Alvaro Cencini (Switzerland)

Can the ECB save the Euro zone?

Abstract

The European project of monetary unification is under threat as never before. It is, therefore, high time to point out what went wrong and what should be done to reform the Eurosystem accordingly. This paper shows that Euro zone member countries are de facto still lacking a single currency and a monetary system that would allow for the final payment of cross-border transactions. Starting from the RTGS mechanism adopted by the Eurosystem and from a comparison with the working of domestic payment systems, it describes the changes required to transform the ECB into a bank of central banks capable to guarantee the existence of a true system of intra-European payments, with or without a single European currency (that is, with or without the loss of Euro zone countries' monetary sovereignty).

Keywords: European monetary unification, Euro zone, TARGET2 system, monetary reform, monetary sovereignty, supranational money.
JEL Classification: E42, F02, F33, F34.

Introduction

The first aim of this paper is to investigate the actual working of the Eurosystem to verify whether the Euro is its single currency, and whether the present RTGS (Real-Time Gross Settlement) system operated by the European Central Bank (ECB) enables the final payment of cross-border transactions. Its second objective is to advocate two alternative reforms for the Eurosystem. In fact, a comparative analysis of the way domestic payment systems operate shows that the Eurosystem is not a coherent European monetary system yet, and that the euro is not its single currency (sections 1 and 2). Things being what they are, the question of the loss of Euro zone member countries' monetary sovereignty comes once again to the fore. In particular, it is necessary to ask anew the question of whether it would be better for these countries to recover their monetary sovereignty or give it up for good in exchange for a new system guaranteeing the transformation of their domestic currencies into a single one. It is more than likely that some Euro zone member countries like the GIIPS (Greece, Ireland, Italy, Portugal and Spain) would have coped better with the economic and financial crises if they had had the opportunity to implement the monetary policies better suited to their specific conditions. Their sacrifice would have been meaningful if it had been compensated by the introduction of a single currency capable to grant monetary stability to the Eurosystem. This not being the case, Euro zone countries should reconsider their choice and re-evaluate advantages and disadvantages of monetary unification (section 3). Now, this exercise would be useless if these countries were once more confronted with two alternatives: either 1) loss of monetary sovereignty and introduction of a single European currency; or 2) re-introduction of monetary sovereignty and exchange rates instability. Both alternatives have serious negative implications and it would be tragic if no other alternative was on offer. Fortunately, such an alternative exists: it consists in the implementation of a RTGS mechanism operated by the ECB and allowing for the final payment of cross-border transactions through the *circular* use of the ECB's currency (the Euro). This solution is advocated in the fourth and last section of the paper, where it is shown that, by flowing from and to its point of emission (the ECB), the Euro would guarantee the automatic and costless stability of exchange rates between currencies of the member countries of the new Eurosystem. Even though my 'revealed preferences' go to this third alternative, I have devoted the first part of section 3 to the reform that, if implemented, would allow for the European project of monetary unification to be fulfilled. I leave it to my readers to elect the solution better suited to 'contribute to the development of modern, robust and efficient market' infrastructure which serves the needs of their economies and facilitates the development of safe and efficient financial markets' (Kokkola, 2010, p. 19).

1. Is the ECB the central bank of Euro zone members' own national central banks?

In this section, we shall confront the role played by national central banks (NCBs) as *banks of banks* with the role played by the ECB within the Eurosystem, in an attempt to determine whether the ECB is, indeed, 'the bank' of Euro zone member countries' NCBs (see also Rossi (2016)). The rationale for such comparison is clear: within any given country, the central bank is at the head of a system allowing for the final payment of interbank transactions and for the existence of a unique national currency. It is, therefore, obligatory to investigate whether or not the ECB is currently able to fulfil these tasks at the European level. While the question concerning the current status of the Euro will be dealt with in section 2, we shall start our analysis by examining the key principles of a monetary system

Alvaro Cencini, Professor of Monetary Economics, Department of Economics, University of Lugano, Switzerland.

in which interbank transactions are finally paid through the intervention of a central institution acting as an intermediary standing above the parties directly involved.

1.1. How do national central banks guarantee the final payment of interbank transactions? As is well known, bank money is a spontaneous acknowledgment of debt (IOU) issued by banks in order to convey payments between economic agents. Apart from banknotes, which are 'issued' and put into circulation by central banks, the greatest part of national currencies is issued by commercial banks. 'The multiplicity both of issuers of money and of payment mechanisms is a common feature in all developed economies. Commercial banks are the other primary issuers, their liabilities (i.e., commercial bank money) representing, in fact, most of the stock of money' (BIS, 2003, p. 1). Now, each commercial bank is a distinct institution and *a priori* its spontaneous acknowledgment of debt is substantially different from the IOUs issued by any other commercial bank. This means that there are no objective reasons for a commercial bank to accept as a payment the IOU issued by another commercial bank. The principle to be applied here is, indeed, very simple and straightforward: *no one can pay up by getting indebted*. Nobody would deny that an economic agent whose income is null can borrow the sum s/he needs to finance her/his payment, but, in this case, the payment is carried out by using the IOU issued by the economic agent's commercial bank, and not by using her/his own acknowledgment of debt. In this example, our economic agent does not pay either with her/his own income, or by issuing her/his own IOU. What Schmitt (1975) calls the law of 'distancing' between the payer and the institution issuing the IOU used as a means of final payment is always complied with when payments are carried out by banks on behalf of their clients and in favor of economic agents, who are themselves clients of these same banks. Is this also the case when a commercial bank is charged by its clients to pay their economic correspondents, clients of some other commercial bank?

If interbank payments were carried out directly between commercial banks, Schmitt's law would be violated, because the bank of the payee would be credited with a sum of IOUs issued by the bank of the payer. Let us call PB_1 the private bank carrying out the payment on behalf of its client C_1, and PB_2 the private bank of the payee, client C_2. Because of PB_1's direct payment of PB_2, the commercial bank of the payer would be indebted to the commercial bank of the payee, and we would be forced to conclude that the payment of PB_2 has not yet occurred finally. PB_1's acknowledgment of debt is a mere promise to pay and, as such, it cannot be the object of a final payment. In order for the payment of PB_1 to the benefit of PB_2 to be effective, it has to be conveyed by money units issued by a bank that is not itself an element of the set of commercial banks. This is precisely what happens in any RTGS system of payment, usually headed by a national central bank that acts as the bank of banks.

Bankers have been the first to understand the need for a system of payments that solves the problem arising from the substantial difference between the IOUs issued by their respective banks. National RTGS systems of payment have evolved from the systems of interbank clearing elaborated by private bankers and are perfectly in line with the practice of settling interbank payments by using central bank money as a means of final payment. 'In payment systems, the settlement of payments using central bank money means that payments are settled via central bank accounts, where the recipient bank has a claim on the central bank and the paying bank either holds deposits with the central bank or has the option of obtaining credit from the central bank' (Kokkola, 2010, p. 44). Settlement methods have also evolved, moving from net to gross settlement mechanisms, in particular, for large value payment systems. 'In gross settlement, each payment instruction is passed on and settled individually across the accounts of the paying and receiving banks, resulting in a debit and credit entry for each and every payment instruction settled' (ibid, p. 47). Even though the most widespread method is that of real-time gross settlement, other methods are still widely used as, for example, the designated-time net settlement, the multilateral netting and the batch settlement. Instead than providing, yet, another detailed description of the different methods available, we shall delve deeper into the logic of interbank payments in order to show what principles any national system of payments must comply with to guarantee the final payment of domestic transactions.

