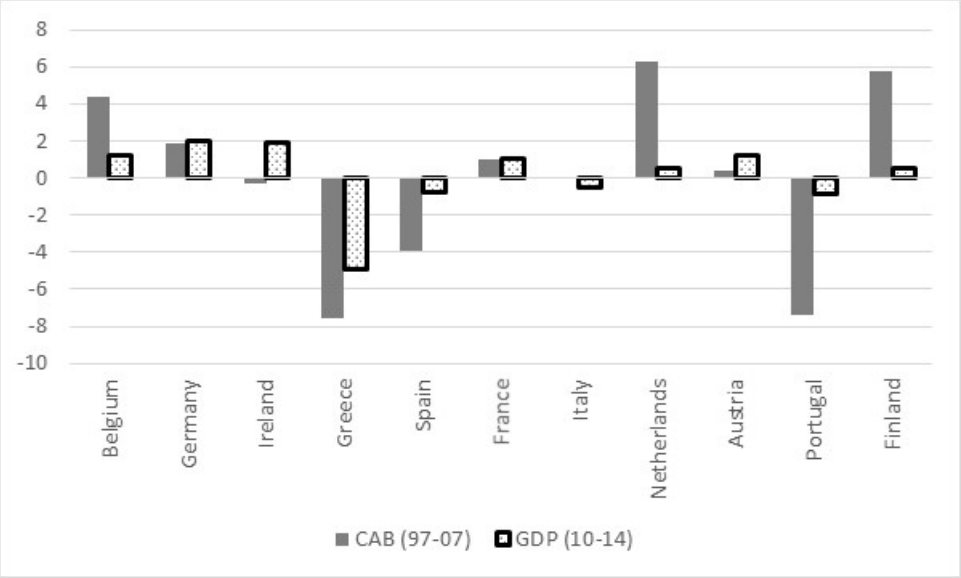
government could no longer be refinanced by Greek banks. But at the same time, the ECB set Greece on a course to leave the euro within a few days, because the payment system, in euros, was going to disappear. And secondly, the decision not to accept Greek public debt as collateral and next to freeze ELA had a strong political motive. In October, 2008 (see ECB, 2008), the ECB had reduced the quality of eligible collateral in refinancing operations from A- to BBB-. Without such a measure we would have been talking of Spanexit, Italexit, *et cetera*, although at that moment in time their fiscal budgets were not alarmingly high. In the case of Greece, despite the profligacy of her governments, it can hardly be claimed that the Grexit was the consequence of a moral hazard problem incurred by Greeks alone. As Wyplosz, *ibid.*, has put it quite clearly, the ECB has had a great deal of responsibility in the Greek mess, rejecting a write-down of Greek debt in 2010, not to mention France and Germany, that backed the ECB with a view to protecting their large banks that had a large exposure to Greek debt, and the IMF (see also for instance Geithner, 2014, especially chapter 11), that feared another Lehman crisis. The financial assistance provided to Greece first in 2010 unleashed a downward spiral of fiscal austerity – falling GDP has brought us to the current situation.

5.2. *Are current account imbalances relevant in a monetary union?*

Gros (2015) writes: "No country which had in 2008 a current-account surplus and/or a positive net external asset position had to endure lasting financial stress –irrespective of the level of its public debt." This author holds that the origin of the current situation is a BoP crisis.

Krugman (2012), basing his opinion on a figure like the one below, reaches a similar conclusion.

Figure 4: Current account balances (%GDP) and GDP growth (averages).



Source: Eurostat, AMECO and authors' elaboration.

