

**Global imbalances and international monetary disorder:
supranational money as a means to avoid another global crisis**

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Paper

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Abstract

This paper argues that the increasingly global imbalances observed during the first years of the third millennium are the result of international monetary disorder, namely, the use of national currencies as objects of trade rather than as means of final payment between countries defined each as the set of its own residents. The recent call by the Governor of People’s Bank of China (Xiaochuan, 2009) to reform the international monetary system goes in the right direction but is silent on the structure required to implement this reform successfully. The call ‘for creative reform of the existing international monetary system towards an international reserve currency with a stable value, rule-based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability’ (Xiaochuan, 2009: 1) needs to be both refined and elaborated upon in order to provide a sound alternative to the current international monetary regime. It has the merit, however, to bring the issue of international payment reform to the attention of policy makers as well as governments all around the world. It is indeed in the interest of all countries participating in foreign trade, including the United States eventually, to set up and then make use of an orderly-working payment system between them. The United States have at least two reasons for being interested in an orderly-working international payments system. First, as the 2007–9 crisis has shown, the huge liquidity denominated in US dollars that exists as a result of the enormous US current account deficit cannot be but ‘recycled’ in the local financial sector, providing the means for the creation and then bursting of bubbles that may ravage the local economy. Secondly, if the rest of the world benefits from international monetary and financial stability, the United States can benefit from it in terms of both commercial and financial flows across the borders. It is thus a ‘win-win’ situation to set up and then manage a properly-working international monetary system in a cooperative mood between the United States and the other major global players in the world economy, vindicating Keynes’s own plan for the reform of international monetary relations that he presented at the Bretton Woods conference back in July 1944.

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Introduction*

This paper argues that the increasingly global imbalances observed during the first years of the third millennium are the result of international monetary disorder, namely, the use of national currencies as objects of trade rather than as means of final payment between countries defined each as the set of its own residents. The recent call by the Governor of People's Bank of China (Xiaochuan, 2009) to reform the international monetary system goes in the right direction but is silent on the structure required to implement this reform successfully. The call 'for creative reform of the existing international monetary system towards an international reserve currency with a stable value, rule-based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability' (Xiaochuan, 2009: 1) needs to be both refined and elaborated upon in order to provide a sound alternative to the current international monetary regime. It has the merit, however, to bring the issue of international payment reform to the attention of policy makers as well as governments all around the world. It is indeed in the interest of all countries participating in foreign trade, including the United States eventually, to set up and then make use of an orderly-working payment system between them. The United States have at least two reasons for being interested in an orderly-working international payments system. First, as the 2007–9 crisis has shown, the huge liquidity denominated in US dollars that exists as a result of the enormous US current account deficit cannot be but 'recycled' in the local financial sector, providing the means for the creation and then bursting of bubbles that may ravage the local economy. Secondly, if the rest of the world benefits from international monetary and financial stability, the United States can benefit from it in terms of both commercial and financial flows across the borders. It is thus a 'win-win' situation to set up and then manage a properly-working international monetary system in a cooperative mood between the United States and the other major global players in the world economy, vindicating Keynes's own plan for the reform of international monetary relations that he presented at the Bretton Woods conference back in July 1944.

To date, when a key-currency country, say *A*, pays an amount of money *A* (*MA*) to the rest of the world, *R*, for its net imports of real goods, services, and/or financial assets, it just transfers to *R* a claim on *A*'s deposits into the banking system of the latter country. The international payment being stopped here today, country *A* does not really pay for its net imports, as it surrenders a mere promise to pay in the form of a claim to deposits in country *A*'s banking system, which indeed cannot leave that system.¹ As a matter of fact, the bank deposits labelled in money *A* are the acknowledgement of debt of country *A*'s banking system. As such, they represent a promise to pay that country *A*, considered

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¹ This led Rueff (1963) to point out that the United States' current account deficits are 'without tears'. See Spahn (2006: 261–3) and Rossi (2007c: 313–16) for analytical elaboration on this point.

as a whole, delivers to *R* in exchange for goods, services, and/or assets that residents in country *A* import from *R*. This promise does not settle country *A*'s debt really, and indeed it is not a final payment for the countries or currency areas concerned as a whole, even though this international problem is not perceived by (nor is it due to) the residents of the countries involved by any foreign trade.² To be sure, residents finally pay their counterparties – be they located in the same country or abroad – when they dispose of any local or foreign currencies that the relevant legislation allows them to use in settlement of their transactions. As a matter of fact, being the acknowledgment of debt of a ‘non-agent’ (as ‘money provider’, the bank or the banking system is neither selling nor purchasing anything), every local or foreign currency is a means of final payment for anyone (households, firms, states) residing within any given currency area. Hence, in the above stylized example, the importer of goods, services, and/or assets in country *A* finally pays for the imported items when s/he transfers to her or his foreign counterparty an equivalent claim on bank deposits labelled in any currencies of choice, provided, of course, that the counterparty agrees on that choice. Country *R* as a whole, however, is not finally paid yet, since any national currency is indeed a promise to pay by the country issuing it when the latter surrenders it to the rest of the world, and as such has no final settlement power *between nations*. Certainly, this national currency (say, the US dollar) may be used in a series of payments for any transactions between any two countries or currency areas. This, however, does not and cannot transform this currency into a means of final payment in the international economy: the international circulation of (paper) claims to a bank deposit in any (key-currency) country is indeed the circulation of a mere promise of payment and, as such, cannot transform the promise of payment into a final payment. A means of final payment is required for that purpose. To be sure, no country around the world would ever accept to be paid eventually with a promise to pay, in exchange for produced output (in the form of exported real goods or services) or in exchange for some claims to future production (in the form of financial assets), if this non-payment were spelt out explicitly. The next section elaborates on this point dealing with the structural as well as institutional shortcomings of the post-Bretton Woods architecture for the international monetary system. In the third section we put to the fore and discuss some basic principles of reform in this regard, reviving the Keynes plan presented in the early 1940s and taking stock also of a number of recent calls for an international monetary reform in the spirit of Keynes (see in particular Alessandrini and Fratianni 2009a, 2009b, Costabile 2009, Piffaretti 2009, Ussher 2009, Xiaochuan 2009). The fourth section offers a stylized example of the working of a reformed international monetary architecture in the spirit of Keynes. The last section concludes briefly.

The current architecture for cross-border settlements

Today, the *financial* architecture for the settlement of cross-border transactions is quite well developed and refined, with respect to the Bretton Woods period (1946–73), and in particular as regards financial-market operations. As a matter of fact, there have been a number of commercial banks' initiatives and undertakings that have led to alliances and mergers among banks and non-bank financial institutions involved in the processing of

² A final payment implies that ‘a seller of a good, or service, or another asset, receives something of equal value from the purchaser, *which leaves the seller with no further claim on the buyer*’ (Goodhart 1989: 26, emphasis added).

securities transactions. As part of these still ongoing developments in the cross-border payment industry, securities clearing and settlement systems, that is, central securities depositories (CSDs) and central counterparty clearinghouses (CCCs), are increasingly incorporated into business groups.³ Even if these trends in financial-market integration facilitated increase in cross-border securities trading and fuelled growth in cross-border transactions, however, the market for securities is still fragmented at the time of writing. As Kauko (2005: 7) notes, '[t]here are more than 20 securities settlement systems in the EU area. Most of the centres are national rather than international institutions.' The problem is literally *inter-national*: it concerns each country involved as a whole, rather than one or many of its residents (like banks, non-bank financial institutions, or even the general government sector). As such, it concerns the *international* payment machinery, and in particular the international *monetary* architecture that is needed in order for the delivery-versus-payment protocol to operate across currency areas effectively.⁴

In spite of the several links and arrangements existing, at the time of writing, between commercial and central banks across the borders, in fact, the main problem remains that, internationally, that is, between any two countries pertaining to different currency areas, payment finality has yet to be provided for any country considered as a whole, that is to say (let us recall it), as the set of its residents. This is due to the lack, to date, of a truly international settlement institution, hence the lack of a means of final payment between nations belonging to different (that is, heterogeneous) monetary spaces. Let us address these issues in turn in this section.