The first principle is that payments between commercial banks have to be carried out in central bank money. This is to say that commercial banks must never pay each other directly, the intermediation of their national central banks being a logical requirement to avoid interbank payment being financed by a mere promise to pay, that is, through the transfer of mere IOUs of the debtor bank. The second principle is less obvious and could come as a surprise to the reader used to identify money with a *net asset*. Indeed, to the same extent that commercial banks issue their money by spontaneously acknowledging their debt, central bank's money is by definition the spontaneous acknowledgment of debt of central banks. This clearly means that central bank money itself cannot finance any net purchase, that is, it cannot be the object of any interbank payment. It is a fact that interbank payments

have to be settled using central bank money, but it is also a fact that central bank money cannot be the final settlement asset, because it defines the central bank's IOU. If the payment of PB_2 in central bank money was final, an acknowledgment of debt would be endorsed with the power to finally discharge a debt, an obvious contradiction. This explains why interbank payment systems have developed a mechanism of clearing with the explicit objective of reducing the risk of interbank payments remaining unsettled.

Analysis shows that the mechanism of clearing, in particular the one applied by RTGS systems, allows for payments between commercial banks to be internalized, thus guaranteeing the circular or vehicular use of central bank money. Indeed, the gross settlement mechanism of RTGS systems requires the balancing of every single payment carried out by the NCB on behalf of commercial banks. Let us show how such a system would work when only two commercial banks are concerned, neither of which has a positive credit on its settlement account with the central bank. This simplified example has the advantage of highlighting the essential logical features of RTGS without taking the existence of positive deposits of commercial banks with their central banks as given. Having grasped the true significance of the principle of *gross settlement*, the reader will, then, easily complete the picture by extending the example so as to include multilateral clearing between numerous commercial banks and the building up of settlement accounts with the central bank.

Let us suppose that private bank 1 is asked by its client C_1 to pay a sum of x money units to the benefit of C_2, client of another private bank, PB_2. The payment has to be carried out via the central bank, *CB*, which is asked to pay PB_2 on behalf of PB_1. If the payment occurred straight away, *CB* would credit PB_2 and debit PB_1 in central bank money, while PB_1 would debit C_1 and PB_2 credit C_2 (Table 1).

Table 1. The first phase of an interbank payment

PB_1			
Assets		Liabilities	
C_1	x m.u.	CB	x m.u.
CB			
Assets		Liabilities	
PB_1	x m.u.	PB_2	x m.u.
PB_2			
Assets		Liabilities	
CB	x m.u.	C_2	x m.u.

Table 1 shows the result of an interbank payment between PB_1 and PB_2 as is often believed to actually take place to the complete satisfaction of commercial banks and of the whole economy. Yet, if this was the way interbank payments were settled, a problem would immediately arise as to their finality. Indeed, to claim that PB_2 is finally paid in central bank money once the *CB* credits it, it is to forget that central bank money is an acknowledgment of debt. A payment is final when the bookkeeping relationships between payer and payee no longer imply a net debit (credit), and this is true when payments occur through the intermediation of the central bank. In Table 1, PB_1 is a debtor to and PB_2 a creditor with the central bank, which means that the central bank (*CB*) has not yet completed its role and is still involved as an intermediary between the two commercial banks. It is enough to apply the principle requiring each single payment to be compensated to find a satisfactory solution to our conundrum. In our simplified example, the mechanism of gross settlement requires PB_1 to be credited by *CB* with an amount of x central money units. Since we are in presence of only two private banks, *CB* necessarily clears interbank payments on a bilateral basis, which means that the payment of PB_1 to the benefit of PB_2 must be balanced by a payment of PB_2 to the benefit of PB_1. Practically, this implies that the payment ordered by C_1 can effectively be carried out when it is balanced by an equivalent payment of PB_2's client C_3 to the credit of PB_1's client C_4 (Table 2).

Table 2. The 'internalization' of interbank payments

PB_1			
Assets		Liabilities	
C_1	x m.u.	CB	x m.u.
CB	x m.u.	C_4	x m.u.
C_1	x m.u.	C_4	x m.u.
CB			
Assets		Liabilities	
PB_1	x m.u.	PB_2	x m.u.
PB_2	x m.u.	PB_1	x m.u.
PB_2			
Assets		Liabilities	
CB	x m.u.	C_2	x m.u.
C_3	x m.u.	CB	x m.u.
C_3	x m.u.	C_2	x m.u.

As Table 2 clearly shows, when interbank payments are finally settled, the central bank has fulfilled its task and is no longer involved as an intermediary either with PB_1 or PB_2. Through its intervention, the central bank allows for the internalization of payments, PB_1's client C_4 being paid by C_1 within PB_1, and PB_2's client C_2 being paid by C_3 within PB_2. Finally, it is the income formed in the national economy and deposited with the two commercial banks that finances the payments between their respective clients, and not a mere IOU issued by the central bank.

1.2. How are Euro zone member countries' cross-border payments carried out by the ECB?

The main large-value payment system adopted in the Euro zone is the Trans-European Automated Real-time Gross settlement Express Transfer (TARGET) system. Launched in January 1999, TARGET was replaced by a second-generation system, TARGET2, based on a Single Shared Platform (SSP). 'Three Eurosystem central banks – the Banca d'Italia, the Banque de France and the Deutsche Bundesbank – were mandated to develop and operate the SSP on behalf of the Eurosystem. […] TARGET2 was launched in November 2007 and fully replaced the previous system in May 2008, when the latter ceased operating' (Kokkola, 2010, p. 247). Yet, despite its increased centralization, the Eurosystem remains a system where cross-border transactions are paid in national central banks' currencies. 'Regardless of the single technical platform, TARGET2 is legally structured as a multiplicity of RTGS systems' (ECB, 2007, p. 36). TARGET2 is not the only large-value payment system of the Euro zone. EURO1 is another one, privately owned and operated, but it is relevant to note that '[t]he [EURO1] system settles the final positions of its participants via TARGET2 at the end of the day' (Kokkola, 2010, p. 180). By and large, the real-time gross settlement mechanisms of the Eurosystem are, therefore, systems where payments are finally settled in central bank money and where countries' net positions are entered as credits and debits with the Eurosystem. 'Target balances are claims and liabilities of the individual central banks of the Euro-zone vis-à-vis the Eurosystem that are booked as such in the balance sheets of the NCBs' (Sinn and Wollmershäuser, 2012, p. 474). This forces one to ask the question of whether cross-border payments of Euro zone countries are carried out in national central bank money or in the currency of the ECB. The fact that TARGET2 is a gross settlement system and that TARGET2 balances are 'entered in the balance sheets of the NCBs' (ibid., p. 474) seems to suggest that the role of the ECB is relatively marginal with respect to that of the NCBs. However, the fact that the Eurosystem is operated by the ECB and that cross-border payments between commercial banks flow 'via the target system of the ECB' (ibid., p. 475), seems to show that NCBs are debited and credited with the ECB, which acts as the central bank of NCBs. Or does it?