Gros holds that this evidence offers a sound ground for the BoP view. The issue 'who-holds-your-debt' plays a pivotal role in his argument: current account surplus countries acquired public debt from debtor countries as a way to fund their external deficits. When they realized that public debt was not riskless they got rid of it, making its price plummet and, therefore, raising long term interest rates. However, we find four drawbacks within this standpoint. Firstly, it is grounded on the loanable funds theory arguing that it has been core EZ countries' savings that have funded a strong domestic demand in the periphery; and when core-to-periphery financial flows dried up, spending in the periphery collapsed, assuming that banks cannot lend what they have not collected before.[10] In our view, and Cesaratto is in agreement, this is another example of the confusion between finance and savings (see Borio and Disyatat, 2015). Domestic banks in the periphery could fund a strong spending with fresh finance (initial finance in the *Circuitiste* slang) creating deposits *ex nihilo*; lower interest rates and an easier access to more liquid international financial and capital markets, where banks can find better conditions for refinancing their loans, contributing to a *more elastic credit supply.* Nevertheless, in no way did savings from the core fund more spending in the periphery. Moreover, the expansion of the periphery created an opportunity to make a profit on excess savings in the core EZ (Hein, 2013). Secondly, the crisis in the EZ periphery, despite a heterogeneous situation, is to some extent the normal, expectable outcome of a protracted period of very high growth funded with bank debt

[10] Other authors (e.g. Mayer, 2011) add that the loss of competitiveness in the periphery caused current account imbalances.

(Bellofiore *et al*., 2014 also add a process of industrial restructuring). This is particularly clear in Ireland and Spain, where the burst of the real estate bubble was the detonator of the crisis, and it did not happen because of the sudden stop of financial inflows, but because of the saturation of that market once prices had skyrocketed, a high percentage of the households had become heavily indebted, a large number of houses did not find a purchaser, and the ECB begun to raise interest rates from 2% in 2005 to 4% in mid 2007. As Whelan (2013) or Febrero and Bermejo (2013) inform, the decline of the real estate sector had begun before the Great Financial Crisis. When the construction sector stops, after having got too big for its boots, the whole economy stops as well. And this causes a banking crisis because the rate of non-performing loans begins to rise, forcing governments to bail out poorly capitalized banks in their jurisdictions. Fiscal consolidation and wage devaluation aggravated the situation.

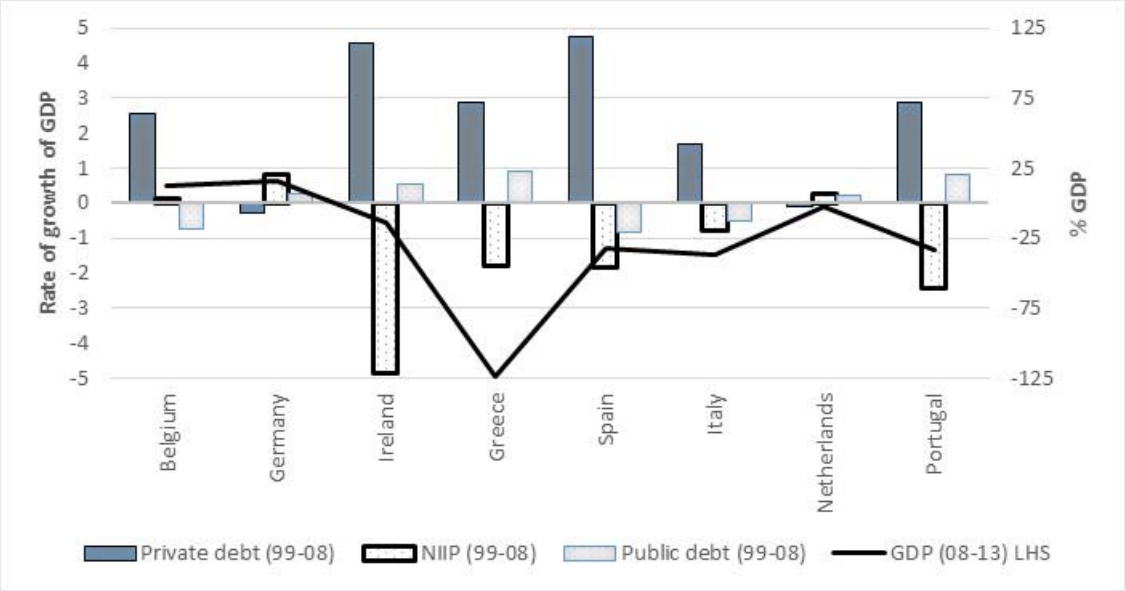
Thirdly, peripheral EZ countries experienced large current account deficits leading to increasingly negative net international investment positions. These external imbalances had to be financed through net capital inflows, which after the Great Financial Crisis began to leave these troubled countries in search of safer harbours. However, focusing on current account imbalances as a mirror for net capital flows may mask much longer and volatile gross capital flows.[11] This is particularly relevant for the Irish case, whose financial sector had become extraordinarily big with respect to her *real* economy (the external debt of monetary and financial institutions reached 400% of GDP in 2008, and gross external debt outstripped 1000% of GDP in 2009).[12]