The lack of an international settlement institution

Every economic transaction within any country's border is finally paid through the local banking system acting as a catalyst: every domestic payment implies the creation of the relevant number of money units through the double-entry book-keeping of one or many banks (see Rossi 2007a: 33–88). There is no instance in the whole world in which even a single bank discards or disregards this way of carrying out payments in the name of its clients (residents in a given country), a rule which Keynes (1980: 44) referred to as 'the essential principle of banking' in his work on international monetary reform back in the 1940s.⁵ Indeed, it is well known today that Keynes advocated the generalization of 'the

³ CSDs are institutions that hold securities, thereby enabling securities transactions to be processed by means of book entries: '[p]aper-form securities have become rarities, having been largely replaced by book-entries, that is to say, entries in a special securities account system' (Kauko 2005: 7). CCCs are entities that interpose themselves between the counterparties to contracts traded in one or more financial markets, becoming the buyer for every seller of financial assets and the seller for every buyer of securities (Russo et al. 2004: 4).

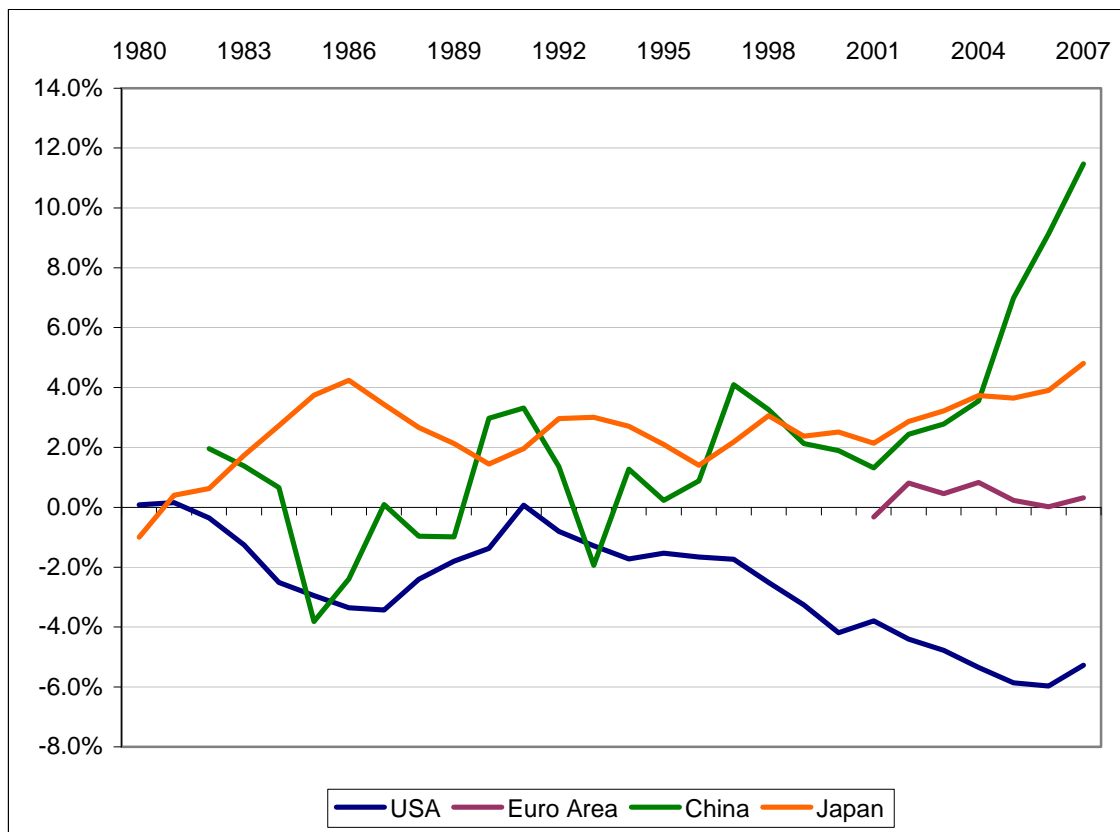
⁴ As a matter of fact, '[t]o achieve delivery versus payment (DVP), settlement of the securities leg in the securities settlement system is conditional on settlement of the cash leg, normally in a large-value payment system' (Committee on Payment and Settlement Systems 2006: 48). Indeed, securities settlement systems and (large-value) payment systems are mutually dependent. Credit extensions in a payment system often depend on the provision of collateral through a securities settlement system, in a number of cases working with a central counterparty (CCP). 'The CCP typically holds a cash settlement account at the settlement agent – the system's settlement bank, often the central bank. It receives funds from settlement members delivering cash and pays out funds to those delivering securities on settlement day' (ibid.: 49).

⁵ 'This principle is the *necessary* equality of credits and debits, of assets and liabilities' (Keynes 1980: 44, emphasis added).

essential principle of banking’ to the payments carried out *between countries*, each of them defined as the set of its residents. On this crucial point, both the Bretton Woods monetary regime and the post-Bretton Woods ‘non-system’ for international payments dismally failed to deliver.⁶ With the monetary architecture for international payments elicited by this ‘non-system’, countries fail to be credited by an international settlement institution⁷ – as the latter does not exist yet – whenever they export real goods, services, and/or financial assets to a different monetary space. This then creates a discrepancy in foreign trade between the income earned in exports and the income spent on imports for each country defined as the set of its residents. In fact, to the extent that a country’s imports are paid for through its exports, the problem of current international payments does not appear, as any imported items are finally paid through an equivalent export of goods, services, and/or financial assets. Hence, even in the absence of an international settlement institution, if foreign trade is balanced in the above sense (that is, any trading transaction finds its final counterpart in another trading transaction) there is indeed no visible difference with an international settlement system grounded on ‘the essential principle of banking’, which guarantees payment finality for every economic transaction as explained above. Things change when, as recently observed in a number of countries, foreign trade gives rise to increasing imbalances in both current and capital accounts, as those recorded in the present millennium for China and the United States (Figure 1).

⁶ The fact that the current international monetary regime is a ‘non-system’ has been pointed out cogently by Williamson (1977: 73). Rossi (2009: 183–91) analyzes the resulting international monetary disorder.