The answer to our previous question is far from being obvious, in particular, because the ECB is only indirectly implied in the payments that NCBs carry out on behalf of national commercial banks. For example, when a Greek importer pays for his/her imports from Germany, the commercial bank charged to carry out the payment debits the importer's account and incurs a debt to the Greek central bank, which, in turn, credits the Bundesbank. The cross-border payment is, hence, carried out through the mediation of the Greek central bank and the Bundesbank, and in central bank money. It is only as a consequence of this payment between NCBs and of the working of TARGET2 that claims on NCBs are booked as claims on the Eurosystem, most specifically, on the ECB. In our example, a 'Target liability is assigned to the Greek central bank in the amount of the transfer vis-à-vis the ECB, because its liability with regard to the Greek commercial banking system is waived, and, conversely, the Bundesbank receives a Target claim on the ECB' (ibid., p. 475). The main differences between the way interbank payments are carried out by NCBs within national banking systems and the mechanism of cross-border payments in the Eurosystem result from the fact that the latter are not carried out by the ECB and that, despite appearances to the contrary, they are not compensated on a gross settlement basis. This latest claim is clearly corroborated by what reported in the ECB *Monthly Bulletin*, October 2011: '[t]he settlement of cross-border payment flows between banks in the Euro zone results in intra-Eurosystem obligations, which are aggregated and netted out at the end of each business day. This results in each NCB having either a claim (i.e., a positive TARGET2 balance) or a liability (i.e., a negative TARGET2 balance) vis-à-vis the ECB, which is the central counterparty' (ECB, 2011, p. 36). The huge increase in Germany's claims on the Eurosystem (ECB) investigated by Sinn and Wollmershäuser (2012) *is due to the lack of a mechanism allowing for the final payment of cross-border transactions on a gross basis, that is, of a system where each NCB involved in a cross-border payment is debited-credited or credited-debited by the ECB*. This amounts to saying that 'TARGET2 lacks international payment finality' (Rossi, 2012, p. 227). To maintain that net payments between NCBs are settled because the claims of one NCB are compensated by the liabilities of another NCB is to misunderstand the principle of double-entry bookkeeping, which imposes the debit-credit or credit-debit of each NCB.

The lack of a true clearing system operated by the ECB has serious consequences for Euro zone member countries, the most worrisome being the sovereign debt crisis resulting from the payment of net total imports, commercial and financial (Schmitt, 2014). Contrary to what Sinn and Wollmershäuser (2012) advocate, the liabilities accumulated by the GIIPS vis-à-vis the Eurosystem are not the result of their having benefited from 'free lunches', but instead that of a

totally unjustified pathological indebtedness. As shown by Schmitt (2012, 2014), GIIPS's net total imports have been fully paid by their residents, which makes it absurd to burden their countries with an external (or sovereign) debt that weighs heavily on their economies and pushes their governments to enforce drastic austerity measures on their population. Since the emphasis in the present paper is on the role of the ECB, let us continue our analysis by testing whether or not the Eurosystem is indeed up to the task of guaranteeing the existence of a homogeneous monetary system of payments. In particular, we have to establish if the Euro is the single currency of Euro zone member countries, because, if it were so, cross-border payments within the Euro zone would logically pertain to the category of inter-regional payments and would have to be analyzed accordingly.

2. Is the Euro the single currency of Euro zone member countries?

As is well known, the decision to adopt the Euro as the single currency of the European countries agreeing to adhere to the monetary union became operative in January 1999, and Euro banknotes and coins started to circulate three years later (January, 2002). In order to create a unique monetary zone, Euro zone member countries agreed to give up their monetary sovereignty, being convinced that the advantages deriving from a single currency would outnumber the disadvantages of losing their autonomy with respect to monetary policy matters. The question asked in this section might seem farfetched or uselessly provocative, because it seems an undeniable fact that Euro zone countries have replaced their national currencies with a single currency called Euro. If this were, indeed, the case, payments between residents of Euro countries would have to be considered as 'domestic', because they would take place within a single monetary area. '[I]t follows from the logic of the single currency that all Euro-denominated payment and securities transactions within the Euro zone (i.e., within the borders of the currency area) are 'domestic'. Thus, all Euro-denominated transactions in the Euro zone should be handled in the same way, whether the two parties are located in the same country or in different countries' (Kokkola, 2010, p. 174). Now, an important consequence of the creation of a single or domestic currency area that has so far been underestimated is the transformation, from a monetary viewpoint, of member countries into regions. Payments between residents – German and Greek, for example – would not be, strictly speaking, cross-border payments if the Euro was, indeed, the unique currency used both in Germany and Greece. In the same way as payments between residents of two German Länder do not involve any of them directly, the transactions between German and Greek residents would have no consequence for their countries. In particular, as it would be illogical to charge a region with the debt incurred by any of its residents, it would be a mistake to claim that within a single currency area a member country has to carry the debt of its residents. The whole question of countries' external debt would have no *raison d'être* within the Euro zone, and there would no longer be any reason to worry about Euro zone countries being too heavily indebted with each other. In the light of all these considerations, it is worth the effort to investigate whether or not the Eurosystem is actually up to the task of guaranteeing the existence of a single currency area to Euro zone member countries.

2.1. How are heterogeneous currencies made homogeneous in a national setting? The problem of the creation of a single currency is an old one, and it has acquired all its significance with the introduction of banks and bank money. The fact that bank money is issued as a spontaneous acknowledgment of debt calls for a system of interbank payments allowing transforming the IOUs issued by different banking institutions into a common standard. Commercial banks being institutions fundamentally different from one another, their IOUs are forcefully heterogeneous, and the task of a national banking system is to provide for a common denominator and a mechanism capable to transform them into homogeneous elements of a single system of payments. This has been done by the creation of a system of interbank payments based on a RTGS mechanism operated by a national central bank. Commercial banks' currencies are given a common form through their transformation into central bank money, a result that is obtained thanks to a process in which the central bank acts as a catalyzer. Currencies issued by commercial banks go through a process of catalysis that homogenizes them. They enter this process as heterogeneous IOUs and come out of it as homogeneous units of undifferentiated national money.

The presence of a central bank acting as bank of (commercial) banks and operating a RTGS system of national payments is what makes it possible to have a national banking system and a single national currency within any given country. This sets the rules for the creation of a single monetary zone and a single currency between Euro zone countries. In order to answer the question of the present section, it is, therefore, sufficient to verify if the Eurosystem complies with these rules. In particular, we have to determine if the ECB is a true catalyzer through which national currencies are actually transformed into undifferentiated units of a single currency

called Euro. In other words, what has to be established is whether or not the ECB is, indeed, the bank for the NCBs operating in the European countries that have given up their monetary sovereignty and, by the same token, for the commercial banks active in these same countries.