And fourthly, public debt is no longer riskless because of, as repeated *ad nauseam* in this paper, the divorce between the national treasuries and the system of central banks. Further, the absence of a supervisor, a single banking resolution mechanism and a credible deposit guarantor were important contributions to this mess.

[11] Lane and McQuade (2013) find that the co-variation between domestic credit growth and the current account balance is not close. See also Broner *et al*. (2013).

[12] Between 1999 and 2008, the ratio of domestic debt to GDP (including households, non-financial corporations and government) increased roughly 130 p.p., and accumulated net borrowing from the rest of the world rose 15 p.p.. However, according to ECB data, gross external debt increased 580 p.p. and gross external debt of monetary and financial institutions increased 225 p.p.

Figure 5: Changes in private debt and public debt, net international investment position and GDP growth.



Source: Eurostat, ECB, AMECO and authors' elaboration. Note: Belgium's private debt increase is much lower when we use consolidate debt figures, as IMF, 2013, p.5, informs.

To sum up. Countries with higher domestic credit growth have experienced higher than average GDP growth, with the exception of Portugal, until 2007, followed by a deeper recession, between 2008 and 2013. This has happened in the context of financialization and money manager capitalism. Higher GDP growth has come with a loss of competitiveness and increasing current account imbalances. Banks in the periphery have refinanced the credit that they granted before in international financial markets, offering an attractive yield to savings in the core. But gross capital inflows had a very loose relation to current account imbalances. And the cause of the crisis in the periphery is mostly due to the unsustainability of a debt-led growth pattern, not a BoP. The sudden stop and the capital reversal observed since 2009 is the consequence of increasing risks from the self inflicted rule by means of which the ECB does not buy sovereign debt either in primary or secondary markets. Without such a safety cushion national banking industries and sovereigns can default, as it is well known.

6. Is a reconciliation between the BoP and the monetary sovereignty view possible?

Some authors have pointed out that the BoP and the monetary sovereignty view might not be so far from each other and that differences are grounded on minor details. We find three positions. Firstly, that there is a BoP in the EZ, but only in the expansionary phase, when peripheral EZ countries grow accumulating a number of imbalances (Cesaratto, 2015, informs on this view). Secondly, the BoP view holds because the EZ misses the mechanisms, existing in stand-alone countries, to restore the equilibrium in troubled countries: in essence, a

supranational fiscal authority able to make transfers amongst regions and a centralized bank resolution mechanism. If these mechanisms were present in the EZ we would not be talking about a BoP crisis (Vernengo, 2015). Finally, there is some degree of subjectivity regarding whether the EZ can be viewed as a currency union or as a group of countries whose currencies are tied by a fixed exchange rate. If the second case is acceptable (Cesaratto, 2013, considers that the EZ is closer to a fixed exchange rate regime, because it is a flawed currency union) the EZ has suffered a BoP crisis.

Cesaratto, 2015c, rejects any possibility of reconciliation arguing that there is a certain debt threshold that if trespassed and hence incurring a moral hazard problem, leads to creditor countries imposing restrictions on debtors, fiscal austerity and internal devaluation.