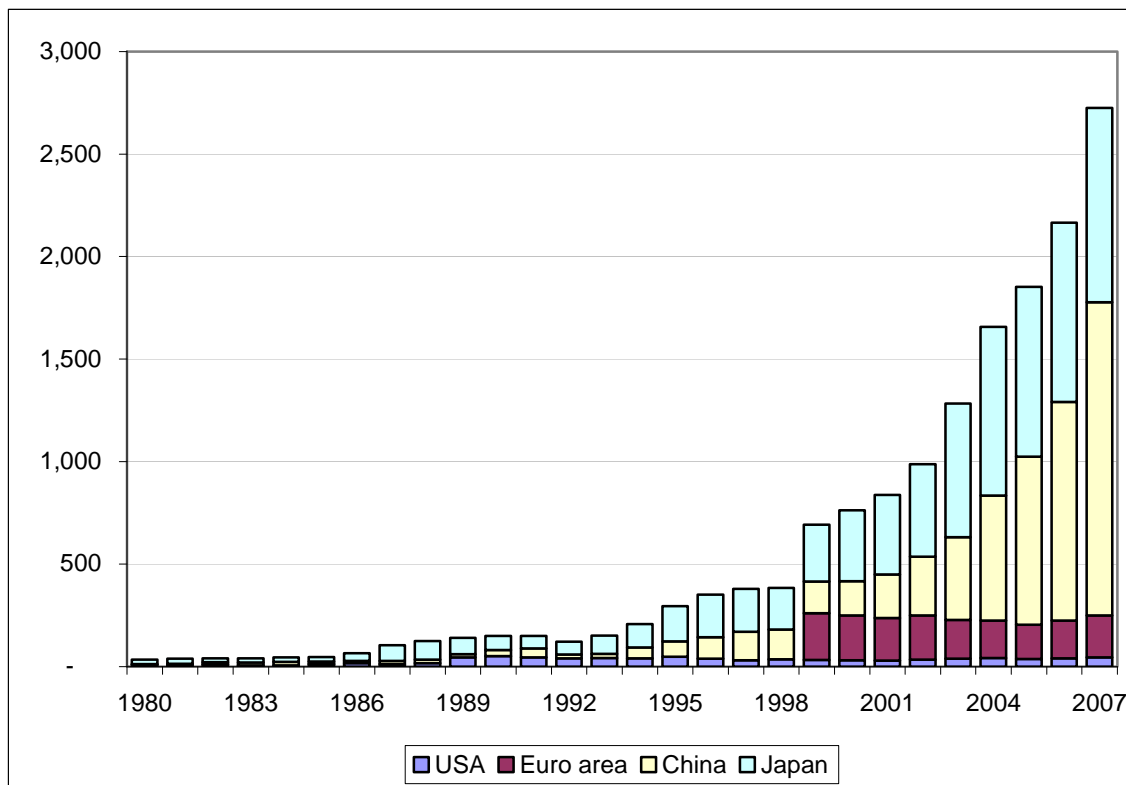
⁷ Notice the essential distinction between a settlement *agent* and a settlement *institution*: the former just ‘manages the settlement process (e.g. the determination of settlement positions, monitoring of the exchange of payments, etc.) for transfer systems or other arrangements that require settlement’ (Committee on Payment and Settlement Systems 2003: 45), whilst the latter is ‘the institution across whose books transfers between participants take place in order to achieve settlement within a settlement system’ (ibid.: 45). More precisely, ‘[t]he settlement institution is in the unique position of being able to create a centralised source of settlement funds to the participants of the system. This source is called centralised because the settlement institution is the only counterparty that can influence the total amount of settlement assets that participants hold (apart from transfers of funds between systems [...]). If the settlement institution is a central bank, the funds are deposits in central bank money’ (Committee on Payment and Settlement Systems 2005: 15).



Sources: *International Financial Statistics Yearbook 2000* (for 1980–98 data) and *International Monetary Fund Balance of Payments Statistics Yearbook 2007* (for 1999–2007 data).

Figure 1. Current account imbalances as a percentage of GDP, 1980–2007

As a result of the huge and recently increasing global imbalances in foreign trade across countries and currency areas, the volumes of (official) foreign-exchange reserves have soared in the most important surplus countries, namely, China and Japan (Figure 2).



Sources: *International Financial Statistics Yearbook 2001* (for 1980–2000 data) and *International Financial Statistics November 2008* (for 2001–2007 data).

Figure 2. Foreign-exchange reserves (USD billion), 1980–2007

As noted in the above stylized example, the United States does not pay for its current account deficit finally. Its most important trading partner, that is, China, is not paid for its current account surplus eventually, unless it records a current account deficit in some later period for the amount corresponding to its previously recorded trade surplus vis-à-vis the United States. Even in this notional case, nevertheless, an intertemporal bilateral clearing of the US current account deficit with the same country's trade surplus, in fact, cannot be assimilated to a final payment. It boils down to barter trade, which, if ever it existed historically, can neither be viable (today even more so than in the past, owing to both the value and volumes of cross-border trade in the present multilateral framework) nor constitute truly a payment system, that is, an orderly-working monetary architecture through which every international transaction on goods, services, and/or financial assets is finally paid and recorded in a double-entry book-keeping system of bank accounts – as this occurs 'always and everywhere' domestically owing to 'the essential principle of banking' referred to earlier on.

The recent call by the Governor of People's Bank of China to reform the international monetary system echoes this problem cogently: 'when a country's currency is no longer used as the yardstick for global trade and as the benchmark for other currencies, the exchange rate policy of the country would be far more effective in adjusting economic

imbalances' (Xiaochuan 2009: 2). Although his call 'for creative reform of the existing international monetary system towards an international reserve currency with a stable value, rule-based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability' (ibid.: 1) needs to be both refined and elaborated upon in order to provide a sound alternative to the current 'non-system', it has the merit to bring the issue of international payments reform to the attention of policy makers as well as governments around the world. It is indeed in the interest of all countries participating in foreign trade, including the United States eventually, to set up and then make use of an orderly-working payment system between them.

This international payment system is urgently needed in today's world characterized by financial liberalization and multi-currency banking across borders. To be sure, these are essential characteristics of modern open economies, be they advanced, emerging, or in transition, and their importance has been growing over the past decades in line with the emergence of highly-connected financial markets. In spite of this connection, to be sure, the international infrastructure for the settlement of all cross-border transactions on both products and financial markets is still fragmented, and one may even say cacophonous to date. This represents a severe limitation of cross-border transactions and a major source of macroeconomic disorder, because they lack eventually a structurally-sound monetary and institutional framework within which any international payments can occur without generating destabilizing effects on exchange rates, interest rates, current and capital accounts, which then affect economic performance negatively. The global financial and economic crisis that affected the world economy in 2007–9 is largely the result of this 'non-system' for international payments, whereby the centre nation (the United States) profits from the 'exorbitant privilege' of purchasing foreign output without ever paying for it finally (see De Grauwe 1999: 66).⁸

The lack of international money emissions

As early as 1963, that is, under the dollar-standard regime decided at Bretton Woods in 1944, a handful of economists were already pointing to the main problem of that regime for international payments, which was to remain the same under the multiple-currency standard that replaced the dollar standard in 1973: 'The supply of reserve currencies to other nations depends on *payment* deficits incurred by the reserve countries' (Machlup 1963: 256, emphasis added). Indeed, a reserve-currency country, such as country *A* in the above stylized example, does not finally pay the rest of the world, *R*, for the goods, services, or assets that it imports from *R* more than it exports to it. To put it differently, in the words of both Rueff (1963) and Triffin (1963), the lack of an international means of final payment implies that countries use national currencies as objects of trade, that is to say, as international reserve assets, whose image⁹ a net importing country transfers,

⁸ According to Gourinchas and Rey (2007: 12), the 'exorbitant privilege' has been first pointed out in 1965 by Valéry Giscard d'Estaing, who at that time was the French Minister of Finance. See Alessandrini and Fratianni (2009a: 342–7) for analytical elaboration on this point.

⁹ As explained by Rueff (1963: 323–4), any country subjects its bank deposits to a process of duplication in so far as it pays its (net) imports of real goods, services, and/or assets from the rest of the world using its local currency. In the current, post-Bretton Woods regime for international payments, as we noted above, country *A* transfers to *R* a mere claim on *A*'s deposits into its banking system when it pays for its (net) commercial or financial imports from *R*. The deposits themselves remain recorded with *A*'s banking system, into which they have been formed as a result of the working of the local monetary economy of

as a mere duplicate, to its financial or commercial partner countries in exchange for an equivalent amount of imported real goods, services, and/or financial assets.