2.2. The actual state of affairs in the Eurosystem. A perusal of ECB's official publications concerning the Eurosystem shows that interbank payments in the Euro zone are carried out in NCBs' monies, and that the ECB does not entirely fulfil the role of bank of NCBs. If we add the fact that some of the payments between residents of the Euro zone are not even carried out in Euros – 'some cross-border payment flows are not settled in central bank money' (ECB, 2011, p. 39) – it becomes undisputable that the ECB is far from being the catalyzer of the national Euros issued within each country member of the Euro zone. Because of this, the Eurosystem is not yet providing the common standard that transforms heterogeneous national currencies into a single European currency. The lack of a system through which national currencies become homogeneous units of a single currency impinges on the European project of monetary unification. Thus, we are compelled to answer and make it compulsory to answer the question asked in this section in the negative: despite appearances to the contrary and official claims, the Euro is *not* the single currency of Euro zone countries.

Monetary unification cannot result from the mere decision to rename national currencies calling them all Euros. Such a decision can only have a nominal impact, whose effect would merely be that of creating the erroneous belief that monetary unification is fundamentally a matter of nominal denomination. It should, indeed, be clear to everyone that there is much more to it, that the transformation of national currencies into a single currency can only be achieved as the result of the creation of a unified monetary system. This means that all the commercial banks operating in the new monetary area would have to become members of a unified system allowing for their interbank payments to be conveyed using a common currency issued by a supranational central bank. In the same way that a national central bank money is required to convey payments between a country's commercial banks, a supranational central bank money is necessary to convey payments between NCBs. It is the existence of a single monetary system enabling interbank payments that makes it possible for a country to have a single currency. Likewise, it is only through the creation of a unified monetary system operated by the ECB and based on a RTGS mechanism that it would be possible for countries of the Euro zone to replace their national currencies with a true single currency. As long as this is not the case, each Eurozone member country will have merely changed the name of its national currency. *De facto*, each Eurozone country has its own Euro currency, the euros issued by the German banking system being fundamentally different, for example, from the Euros issued by the Greek, Italian or French banking systems, and the latter being essentially different from one another.

The existence of Euro zone countries' external debts is a further proof of the absence of a unified monetary system and of a single currency at the European level. Indeed, if the Euro was the single currency of the Euro zone, from a monetary viewpoint, Euro zone member countries would be reduced to regions of a single monetary system and it would no longer be possible for a Euro zone country to get indebted to any other country within that area. Actually, if the Euro was a true single currency within the Euro zone, payments carried out in Euros between residents of its member countries would settle their transactions without any implication for their countries. For example, payments in Euros carried out by Greek importers would be final and it would be meaningless to maintain that their net imports indebt their country. Being fully paid in an income denominated in units of a single currency, Greece's net imports would have no impact on the country's external debt, in the same way as payments between residents of different regions of a given country do not entail any interregional indebtedness. This is not what happens in the present Eurosystem, where countries whose net imports, commercial and financial, are net incur a debt to the ECB because of the payment carried out by their NCBs on behalf of their commercial banks and in national central bank money. '[A] country's target debt measures the accumulated balance-of-payments deficit with other Euro countries, i.e., the accumulated net outflow of central bank money for the net purchase of goods and assets from other Euro countries' (Sinn and Wollmershäuser, 2012, p. 488).

Sinn and Wollmershäuser's (2012) claim that TARGET2 balances are the mark of a worrisome debt incurred by some countries, mainly the GIIPS, to others, mainly Germany, via the Eurosystem and the ECB has been dismissed by ECB's experts on the ground that 'TARGET2 balances of Euro zone NCBs reflect the uneven distribution of central bank liquidity within the Eurosystem. As there can be no upper limit on the value of payment flows within a single currency area, there can be no upper limit on the TARGET2 balances of NCBs. Limiting the size of TARGET2 balances would be inconsistent with the concept of a currency union' (ECB, 2011, p. 39). Their argument rests on the belief that the Euro

is, indeed, the single currency of the Euro zone member countries, and that, in a single currency area, payments between residents are settled in the single currency of that area. For sure, these experts are well aware that payments between residents that are not clients of the same commercial bank are not directly settled, but require the intervention of the central bank. They do not maintain that payments within the Euro zone are settled with the Euros issued by commercial banks, yet, they fail to see that what cannot be endorsed to commercial banks can also not be granted to central banks. A commercial bank cannot pay another private bank using its own currency, since this would amount to pay by getting indebted, that is, by transferring its own IOU to the creditor. Likewise, a NCB cannot settle its payments with another NCB by using its own acknowledgment of debt. Cross-border payments in the Euro zone require the intervention of the ECB and the use of central bank money that is not issued by any NCB. Yet, the use of the ECB money is not enough to guarantee the final settlement of cross-border payments between Euro zone countries.

Within a national payment system, the NCB money is used as a means to convey payments through a RTGS mechanism that guarantees payments finality thanks to a clearing, and not via a transfer of central bank money. What a national system of payments grants is the vehicular use of central bank money and, through it, the transformation of commercial banks' currencies into a single, national currency. The final settlement of cross-border payments in the Euro zone requires, analogously, the vehicular use of the ECB money. This means that each single payment carried out by the ECB on behalf of NCBs should be netted out thanks to the implementation of a rigorous RTGS mechanism. If this were the case, the Eurosystem would, at the same time, cancel the very formation of external debts between Euro zone countries and avoid the accumulation of TARGET2 balances with the ECB. Westermann (2014: 10) is thus right when he states that 'TARGET2 is not the only item, but it is one of the critical items that have created imbalances in the Eurosystem that appear unsustainable without major reform'.

The reader might find it difficult to understand the concept of money as a mere vehicular means of payment. The distinction between a *means* of payment and the *object* of a payment might sound weird, and it is likely that the claim that payments are always carried out using money and, yet, money is never their object would be a source of misunderstanding rather than a clarification of the nature of monetary payments. Fortunately, it is not necessary to enter into a detailed analysis on the nature of bank money to find out what is still missing in the present Eurosystem and why the Euro is not yet (2016) the single currency it was meant to be. Indeed, the correct understanding of the principles on which the national systems of payments rest is enough to show that they are not complied with by the Eurosystem of cross-border payments.

In TARGET2, cross-border payments are carried out in NCBs' currencies. 'TARGET2 is a real-time gross settlement system operated in central bank money by the Eurosystem. Payment transactions are settled one by one on a continuous basis in central bank money with immediate finality. Since the account of the receiving institution is never credited before the account of the sending institution has been debited, the receiving institution is always certain that funds received are unconditional and irrevocable' (Kokkola, 2010, pp. 178-9). This amounts to saying that cross-border purchases are paid by crediting the banking system of the seller with an amount of IOUs issued by the banking system of the purchaser. This is necessarily so, because any NCB money is, by definition, the acknowledgment of debt of the national banking system that issues it. It seems, therefore, justified to conclude that such a system does neither introduce a mechanism allowing to give a common form to Euro zone NCBs currencies, nor provide a setting guaranteeing the final settlement of payments between residents of Euro zone member countries.