In our view, agreeing with Cesaratto, such a reconciliation is impossible but for different reasons. The EZ is a monetary union, although it is incomplete. As such, it has a single currency, which is different from a fixed exchange rate regime. What makes the difference is that there is one single central bank with a single monetary policy for all her members and a single payment system across the whole monetary union. The T2 settlement system invalidates the restriction of international reserves making the BoP view irrelevant. T2 imbalances and refinancing operations go hand-in-hand and cannot be separated when the interbank money market does not distribute adequately a given amount of reserves if the ECB aims to implement a single monetary policy for all its members. Further, as post-Keynesian authors hold, a central bank can control not only the short term interest rate but also the long term rate (see for instance Rochon, 1999, pp. 32-36, regarding liquidity preferences). This requires that the central bank has to accept playing the role of buyer of last resort of public debt. The problem in the EZ is with the fiscal implications of the implementation of such a monetary policy. Particularly, when the central bank purchases public debt from a particular government its yield falls (e.g. the ECB with the OMT) which might benefit a profligate government. A possible solution is, as Henning and Kessler, 2012, have put it, that national governments agree to self-impose running balanced budgets, like states in the United States, in order to avoid irresponsible indebtedness. Yet, this happens because the US federal government provides fiscal support to states when required, and also there is a centralized mechanism (which depends on the Treasury and the Fed) able to manage the resolution of a banking crisis and to provide bank deposit insurance in cooperation with the federal fiscal authority. De Grauwe (2013) has suggested a separation of responsibilities so that the ECB could take care of the role of lender of last resort, whilst the European Commission could control the moral hazard problem that the former might lead to. With the OMT, it looks like the ECB is assuming both roles and this is not a good idea because it goes against the ECB's independence when it gets involved in political decisions that correspond to

other institutions. With the adoption of the Six-pack, the Two-pack, the Fiscal compact, and so on (for details, see Dodig and Herr, 2015) EZ members are committed to avoiding moral hazard problems. The drawback, however, is that the supranational fiscal authority which could cushion the effects of a recession is underdeveloped, and the same holds for the banking union.

7. Conclusions

There are two views aiming at providing an explanation of the crisis in the EZ: the BoP view and the monetary sovereignty view. We have focused on Cesaratto's view in favour of the BoP crisis because the theoretical frame that supports his view is quite similar to ours (briefly, endogenous money and the Keynesian principle of effective demand). There are three essential elements giving support to this view: strong similarities with what has happened in emerging markets affected by a financial crisis, a convertibility risk, and a moral hazard problem.

In our view, sympathetic to the monetary sovereignty view, the BoP view is incorrect because of two elements: the existence of the T2 system and the divorce between the monetary and fiscal authorities. In this paper, we have argued that T2 imbalances have to go hand-in-hand with refinancing operations, when the interbank money market gets fragmented, but T2 imbalances combined with refinancing operations alone are not enough to prevent a sovereign and banking crisis: the ECB should play the role of buyer of unlimited amounts of public debt, like the OMT though without any conditionality.

The so-called Grexit, and the relevance of current account imbalances have been taken into account because they are factors that, apparently, contradict our position. We hope to have persuaded the reader to the contrary.

Lastly, we have found that both views are incompatible and cannot be reconciled. Cesaratto reaches the same conclusion, grounded on the moral hazard problem: if core countries do not wish to abandon their neo mercantilist growth models and public opinion does not accept the consequences of further economic, fiscal and political integration, peripheral indebtedness to the core EZ has a limit, that if trespassed requires external financial assistance and a rebalancing of their economies. Just like emerging countries after a BoP crisis. For us, with T2 there is just one currency. This means that if foreign exchange markets did not even exist, there could not be a BoP crisis, so that the cause of the crisis should be found elsewhere. We believe that a good candidate is bad bank behaviour, granting too much credit, which dragged national governments. And due to failures in the design of the monetary union, the ECB has found too many obstacles to playing the role of lender of last resort to governments and also to assuming its role in the resolution of a bank crisis. There is one point of agreement in these two views. If further integration is not possible, we should seriously consider abandoning the euro.

Acknowledgements

Comments from Sergio Cesaratto and Óscar Dejuán are gratefully acknowledged. The usual disclaimer applies.

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