Now, in a period of growing cross-border transactions as well as exchange-rate pressure before the break-up of the Bretton Woods regime in 1973, many member countries of the International Monetary Fund (IMF) feared that the amount of international reserves was not growing enough to meet their increasing liquidity needs. They considered this as a threat to both domestic growth and international financial stability, and decided to create Special Drawing Rights (SDRs) at their Rio de Janeiro annual meeting (1967), a decision put into force in 1969. According to the official definition, SDRs are ‘entries in the IMF ledgers that allow deficit countries to settle part of their payments imbalances with allotments of SDRs’ (Meier 1982: 90). In practice, an IMF member country may use SDRs in order for it to withdraw from its Special Drawing Account at the IMF an equivalent amount of some specified convertible currency at a given exchange rate, the currency provider receiving SDRs in exchange for it. This means that, in fact, SDRs are just a conduit to obtaining a number of national currencies, like the US dollar and the pound sterling, with which any given country pays its foreign trade deficit eventually – but not finally, as we pointed out above. As such, SDRs are special credit lines, rather than money, provided multilaterally under the aegis of the IMF. More precisely, SDRs were a new form of financial assistance to deficit countries, which obtain a special right to withdraw a specified amount of some national currencies, which then they surrender in payment of the commercial or financial deficits they have with the rest of the world. ‘The SDR was an international reserve asset rather than money’ (Endres 2005: 181–2). Indeed, to date, the IMF has not been issuing SDRs – an emission which, in fact, would amount to providing a means of final payment for international trade on commercial and financial markets – but just allocated them as a percentage of an IMF member country’s quota (see Cumby 1983 for an account of the SDRs allocation process, and Alessandrini and Fratianni (2009a: 351–2, 2009b) for the essential difference between SDRs and Keynes’s *bancor*). To be sure, the decision announced by the G-20 leaders gathered in London on April 2, 2009 ‘to support a general SDR allocation which will inject \$250 billion into the world economy and increase global liquidity’¹⁰ does nothing to change the nature of SDRs. In allocating a given amount of SDRs, the IMF acts merely as an international *financial* intermediary, and not as an international *monetary* institution, which would issue endogenously its own means of final payment for the settlement of international trade on commercial and financial markets (more on this later). Clearly, the SDR is a sort of ‘helicopter money’ (see Alessandrini and Fratianni 2009b: 4). As a matter of fact, the IMF does not (yet) monetize any of the operations that it carries out on any of its member countries’ demand, be they denominated in national currencies or

production. The same bank deposits, however, are recorded, as a duplicate, in the banking system of the rest of the world, *R*, which in the above stylized example is a net exporter and, as such, is paid with an amount of money *A* that it enters, as official foreign-exchange reserves, on the assets side of its banking system’s balance sheet. As such, these claims (notably, a financial capital) circulate erratically on foreign-exchange markets around the world, subjecting exchange rates to erratic fluctuations and, more important in explaining the 2007–9 global crisis, allowing the so-called ‘shadow banking system’ (including both hedge funds and investment banks) in the United States to ‘recycle’ this financial capital in the ‘originate-and-distribute’ circuit that affected, among others, the local real-estate sector and the world economy later on.

¹⁰ ‘London Summit – Leaders’ Statement, 2 April 2009’, par. 19, available at www.unesco.org/education/G-20Londoncommuniqu.pdf

in SDRs. Generally speaking, therefore, all international payments, to date, involve national currencies as objects of trade in the current regime, which subjects their exchange rates to a structural disorder, because any traded currency can be – contrary to its own nature of numerical instrument of payment – the object of either a net supply or net demand on this market.

Indeed, and as recognized by the Governor of the People’s Bank of China in his recent call to reform the international payments machinery, the 2007–9 global crisis ‘calls for creative reform of the existing international monetary system towards an international reserve currency with a stable value, rule-based issuance and manageable supply, so as to achieve the objective of safeguarding global economic and financial stability’ (Xiaochuan 2009: 1). As Xiaochuan (2009: 2) notes, ‘[t]he desirable goal of reforming the international monetary system, therefore, is to create an international reserve currency that is disconnected from individual nations and is able to remain stable in the long run, thus removing the inherent deficiencies caused by using credit-based national currencies.’ This was actually the project that Keynes had in mind when preparing his own ‘Proposals for an International Clearing Union’, to be submitted to delegates at the Bretton Woods conference in July 1944 (Keynes 1980). To be sure, in the 1940s as well as at the time of writing, ‘[t]he creation of an international currency unit, based on the Keynesian proposal, is a bold initiative that requires extraordinary political vision and courage’ (Xiaochuan 2009: 2). Yet, as argued by Machlup (1963: 259), ‘bank managers and others with practical experience ought to stop regarding anything that has never been tried as impractical, and the theorists ought not to give up attempts to advance their favorite schemes just because the bankers refuse to listen.’

Let us explore therefore the avenue to reforming the international monetary architecture in the spirit of Keynes’s proposals, emphasizing in the next section the way and means to guarantee payment finality at the international level, for any countries involved as the set of their own residents (see above).¹¹

The required structural reform of the international monetary architecture

To make sure that every international transaction is finally paid, an international system of payments working under the real-time gross-settlement (RTGS) protocol needs to be created, imitating the RTGS systems that exist within any advanced economies around the world at the time of writing. More particularly, any foreign-trade transaction needs to be finally paid in national currency within each of the countries concerned, and in an international money unit (IMU) between them.¹² The payment system to put into practice between currency areas has to make sure that international money will never spill out of

¹¹ For recent attempts at reviving Keynes’s ‘Proposals’ in order to solve international monetary problems, see also Alessandrini and Fratianni (2009a), Costabile (2009), and Piffaretti (2009), who complement the research work that we put forward here, adding a number of structural and institutional points that, in this paper, we avoid to discuss for space constraints.

¹² The name of the international money unit does not matter here. It may be *bancor*, SDR, Supranational Bank Money (SBM, see Alessandrini and Fratianni 2009a, 2009b), International Money Clearing Unit (IMCU, see Davidson 1992–93) or any other label suits the social desires and the political aspirations of governments that participate in setting up and managing the international settlement institution to be designed properly.

the settlement system required for enabling international payments' finality. If so, then the international monetary architecture to set up must avoid that a bank deposit labelled in any given local currency can give rise to a duplicate in some foreign banking system, whenever an importer disposes of it in payment for commercial or financial imports. In a nutshell, the (reformed) monetary system for international payments has to consider that national currencies are indeed means of payment in the relevant monetary space – in conformity with their nature – and not goods or financial assets that can move across these spaces and beyond the country's borders. In practice, the reform of international payments ought to lead to the introduction of a monetary structure *between countries* pertaining to different currency areas, say between country *A* and country *B*, through which commercial or financial imports are finally paid in local currency by the importer and, symmetrically, any exports are finally paid in local currency in the bank account of the exporter. This requires the setting up in every country of an institution that acts as a catalyst in any international payments resulting from cross-border transactions on either product or financial markets. This institution might be either an external department of the national central bank, or a national clearing authority as suggested by Schumacher (1943), the important point being that it averts duplication of those bank deposits that residents transform into imported real goods, services and/or financial assets. If this new system is well designed, as we shall see later on, then:

The importer in country *A* pays for the goods he buys from country *B* by handing over to the Clearing Authority in his own country a sum of *A*-money which is deemed to discharge his debt. The exporter in country *B* receives from the Clearing Authority in his country an equivalent sum of *B*-money which is deemed to satisfy his claim.