What happens in the actual Eurosystem is rather confused, because, on the one hand, cross-border payments are carried out in NCBs currencies as if the denomination of these payments in Euros was enough to establish the perfect substitutability between them and a single currency, while, on the other hand, TARGET2 balances are held with the ECB and seem to involve the ECB money. Now, if cross-border payments are, finally, settled in NCBs' currencies, the ECB is prevented from being a catalyzer between NCBs currencies and none of the net payments between Euro zone countries is really final, every national money being an acknowledgment of debt. This dismal result would hold true also if it were claimed that what creditor countries are credited with is ECB currency. Even in this second case, the ECB would not complete its function as a catalyzer, because instead of being an intermediary in the transformation of national currencies into a single European currency, the ECB currency would be itself the object of payment of creditor countries.

Within any given country, commercial banks' currencies are given the common form of national currencies, because the central bank changes each of them

into central bank money without attributing to any of them, central bank money included, the status of 'object of payment'. *In interbank payments, commercial banks' currencies are changed into central bank money, which becomes their common denominator*. At the European level, things should work in a similar way, NCBs currencies being changed in ECB money in a circular flow allowing for every cross-border transaction to be finally paid in real terms, the ECB money being a mere 'means' used to convey the payments finally. The RTGS mechanism adopted by every single country has the objective to clear interbank payments carried out in central bank money so that none of them is, finally, settled in money, in full compliance with the principle preventing payments to be settled with the remittance of an IOU.

As we have seen in the first section of this paper, payments are internalized through the vehicular use of central bank money and finally settled by part of the income deposited in each commercial bank. In the present Eurosystem, none of this is granted. Cross-border payments are not conveyed through the circular use of a ECB Euro, and this has the double effect of leaving national currencies heterogeneous and of leaving net cross-border payments, finally, unsettled. In conclusion, if we add also the fact that 'some cross-border payment flows are not settled in central bank money, and are, thus, not accounted for in TARGET2 balances' (ECB, 2011, p. 39), we are forced to claim that, as they actually stand, the Eurosystem and the ECB provide neither the institutional structure nor the mechanism required to make of the Euro the single currency of the Euro zone.

3. What should the ECB do to transform the Euro into a single European currency?

The answer to this question is clear and can easily be derived from the analysis developed so far. The fact that the ECB has already been conceived as the central bank of NCBs and that a RTGS system is already in place makes it easier to address the problem and can substantially shorten the time required to build up a correct system of payments capable to transform the national currencies still existing in the Euro zone into a single European currency. Let us briefly sketch the main lines of the reform required to reach this goal.

3.1. A simple reform that would allow for the creation of a truly unified European monetary system. In order for the ECB to become a proper catalyst through which the currencies issued in the Euro zone are rendered homogeneous, it is necessary that every 'cross-border' payment between residents of the Euro zone be carried out through the intermediation of the ECB. The actual principle according to which cross-border payments are mainly carried out in central bank currencies – 'cross-border TARGET payments are processed via the national RTGS systems and exchanged directly on a bilateral basis between NCBs' (ECB, 2007, p.34) – should be replaced by a rule enforcing the use of the ECB money as the means of final payment of cross-border transactions within the Euro zone. This would provide the Eurosystem with a common standard, the ECB money, which would give a single form to the currencies issued in the Euro zone.

A few remarks are called for to clarify the role of the ECB with respect to NCBs of the Euro zone, and the role of the ECB money as means of payment within the Eurosystem. Let us start with the intervention of the ECB as bank of NCBs. In this supranational role, the ECB would act as an intermediary, and ECB's money would be the vehicle for cross-border payments. The ECB would, thus, convey payments that NCBs are carrying out on behalf of their commercial banks, the latter intervening on behalf of their clients, residents of Eurozone countries. Direct payments between NCBs would no longer be allowed, as is the case for payments between commercial banks operating within a national setting. The ECB would become a kind of umbrella under whose aegis NCBs would *de facto* be transformed into regional banks. In this sense, the Eurosystem would be similar to the US federation of central banks. Yet, unlike what happens in the United States, where inter-district balances are cleared once a year, the rigorous, daily application of the RTGS mechanism would clear all payments between the relevant NCBs and make superfluous any adjustment of their balances. This is not to say that under no circumstance would the ECB carry out interbank payments that are not perfectly cleared. The ECB would, in fact, have the capacity to provide intraday and overnight credits to NCBs that could not immediately balance their ECB money outflows with equivalent inflows. The new Eurosystem would still have at its disposal a whole series of sophisticated instruments to increase the efficiency of cross-border payments and settlement finality between Euro zone member countries. Great attention would still be devoted to the arrangements concerning payment systems oversight, securities market infrastructures, bank credit operations, risk management and prudential banking supervision with the explicit aim, as is already the case today, to guarantee the 'smooth functioning of payment systems and the stability of the financial sector' (ibid., p. 22) However, it has to be clearly stressed that, whatever measures would be taken to improve the functioning of the RTGS mechanism, *the aim of the new Eurosystem would be to comply with the logical principles requiring (central) bank money to be used as a means of final payment and not as the final settlement asset*.

The latest claim brings us to our second remark. Central bank money, whether issued by NCBs or by the ECB, is not created as a sum of income that adds up to that formed through production and ex-

pressed in commercial bank money. The role of central bank money is *to give a common form to the currencies issued by commercial banks and associated to physical output*. Likewise, the role of the currency that would be issued by the ECB in the new Eurosystem would be to transform NCBs' currencies into a single European currency, without increasing the amount of income created by production in the Euro zone. As with any other payment, cross-border payments within the Euro zone are financed by the expenditure of income: this would be guaranteed in the new Eurosystem through the intermediation of the ECB and its currency. The ECB's intervention would, therefore, fulfil two tasks at the same time: 1) it would transform NCBs' currencies into undifferentiated units of a single currency, and 2) internalize interbank payments, which would be finally settled through the expenditure of income and not by the remittance of a mere IOU.

Substantially, the reform presented here and first envisaged by Schmitt (1973) can be summarized in the schematic representation of Figure 1, where the ECB is at the head of a RTGS mechanism thanks to which the payments between two national central banks, NCB_1 and NCB_2, reciprocally compensate.

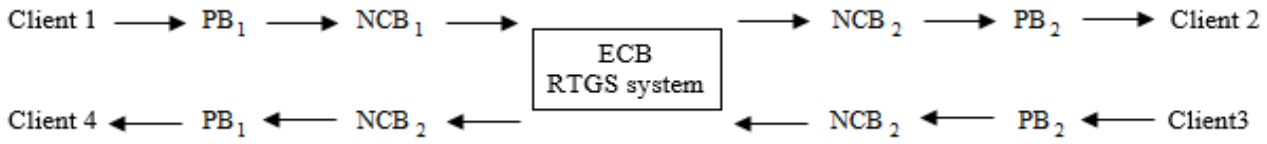

Fig. 1. Schematic representation of the reformed system of cross-border payments

The case represented in Figure 1 is that, of a bilateral transaction between residents of two Euro zone member countries, clients of private bank one, PB_1, and private bank two, PB_2, respectively. The order given by client one, C_1, to her/his bank, PB_1, to pay client two, C_2, is balanced by that given by client three, C_3, to her/his bank, PB_2, to pay client four, C_4. The clearing in real time and on a gross basis is what a RTGS system is all about, and this is precisely what happens in Figure 1. As a result, payments are 'internalized', client C_4 – a seller of commercial goods and/or financial assets – being paid by the income spent by client C_1 – a purchaser of commercial goods and/or financial assets – and client C_2 being paid by the income spent by client C_3. Indeed, PB_1 debits C_1 and credits C_4, while PB_2 debits C_3 and credits C_2. The belief that 'RTGS systems typically process credit transfers, which are initiated by the payer. These are settled by (simultaneously) debiting the payer's account and crediting the beneficiary's account, after which a payment is considered to be final' (Kokkola, 2010, p. 51), hinders the correct understanding of the logical principle on which RTGS' system must rest. This principle is rooted in the very nature of double-entry bookkeeping, which, in turn, is the foundation of bank money. Fundamentally, the compliance with double-entry bookkeeping requires each credit to be balanced by an equal debit *on the same economic agent*. In our example of Figure 1, private banks' debit with their NCBs must be balanced by an equivalent credit and, at the same time, the debit incurred by every NCB with the ECB must be compensated by a credit of the same amount and vice versa. To claim that NCB_1's debit with the ECB is balanced by the NCB_2' credit with the same ECB is to mix up simple-entry with double-entry bookkeeping, a confusion that leads to an erroneous application of the RTGS mechanism, which becomes, thus, incapable of transforming national currencies of the Euro zone into a single currency, as well as to guaranteeing the final settlement of cross-border payments between Euro zone member countries.

Once the logical rule to be followed in the creation of a new Eurosystem is understood, it is easy to conceive of a more complex system of multilateral clearing where the ECB, besides its all important role of monetary intermediary, can also play an active role as a financial intermediary providing, if necessary, intraday and overnight credits to NCBs. In this respect, the only rule that has to be respected is the logical impossibility for any payment to be finally settled through the emission of an IOU. This means that, practically, ECB's credits must be reduced to advances over a very short period of time. Under no circumstance should NCBs' imbalances be settled through money creation, by the ECB or by any other conceivable institution.

3.2. Advantages and disadvantages of monetary unification: a reconsideration. Having established that currently the Euro is not the single currency of the Euro zone, the decision to reform the Eurosystem in order to attain proper monetary unification has to be additionally assessed against the disadvantages brought about by the abolition of monetary sovereignty. Indeed, giving the present problematic state of affairs, member countries of the Euro zone could restore their monetary sovereignty without giving up on the single currency, which, in the present state of affairs, is not one. In other words, Euro zone countries have in a manner of speaking returned to their

point of departure and can now make a clear choice between monetary sovereignty and adopting a single currency. Apparently, such choice feels like being between a rock and a hard spot, because giving up one's monetary sovereignty in a situation where economic convergence is still very far into the future makes it much more difficult to reduce the existing gap between countries, and also since the maintenance of national currencies seems to lead unavoidably to erratic fluctuations in exchange rates. On the one hand, it is certain that countries such as the GIIPS would be better off if they could regain national control of their monetary and fiscal policies. In the present state of affairs, their economies are still in need of suitable measures to meet their specific requirements, for example, decisions concerning the interest rate or the rate of exchange. If they were allowed to recover their monetary sovereignty, Euro zone countries would again be free to choose the monetary and fiscal policies better suited to stimulate and protect their domestic economies until a true economic convergence would make the passage to monetary unification possible. On the other hand, the mere recovery of monetary sovereignty would not be enough to help countries out of the actual economic and financial crisis, and would even prove a worse solution given the impact devaluation would have on the most indebted ones. In particular, if by regaining their monetary sovereignty countries were forced to accept the re-establishment of a regime of floating exchange rates, disadvantages could easily equalize or even overtake the advantages.

The comparison between advantages and disadvantages of monetary unification is distorted by the fact that Euro zone member countries have, indeed, given up their monetary sovereignty, yet, they have not benefited from the introduction of a single currency. They find themselves in the worst possible situation, because they are suffering both from the disadvantages of having lost control over their monetary policy and from the present monetary instability. The latter cannot manifest itself as a fluctuation of exchange rates, yet, the evolution of purchasing power and of deflation in the Euro zone countries together with that of their spread (see Cesaratto (2013)) points to the lack of a true, homogeneous system of cross-border payments as the ultimate source of monetary disparities. If Euro zone member countries were to introduce the reform described in section 3.1, their situation would improve and their sacrifice of monetary sovereignty would, at least, be partially compensated by the presence of a new Eurosystem capable to guarantee the existence of a single currency and the monetary transformation of Euro zone member countries into regions or districts of a single currency area.

It remains true that if Euro zone countries were to reach the objective they set for themselves in Maastricht in 1991, they would still suffer from the loss of their monetary sovereignty. The question is, therefore, justified of whether it could be possible to benefit at the same time from the advantages of monetary stability and monetary sovereignty. This question calls for two investigations: 1) it has to be verified if most Euro zone member countries would largely benefit from the recovery of monetary sovereignty without causing any loss to the others, and 2) it must be ascertained whether monetary stability can be obtained without the need for Euro zone member countries to adopt a single currency. The last section deals with these two aspects and shows that a novel solution can be proposed, which creates the best possible conditions to realize the project of European unification in the near future.

4. Can European member countries of the Euro zone recover their monetary sovereignty and be members of a European monetary system granting the stability of their currencies' exchange rates?

4.1. The call for monetary sovereignty. The benefits that Euro zone member countries could derive from regaining control over their monetary and fiscal policies and from the prospect of renegotiating new exchange rates are obvious and there is no need to convince the reader that most Euro zone countries would have been better off, if they had maintained their monetary sovereignty. What is less clear is whether the advantages outnumber the disadvantages countries have to face, were they allowed to recover the monetary sovereignty they have given up eighteen years ago. One of the main arguments against the recovery of monetary sovereignty is that, following the almost unavoidable devaluation that would ensue, the debtors, residents of numerous former Euro zone countries, would find themselves more indebted in terms of their domestic currency. This may be so, but only with respect to debts previously incurred in Euros and to the extent that they cannot be renegotiated (interest rates included). Even though this problem must not be minimized, it would be more worrisome if, following the recovery of monetary sovereignty, exchange rates entered a period of erratic fluctuations. Before showing how this turn of events can be perfectly avoided, let me introduce one last argument in favor of monetary sovereignty.