(Schumacher 1943: 150)

The international payment machinery required to this end has therefore to work in such a way that within countries all payments are finalized in local currencies, while between currency areas all payments are finalized through the emission of international money as a vehicle of those real goods, services, or financial assets that move beyond a monetary space's borders. Let us expand on these requirements to reform the present international monetary (and financial) architecture, transforming it into a fully-fledged international settlement system that guarantees monetary homogeneity and exchange rates stability – though not fixity – between currency areas.

Among the great architects of international monetary and financial reform, Schumacher was, together with but rather independently of Keynes, one of the first proponents of an international settlement system using bank money instead of a commodity, such as gold, to settle foreign trade, which in his time mainly concerned commercial items, hence the current account balance.

[In the 1940s, Schumacher] was very much absorbed in ways to prevent future wars and finally concluded that in international economics, it was the countries with surpluses in their balance of trade which were the greatest threat to peace. [...] As a possible solution to this problem he devised a new system whereby surplus countries had to spend what they earned in the long term while financing

the debts of the economically weaker countries with their surpluses in the short term.

(Hession 1986: 4)

The aim of this proposal was to create an international monetary system, in order (1) to make sure that all international transactions are finally settled, and (2) to provide deficit countries with the means to finance their imbalance with respect to surplus countries, as defined by their current account balance. To this goal, Keynes made an important, but at that time discarded and since then largely ignored, contribution. He notably suggested as the key point of the reform that '[i]nternationally all transactions [have] to be cleared between central banks, operating on their accounts with an International Clearing Bank' (Keynes 1980: 34). This clearly points to two crucial characteristics of the international monetary reform, namely that the bank to set up must act as a settlement institution, that is to say, must imitate any central banks in their capacity of finally paying all interbank debts within the national payment system, and that it must be an international bank, that is to say, the settlement institution for national central banks themselves.

Keynes observed that the logic of bank money implied the hierarchical structure of banking systems. Within countries inter-bank settlements are daily proceeded in central bank money [...]. Keynes thought that the same logic could be forwarded to international settlements, if a third stage was built in linking national banking systems together.

(Aglietta 2004: 52)

Now, the linking of national banking systems together can actually occur in two very different ways. The first is the avenue chosen by would-be EMU member countries with the creation of a single European currency issued throughout the euro area by TARGET, the ESCB, and the European Central Bank. In fact, Keynes did not aim at establishing a supranational monetary authority that requires surrendering monetary sovereignty to an institution, such as the ECB, which would not have been accepted by the large majority of delegates at the Bretton Woods conference in 1944 (see Alessandrini 2007: 19). The second, alternative avenue that countries might choose to link national banking systems together, indeed, has never been tried so far, although this is not a sufficient criterion for considering it as impractical, as pointed out by Machlup (1963: 259).

This alternative avenue is the emission of a common, instead of a single, currency for a number of countries in the world (if not for all of them).¹³ As noted, it implies that every international transaction on either product or financial markets has to be paid finally, in local currency within the country or currency area concerned by it and in international money between trading countries. In this international payment system, to be headed as

¹³ As Alessandrini and Fratianni (2009a: 350) argue, the feasible alternative to an unfeasible autonomous supranational central bank is to create 'a cooperative agreement among a restricted group of key countries that find it in their interest to share responsibility to stabilize the IMS [international monetary system].' In this respect, Alessandrini and Fratianni (2009a: 351–5) propose to start with a bilateral agreement between the United States and the euro area, before expanding the agreement to include China. For geopolitical as well as geostrategical reasons, in this paper we suggest by contrast starting with a bilateral agreement for China and the United States, to be expanded later on to the European Union, as the latter area has roughly a balanced current account, whilst the two former countries have huge current account imbalances as seen in Figure 1.

well as overseen by an international settlement institution, each currency is changed into itself (an ‘absolute exchange’) through the purely vehicular emission of an international means of final payment, whose nature is that of a numerical unit, which is needed to homogenize all national currencies participating to this system.¹⁴ If so, then the system for international payments becomes a system of stable, though not fixed, exchange rates replacing the present ‘non-system’, which elicits exchange rate volatility as pointed out above. In the proposed new architecture for international payments, all transactions on foreign-exchange markets will not affect exchange rates, in so far as country *A* recovers (that is to say, demands) its currency, *MA*, as soon as it surrenders (that is, supplies) this currency in the payment of a commercial or financial item imported from the rest of the world, *R*. In this case, as Guttmann (1994: 433) points out, ‘[b]eing linked to equivalent payments by and to individuals in their respective currencies, [every emission of international money] only transfers existing purchasing power from one country to another.’ Let us expand on this crucial point with a stylized example.

A stylized example of the working of the reformed international monetary system

Consider the United States of America, *A*, and the People’s Republic of China, *R* (which may also represent the rest of the world, facing country *A*), and suppose that country *A* has to pay *R* for those commercial and financial items that its residents imported from *R*. If the international payment between *A* and *R* has to be finalized, then country *A* must recover its currency, *MA*, as soon as it surrenders it in payment of commercial and/or financial imports from *R*. This means that country *R* has to be led to spend the deposit in *MA* as soon as country *A* transfers to it the corresponding property right (as we know, a deposit cannot leave the banking system where it has been formed). This requirement means that country *R* has to spend an amount of money *R*, *MR*, when it is informed by country *A* that it is entitled to a deposit in *MA* in *A*’s banking system. It also means that country *A* has to obtain the property of a deposit in *MR* as soon as it surrenders the ownership of a bank deposit in *MA*. Both these operations need a common numerical standard logically: as a matter of definition, international money is the numerical unit of measurement of national currencies making their exchange rates stable as they are taken into a set of absolute exchanges, as defined above. In this situation, as we shall explain later on, international payments guarantee indeed monetary order as well as exchange rate stability: monetary order obtains as every purchase of real goods, services, and/or financial assets is finally paid through a sale of securities, which is not the case to date for key-currency countries such as country *A* in the stylized example considered so far, while exchange rates remain stable because every demand for a given local currency is, *simultaneously*, a supply for the same currency and for the same amount.

Indeed, in our stylized example, *x* units of *MA* are supplied (against, say, *z* *IMU*) in the payment of country *A*’s trade deficit, at the same time as *x* units of *MA* are demanded (against *z* *IMU*) in the payment of those securities that country *A* has to sell in order for it to finance its own trade deficit, thereby avoiding the deficits ‘without tears’ pointed out above referring to Rueff (1963). Similarly, *y* units of *MR* are demanded (against *z* *IMU*)

¹⁴ Note that the international settlement institution ‘could be established either as a separate institution or imbedded within an existing international organization, such as the International Monetary Fund or the Bank for International Settlements’ (Alessandrini and Fratianni 2009a: 341).

in payment of country R 's trade surplus, at the same time as y units of MR are supplied (against z IMU) in payment of those securities that country R purchases, thus obtaining (in the form of securities) the purchasing power that it earns through its net exports. As every currency is simultaneously supplied and demanded against an identical amount of international money (z IMU), foreign exchange rates can never be affected by exchanges on product and financial markets across borders. This occurs automatically by design of the international payment machinery, and is not subject to agents' forms of behaviour.