At the time European countries had to decide whether to give up their domestic currencies and adopt the Euro or not, it was already pointed out that a few problems could arise, because domestic economies would lose part of their 'protective' belt and some firms might not been able to survive in the new monetary environment. Economists were well aware that Euro-

pean countries were still very diverse from a production point of view, and that divergence in productivity manifests itself as a divergence at the money-income level. The shutting down of weak firms was considered an unavoidable consequence of monetary unification, a sacrifice that would be more than compensated by the economic growth that would accompany the adoption of the Euro. However, what most economists missed was the consequence of monetary unification on *capital*. They did not appreciate that monetary sovereignty is a protection against free capital movements, and that such a protection was still badly needed by most European countries. By giving up their national currencies, Euro zone member countries created the conditions for the free movement of capitals within the Euro zone, that is, for the transfer of capitals from less to more productive countries (see Cencini and Schmitt (1992), and Rossi (2007)). Giving the economic disparity between European countries, to abandon the monetary protective belt of monetary sovereignty was not the best possible decision to take, and the ensuing flow of capital from South to North has not failed to widen the gap between Mediterranean and Northern countries.

The question that we are dealing with here concerns whether it would actually be worthwhile for Euro-zone member countries to recover their monetary sovereignty. Now, even though most arguments analyzed so far tend to show that Euro zone countries would derive more advantages than disadvantages by this transition, a straightforward answer cannot be given before having established, if it would, indeed, be feasible to provide them with a monetary system that allowed for an automatic and costless stability of exchange rates. This is what will be demonstrated in the last section of this paper.

4.2. The use of the Euro issued by the ECB as inter-European and inter-national means of payment. The idea, which goes back to Schmitt (1973, 1975, 1977, 1988), is to create a system of cross-border payments between countries within which payments are carried out in national currencies, while avoiding the use of any of them as object of final settlement. The role of a monetary institution charged to issue the means of payment necessary to convey cross-border payments and to act as a monetary (and financial) intermediary would be attributed to the ECB. On request from NCBs, the ECB would issue its currency, which could still be called the Euro to carry out transnational payments through a RTGS mechanism.

For the sake of clarity, let us consider interbank payments only. If the commercial banks concerned were two institutions operating in two different countries, their reciprocal payments would be conveyed by the ECB through a circular flow of Euros. The principles to be followed are the same that are complied with within any national banking system: 1) no payment between banks can be settled by using the IOU issued by one of them; 2) the use of central bank money must define a circular flow. The first principle is respected by the intervention of central banks when national interbank payments are concerned, and by that of the ECB in the system of inter-European payments advocated here. In the latter case, the ECB would carry out cross-border payments on behalf of NCBs, which would no longer be allowed to pay each other directly. Let us consider once again our previous bilateral example. When the NCB of country 1, NCB_1, is asked by a domestic private bank, PB_1, to pay a private bank of country 2, PB_2, it has to transmit the order to the ECB, which credits the NCB of country 2, NCB_2, in Euros. Suppose we stop the process here, then, bookkeeping entries at the ECB would be as follows (Table 3).

Table 3. The first phase of a cross-border payment as seen from the ECB viewpoint

ECB			
Assets		Liabilities	
NCB_1	x Euros	NCB_2	x Euros

The ECB would balance its debt to NCB_2 with its credit on NCB_1. As for NCBs, NCB_1 would balance its debt to the ECB with an equivalent credit on PB_1, whereas NCB_2's debit to PB_2 would be compensated by its credit on the ECB (Table 4), where NM_1 and NM_2 stand for the national money of country 1 and country 2, respectively, and where $y\ NM_1 = x$ Euros $= z\ NM_2$.

Table 4. The first phase of a cross-border payment as seen from the NCBs' viewpoint

NCB_1			
Assets		Liabilities	
PB_1	y NM_1	ECB	x Euros
NCB_2			
Assets		Liabilities	
ECB	x Euros	PB_2	z NM_2.

Could the situation described in Tables 3 and 4 represent the final result of the payment between country 1 and 2 mediated by the ECB? If this were, indeed, the case, country 2's net exports would be paid by a positive amount of Euros issued by the ECB, which is in open violation of the second principle the new Eurosystem has to comply with.

Even if the Euro would not define the IOU of any of the two countries involved in the cross-border payment we are analyzing, it is also certain that, being

issued by the ECB, the Euro defines the acknowledgment of debt of this institution. If the payment in Euros were final, an IOU issued at zero cost would be endowed with the power to settle a transaction whose other term is a real product. A mere IOU with no purchasing power cannot 'feed' or finance a positive payment. Now, *while national currencies derive their purchasing power from production, the Euro can derive it only 'by substitution'*. It is only if it takes (momentarily) the place of national currencies that the Euro can exert a purchasing power. What would be totally illogical and counterproductive, is allowing the Euro to add to national currencies and become an object of payment.

The solution lies in the circular flow of the Euro. Used as a means of payment, the ECB's currency circulates from and to its point of emission, and, in doing so, it conveys the real object of reciprocal payments between countries. Although conveyed by the Euro, cross-border payments have to be finally settled in real goods and/or financial assets. Exchanges are mediated by money, and this should also be true when they occur between countries. Through the mediation of the Euro, country 1 will have to pay its net imports by giving to country 2 an amount of equal value of its own domestic resources.

Countries 1 and 2 of our example are debited and credited in Euros by the ECB. However, as required by double-entry bookkeeping, the payment cannot be considered as completed, when country 1 is debited in Euros and country 2 is credited. The compliance with the logical principle of double entry calls for the simultaneous debit-credit of country 1 and credit-debit of country 2. If the Eurosystem were up to its task, it would guarantee that this pairing of debits and credits is respected, and thereby ensure the circular use of the Euro, which would be created and destroyed as regards both countries. In its flow from the ECB to NCB_2, the Euro would 'transfer' to country 2 part of country 1's domestic resources, and in its flow back from NCB_2 to the ECB it would "transfer" to country 1 an equivalent part of country 2's national resources. Through the circular flow of the Euro, country 2 obtains part of country 1's purchasing power and vice versa, part of country 2's purchasing power is transmitted to country 1. The terms of the exchange mediated by the ECB and the Euro are represented by an amount of real goods of the same value.

The apparent weirdness of our claim is entirely dissolved when it is recalled that, as already happens with domestic interbank payments, cross-border payments would be conveyed through a RTGS mechanism. The rigorous implementation of this mechanism brings about a perfect compensation between payments, which implies that each debt with the ECB must be balanced simultaneously with an equivalent credit, and vice versa. As a rule, the ECB would carry out cross-border payments on behalf of NCBs on condition that each payment is balanced by another payment of equal value and opposite sign. In our bilateral example, this would mean that the ECB would pay NCB_2 on behalf of NCB_1 only when an equivalent credit were available on NCB_1's account with the ECB. In a situation where no such credit exists yet, the payment ordered by NCB_1 would be effectively carried out by the ECB only when an equivalent order were passed by NCB_2 to the ECB. In other words, country 1 could pay country 2 only if country 2 paid country 1, and vice versa. If such a system were to imply the necessity for each country to equilibrate their trade balance, it would have to be dismissed right away. The necessary balancing of commercial transactions is a strait jacket that penalizes both developing and highly industrialized countries. What Europe (and the world) needs is a monetary reform allowing international trade to increase, to the benefit of both exporters – which have plenty to sell – and importers – whose economic growth may advantageously be supported by foreign investments. The reform presented here does not require the balancing of commercial transactions at all. The clearing on which RTGS mechanisms are based is not that between commercial sales and purchases, but that between *total* sales, commercial and financial, and *total* purchases. As an example, Table 5 represents the bookkeeping entries corresponding to the balancing of commercial imports by country 1 and financial exports by country 2.