As a result of these workings, in the international monetary space all national currencies (MA and MR in our example) are the object of an absolute exchange, whereby a sum of MA is transformed into itself through the *monetary* intermediation of the international settlement institution, while a sum of MR is also transformed into itself simultaneously and via the same institution. In so doing, the international settlement institution makes sure that no excess demand (be it positive or negative) for any currency can exist, as any sum of national money is both demanded and supplied instantaneously. As a matter of fact, it takes an instant – to wit, a zero duration in time – to record a payment in any bank's ledger. If this payment is international, that is, between countries pertaining to different currency areas, and this is expressed in a common numerical standard, namely, international money *sensu stricto*, then international transactions are absolute exchanges that leave every currency's exchange rates unaffected by cross-border (commercial or financial) trade. Let us illustrate the working of this international monetary agreement in Figure 3.

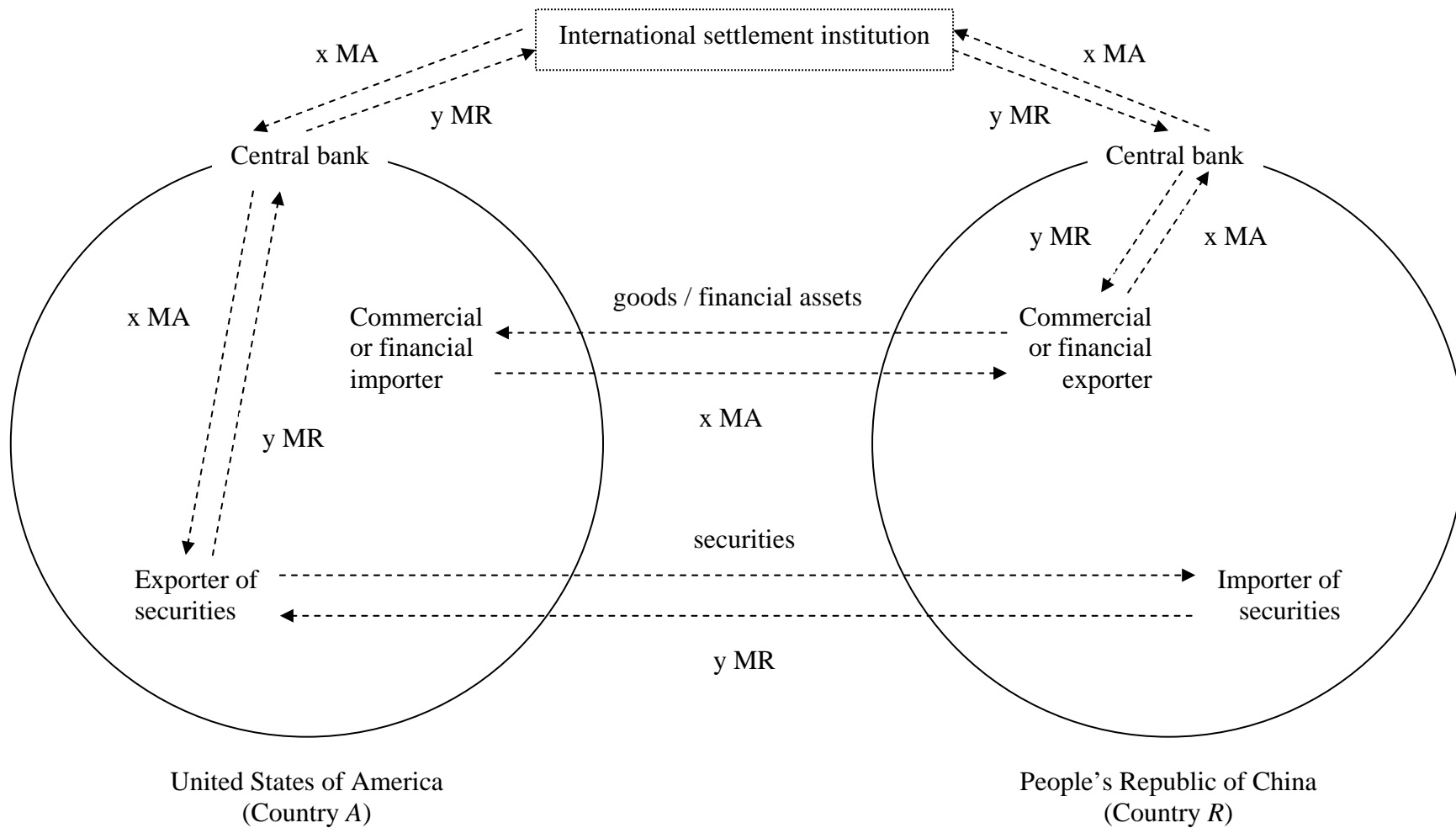


Figure 3. The working of an international monetary agreement between China and the United States: a stylized example

The international settlement system represented in Figure 3 being a system in which any economic transaction on either product or financial markets is finally paid both within and between countries, any commercial or financial item imported by a country, A , must be paid for with an equivalent export of securities, which as a matter of fact are goods in their financial representation, so that any transaction finds its final counterpart in another simultaneous transaction on either the product or financial market. In country A , a claim on bank deposits labelled in MA is disposed of by the national importer, who obtains real goods, services and/or financial assets from the rest of the world through an 'absolute exchange'. In country R , the exporter of real goods, services, and/or financial assets is finally paid in so far as (s)he obtains a claim on bank deposits labelled in MR (through the domestic banking system, headed by the local central bank), which brings to her (or him) a purchasing power identically equivalent to the value (s)he exported (in a commercial or financial form) to country A (see Figure 3, where all transfers of claims on bank deposits are represented by indicating merely the amount and the money unit in which these deposits are labelled; in fact, no bank deposit can leave the banking system in which it originates, as noted above).

This transaction on securities being induced by the commercial or financial transaction carried out by residents, it might involve the state of either country (A and/or R), since there might be no private-sector resident willing to sell (or to buy) those securities that are purchased (or sold) by a non-resident (that is, a resident in a different currency area). Before addressing this issue, we must however focus on the protocol for the emission of international money in the payment of any foreign-trade transaction.

The working of international money emissions

Suppose that China and the United States decide to sign an agreement to participate in the system for international payments we propose in the spirit of Keynes. Suppose also that the United States records a foreign deficit worth x MA or, equivalently, z IMU . For expositional ease, assume that the US foreign deficit corresponds to China's surplus, as if the system we propose were composed of two countries only (at least initially).

In order to make sure that the money-purveying and the credit-purveying functions of the international settlement institution are absolutely separated, let us introduce a two-department book-keeping structure in each national central bank involved in the reform. In other words, let a country's central bank record every international transaction in two separate monies, which means that its domestic department enters the payment in its own local currency while its external department enters it in international money, IMU . The result of the payment of the trade imbalance between China and the US is shown in Table 1, where we assume that x $MA = z$ $IMU = y$ MR .

Table 1. International money as means of final payment between countries, step 1

<i>US Federal Reserve (Fed)</i>		
<i>Domestic department (DD)</i>		
<i>Assets</i>	<i>Liabilities</i>	
	Deposit of bank A	-x MA
	Deposit of ED	+x MA
<i>US Federal Reserve (Fed)</i>		
<i>External department (ED)</i>		
<i>Assets</i>	<i>Liabilities</i>	
Deposit with ISI	-z IMU	
Deposit with DD	+z IMU	
<i>International settlement institution (ISI)</i>		
<i>Assets</i>	<i>Liabilities</i>	
	Deposit of the Fed (ED)	-z IMU
	Deposit of the PBC (ED)	+z IMU
<i>People's Bank of China (PBC)</i>		
<i>External department (ED)</i>		
<i>Assets</i>	<i>Liabilities</i>	
Deposit with DD	-z IMU	
Deposit with ISI	+z IMU	

<i>People's Bank of China (PBC)</i>		
<i>Domestic department (DD)</i>		
<i>Assets</i>	<i>Liabilities</i>	
	Deposit of ED	-y MR
	Deposit of bank R	+y MR

While domestic payment finality occurs in national money, the final payment of every international transaction must be carried out in international money, as noted above. As far as the international payment is concerned, the international settlement institution acts as a catalyst in the sense that it has to create the number of (z) international money units needed to ensure that, in our stylized example, China has no further claims against the United States (see Table 1). Notice also the distinction between international *money* and *deposits* with the international settlement institution, which as a matter of fact amounts to distinguishing a flow (Figure 4) from the result of this flow, that is, a stock, recorded in any bank's book-keeping (see the ledger of the international settlement institution in Table 1).

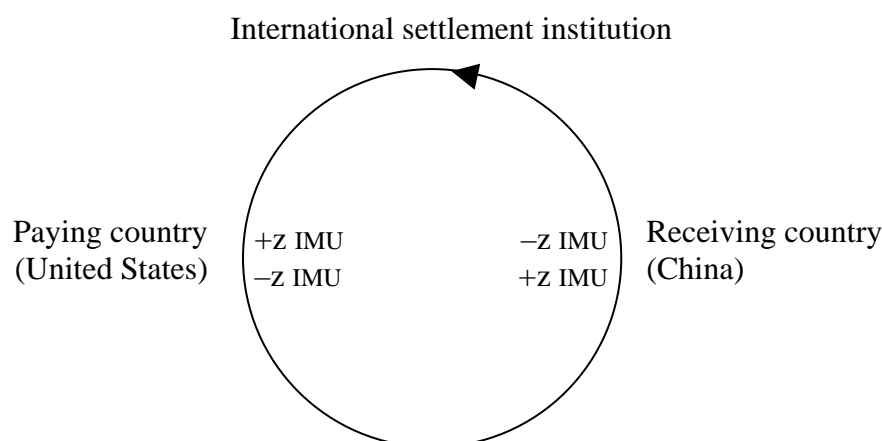


Figure 4. The emission of international money between trading countries

In fact, if settlement of the international transaction were stopped at this stage, the US or country A would be allowed to finally pay its net commercial or financial imports from China (or country R) without relinquishing an equivalent amount of securities (see the domestic department account of the Fed in Table 1). The US would thus live beyond its income, as it may pay for its net commercial or financial imports without exporting real goods, services, and/or securities for an equivalent amount. This risk was imbedded in Keynes's proposals for the creation of an International Clearing Union, as a number of authors, quoted by Alessandrini (2007: 24, fn. 42), pointed out in the 1940s – although

Keynes did not ignore that risk, since he proposed a number of corrective measures (see Alessandrini 2007: 24–8, but also Rossi 2007b: 101–3).

If the intervention of the international settlement institution were to stop at this stage, in fact, a deposit of z IMU would coexist alongside of a sum of bank deposits in money R worth the same amount (see Table 1): the number of money units existing as a result of a single payment would be twice ($2x$) the value of the exchanged items (x MA), as in our example x MA = z IMU = y MR. To make sure that the total sum of bank deposits in the whole world corresponds to the value of the underlying transaction, the international payment system has to guarantee that either one of the two sums of money worth y MR each (that is, the deposit in the domestic department of the People's Bank of China and the deposit at the international settlement institution) disappears as soon as it is formed. Only in this case will the ISI intervention, which is needed to finalize any international payments, leave the money–output relation unaltered worldwide. In the contrary case, in fact, the US would be allowed to pay for its net imports by becoming indebted to the international settlement institution, that is, without disposing of an equivalent amount of securities. This would mean that total demand for world output (which, for expositional ease, we limit here to output of the US and China) would be greater than total supply, owing to the purchasing power of the bank deposits in the accounts at the international settlement institution, which add to the purchasing power that exists in the form of bank deposits denominated in national currencies (MA and MR in our stylized example).

So, if the reform of the international payment system were to stop at this stage, it would not solve the problem of how countries have to finance their current or capital account deficit eventually. To be sure, each country must provide the real or financial backing of its net imports of real goods, services, and/or financial assets. This means that a country must finance its net commercial imports by an equivalent amount of exports of goods, services or securities. Clearly, a trade deficit has to be financed, and this may only occur through a sale of securities – provided that there is a purchaser for them, otherwise the country must cut back on its net imports of commercial and/or financial items.

Now, as the current working of domestic payment and settlement systems shows, it is possible to link together funds transfers and securities transfers at the international level to make sure that delivery of a financial asset occurs if, and only if, the corresponding final payment occurs, too (this is the DVP mechanism, by means of which both actions take place at the same time). Let us illustrate this mechanism by referring to our stylized example. When People's Bank of China is informed that it is entitled to a bank deposit in IMU at the international settlement institution, the Chinese government should decide whether to lend the corresponding amount directly to a (private or sovereign) resident in a deficit country like the US, or to spend it for purchasing securities on the international financial market (see below). If the Chinese government lends its IMU deposit to the US voluntarily, this means that a US resident sells an equivalent amount of securities to a Chinese resident, a case illustrated in Figure 3. If so, then the book-entry situation after this financial transaction has taken place, and has been finally settled in IMU through the international settlement institution, is depicted in Table 2.

Table 2. International money as means of final payment between countries, step 2

<i>US Federal Reserve (Fed)</i>			
<i>Domestic department (DD)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Financial assets	-x MA	Deposit of ED	-x MA

<i>US Federal Reserve (Fed)</i>			
<i>External department (ED)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Deposit with DD	-z IMU		
Deposit with ISI	+z IMU		

<i>International settlement institution (ISI)</i>			
<i>Assets</i>		<i>Liabilities</i>	
		Deposit of the PBC (ED)	-z IMU
		Deposit of the Fed (ED)	+z IMU

<i>People's Bank of China (PBC)</i>			
<i>External department (ED)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Deposit with ISI	-z IMU		
Deposit with DD	+z IMU		

<i>People's Bank of China (PBC)</i>			
<i>Domestic department (DD)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Financial assets	+y MR	Deposit of ED	+y MR

If we draw the balance of payments considering Tables 1 and 2 altogether, we have the situation shown in Table 3, and we notice that as a result of the international payment in international money issued by the international settlement institution no one country has a *payments* deficit, as all foreign trade imbalances between the US and China are finally paid by a transfer of securities in a multilateral framework, in which the paying country (the US) disposes of a bank deposit – and not merely a duplicate of it – as its purchasing power is transferred to the receiving country (China), as represented in Table 3.

Table 3. The result of an international delivery-versus-payment transaction on securities

<i>US Federal Reserve (Fed)</i>			
<i>Domestic department (DD)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Financial assets	–x MA	Deposit of bank A	–x MA

<i>People's Bank of China (PBC)</i>			
<i>Domestic department (DD)</i>			
<i>Assets</i>		<i>Liabilities</i>	
Financial assets	+y MR	Deposit of bank R	+y MR

In this international settlement system, both national and international monies are used in a purely vehicular way, that is, as a means – and not as an object – of payment. To be sure, the US records a net financial outflow, as it sells financial assets in order for it to finance its final payment to China (through the international settlement institution). Of course, these securities, while they provide the means to finance the US net imports of real goods, services, and/or financial assets, are in no way the ultimate export of a net importing country: any foreign trade deficit can indeed only be paid eventually by a net export of goods or services, compensating over time a country's current account deficit

with the same country's trade surplus. The sale of securities, however, provides a bridge between the present and the future, that is to say, between a current account deficit and a trade surplus recorded by the country considered – on condition that, of course, there is a demand for those securities that this country aims to sell in that respect.