Table 5. Final settlement of cross-border payments

NCB_1			
Assets		Liabilities	
PB_1 (commercial importers)	y NM_1	ECB	x Euros
ECB	x Euros	PB_1 (financial exporters)	y NM_1
PB_1 (commercial importers)	y NM_1	PB_1 (financial exporters)	y NM_1
ECB			
Assets		Liabilities	
NCB_1	x Euros	NCB_2	x Euros
NCB_2	x Euros	NCB_1	x Euros
NCB_2			
Assets		Liabilities	
ECB	x Euros	PB_1 (commercial exporters)	z NM_2
PB_1 (financial importers)	z NM_2	ECB	x Euros
PB_1 (financial importers)	z NM_2	PB_1 (commercial exporters)	z NM_2

The new Eurosystem would not hinder country 1's net commercial purchases. An equivalent net sale of financial assets would indeed guarantee the circular flow of the Euro, as well as the compliance with the logical rule of double-entry bookkeeping, and the

smooth functioning of the RTGS mechanism. The respect of the necessary equality of the terms of exchange between countries does not restrict international trade. It merely establishes what should be obvious to everyone, namely that a country whose commercial imports are net, is a country that benefits from foreign investments and, reciprocally, that a country that benefits from net commercial sales abroad is a country whose investments abroad increase.

As previously said, the rigorous working of a RTGS system is compatible with the use of ECB instruments enabling this institution to make advances to NCBs in the form, for example, of intraday and overnight credits. Another possibility to widen the range of countries' net commercial imports would be to ask the ECB to act not only as a monetary intermediary, but also as a financial intermediary. In this function, the ECB could issue financial claims in Euro and sell them on the international financial market in order to purchase financial claims issued by countries in need to finance their net commercial imports.

At any rate, the new Eurosystem would fulfil two tasks: 1) it would enable the *final* settlement of cross-border payments, and 2) it would guarantee the stability of exchange rates between the national currencies of member countries. To be sure, the fulfilment of the second task would be a direct consequence of the way the first would be fulfilled. From the moment cross-border payments are settled through the circular use of the Euro, national currencies are simultaneously subject to a supply and an equal demand in terms of Euros. The ensuing stability of the exchange rate between each national currency and the Euro would, thus, entail one between the national currencies themselves. Every cross-border payment being mediated by the ECB, national currencies would no longer exchange directly one another, and their relative exchange rate would be derived from the exchange rate of each of them with the Euro. Since every cross-border payment would imply the debit-credit and credit-debit in Euro of each NCB, it is clear that in each of them the purchase of Euros by any national currency would be perfectly balanced by the purchase of the respective national currency by the Euro. The consequence is that the new Eurosystem would in no way alter the exchange rates between member countries' national currencies. It is important to observe that this result would be reached cost free, without any need for monetary authorities to intervene on the foreign exchange market. Exchange rate stability with regard to cross-border payments would be obtained 'automatically' through the implementation of a mechanism respectful of the flow nature of money. The circular use of the Euro would 'impede its transformation into an object of exchange, and permit the passage from today's regime of erratic exchange rate fluctuations to a system of stable exchange rates' (Cencini, 2010, p. 54).

As the attentive reader might have noticed, the system of cross-border payments described here is similar to as well as compatible with the one, concerning the objective of introducing the Euro as a single currency, advocated in section 3.1. This should not come as a surprise, because in both cases what has to be achieved is the creation of an authentic *European* system of payments. When this is achieved through transforming national currencies into a single European currency, payments between countries are reduced to payments between regions, and NCBs are collected into a federation of central banks headed by the ECB. If European countries were to adopt the RTGS system proposed in section 3.1, they would give up their monetary sovereignty and their NCBs would become part of a unique system of payments that would replace their national systems. Strictly speaking, payments within this new Eurosystem should not even be labelled cross-border, because no internal monetary border would exist between Euro zone countries. Commercial banks, NCBs and the ECB would form a single and homogeneous monetary system. In particular, the ECB and its associated NCBs would provide a RTGS mechanism enabling interbank payments, whether they occur within a country or between countries members of the Euro zone.

The alternative solution proposed here differs from the single currency case in that it does *not* require countries to abandon their monetary sovereignty. If this solution were implemented, interbank payments occurring at the national level would settle through the intermediation of NCBs and via a RTGS mechanism operated by them, while cross-border payments would settle via the ECB. Each country would be monetarily sovereign and would operate its own domestic payment system autonomously. Only cross-border or transnational payments would have to be carried out by the ECB, through the implementation of a RTGS mechanism guaranteeing the circular use of the Euro.

Conclusion

In this paper, we have shown that the current Eurosystem does not fulfil the tasks it was conceived for, since the Euros issued by the national banking systems of Euro-area member countries have not yet been made into a single currency. The actual working of the ECB and of the RTGS mechanism it operates are inconsistent with what is logically required to settle cross-border payments transforming countries into regions of a single monetary system. What is still missing at

the European level is a system like the one operated by NCBs within each country. The comparison between national banking systems and the Eurosystem provides the key for a reform that would allow the project of European monetary unification to be realized eventually. On the other hand, recognition that the Euro pean single currency is not, yet, a reality opens the way to an alternative solution, which enables Euro zone member countries to recover their monetarysovereignty while guaranteeing the stability of their national currencies' exchange rates. In a moment where economic and financial crises seriously undermine the original European project and the sovereign debt crisis puts an enormous pressure on the GIIPS with an increasing risk of bailing them out, it is crucial to reconsider afresh the role played by the ECB. The two alternative reforms of the Eurosystem advocated in this paper rest on the implementation of a RTGS system of payments where the ECB is charged either with the creation of a single European monetary system or with the task to operate a system of cross-border payments between monetary sovereign countries. Both solutions are feasible and easy to implement, and they are both consistent with Trichet's claim that 'one of the basic tasks of the ESCB and the ECB is to promote the smooth operation of payment systems' (Kokkola, 2010, p. 16). Let us, therefore, end the paper with the former President of the ECB's own words: '[a] safe and efficient payment system is of fundamental importance for economic and financial activities and is essential for the conduct of monetary policy and maintenance of financial stability' (ibid., p. 16), and hope that such a system will soon be created, for the greatest benefit of Europe and its economic partners.

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