Indeed, if China spends the IMU bank deposit it got as a result of its trade surplus (worth z IMU) for purchasing the securities sold by the US, then this allows the latter country to find on the international financial market the funds it needs to pay for its trade deficit finally. All in all, international money disappears as the reflux principle indicates,¹⁵ and no inflationary pressure can therefore arise on the market for produced goods: a bank deposit of y MR exists (in China) as a result of international settlement of the US trade deficit (China's trade surplus). As Table 3 shows, this deposit is backed by an amount of financial assets, as collateral, which are transferred from the US to China with the *monetary* intermediation of the international settlement institution to be set up.

Now, although the most needed purpose of the international settlement institution is that of providing participating countries with a means of final payment for the international monetary system, it would be wise to let the international settlement institution act also as a *financial* intermediary, lending on a long-term basis the amounts saved by surplus countries. The international settlement institution could notably lend to deficit countries, such as the US, the whole amount of IMU deposited by surplus countries which spend it neither on product markets nor on financial markets around the world.

Consider in this respect the ISI books in Tables 1 and 2. The two double-entries in these books are the result of two distinct emissions of international money that occur in one and the same point of time. The first emission concerns the payment in international money of the trade imbalance between the US and China. By way of contrast the second emission concerns the payment in international money of a transaction on the financial market that is induced by the former emission (see above). The second emission being induced by the first, we may analyze them together (Figure 5).

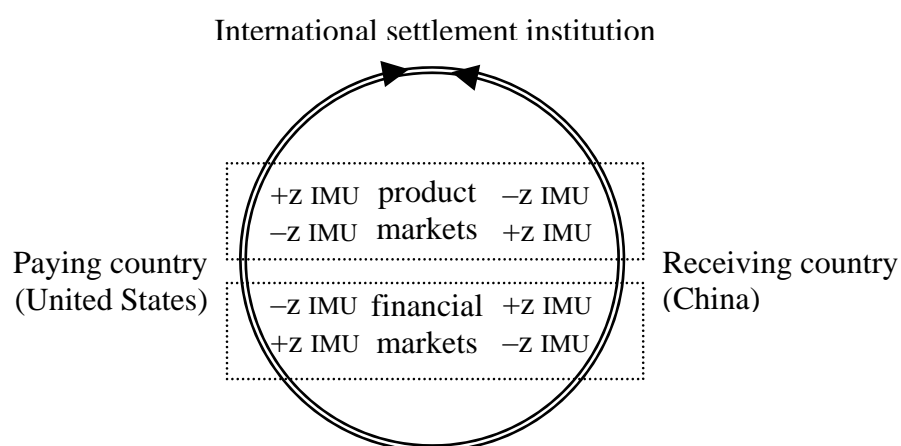


Figure 5. The two emissions of international money in a delivery-versus-payment

¹⁵ See Lavoie (1999) for an analysis of the reflux principle in the history of monetary thinking.

The emission of international money represented anticlockwise in Figure 5 is elicited by the money-purveying function of the international settlement institution with respect to foreign trade. Countries need to ask the ISI in order for their autonomous commercial and financial transactions to be settled. By contrast, the emission of international money represented clockwise in Figure 5 results from the fact that the first (anticlockwise) emission alone would not be enough for the surplus country (China) to be paid finally: the monetary intervention of the international settlement institution would give rise to a mere promise to pay, if it were not complemented by a reverse operation whereby the newly-formed bank deposit in international money (z IMU, see Table 1) is destroyed. This reverse operation amounts to a purchase of securities by China, which in so doing spends the IMU deposit it is entitled to at the ISI as a result of the goods-market emission of international money. On the whole, if China is led to spend on international financial markets the bank deposit in IMU it obtains from foreign trade on real goods and services, it thus contributes to ensure the orderly working of the international settlement system.

What happens, however, if China does not spend its bank deposit at the ISI to buy those securities that the US will be selling in order to finance its trade imbalance? To be sure, as Alessandrini and Fratianni (2009a: 350) point out, '[t]he participation of creditor countries in the adjustment process poses the greatest challenge.' It is particularly at this juncture that the credit-purveying function of the ISI acquires its full sense. As a matter of fact, instead of selling its securities to China, the US might sell them to the ISI, which, in so doing, advances a payment that the United States will benefit from when exporting real goods or services. If so, there might be two kinds of financial assets behind the entries in Table 2: US's securities sold to the ISI, and the ISI's securities sold to China. These securities may indeed be denominated in either local currencies (MA, MR, or any third-country's currency) or international money, the key point being that the final payment of all these financial transactions between countries occurs using international money as a vehicle, that is, as a means of payment, whose load is given by those securities that are thereby transferred from the seller to the buyer.

By selling its own securities (or debt certificates) on the international financial market, the international settlement institution would collect private as well as public capital and invest it in those countries most in need of a recovery, and in which otherwise capital would not flow (see Kalecki and Schumacher 1943: 30–3). As Stamp (1963: 81) noted, '[t]he certificates would end up with the countries which are in over-all surplus – which, therefore, would have automatically lent [...] that surplus to the rest of the world.' Of course, both the open-market and the lending operations carried out by the international settlement institution would have to be supervised and respect the principles of sound banking as well as international best practices. The ISI lending facilities are not to be granted *ad libitum*, but some limit must be provided, and an interest rate must be paid by those countries obtaining the (unconditional) financial assistance of the international settlement institution. The interest rates paid by deficit countries on their borrowings, from either surplus countries or ISI, would likely depend on the extent of their current account deficit, stock of international debt, and capital account imbalances. A country recording a capital account surplus, especially one elicited by capital inflows (that is, a net sale of securities to the rest of the world), will hardly be in a position to issue new debt instruments at favourable terms. It will thus have to accept either the onus of paying higher interest rates on new debt, or that of slowing down the national economy

by a hike in domestic interest rates in the hope to attract (both short term and long term) foreign investment. Alternatively, or additionally, this country might devalue, hoping thereby to boost exports and improve its trade balance in a not too distant future.

In fact, the main objection against this reform is that it might invite abuse, and that the quality of those securities that deficit countries sell to the ISI (in its acting as long-term purveyor of funds) might not match the quality of the securities that ISI sells to surplus countries, so that the quality of the ISI financial assets is likely to deteriorate over time, too. In this respect, the statutes of the ISI need to provide some limit, say, in terms of a percentage of either total foreign trade or GDP (for instance, calculated on a five-year moving average), beyond which no country is allowed to finance its trade deficit by the sale of financial assets – namely, when the country's risk and stock of debt are already too high for this country to provide sound collateral – and it must thus cut back on its commercial imports and/or increase its exports of real goods and services (not least to pay for debt service, that is, interests on securities sold either to surplus countries or to ISI to finance its trade deficit). To be sure, under the proposed international settlement system no creditor country suffers from any credit or settlement risks: any balances at the ISI are always fully, and immediately, convertible into real goods and services sold by any members of the system, or into securities sold either by any (deficit) country or by the ISI itself acting in this connection as a financial intermediary between its member countries.

Conclusion

In the reformed architecture for international payments of cross-border transactions that we put forward in this paper, monetary and exchange-rate policy decisions can be taken according to the real needs of increasingly-open market-economies – be they advanced, emerging, developing, or in transition – rather than to counteract the erratic volatility of exchange rates as well as their unpredictable effects on current and capital accounts. In the international monetary system we propose, any participating currency will have an exchange rate that is stable (although not fixed) in terms of international money, hence also with respect to any other participating currencies, in a framework of free capital movements, without this being incompatible with flexibility in monetary and exchange-rate policy making. Beyond exchange rate stability, indeed, the reform of international payments that we propose in this paper grants another important benefit to participating countries, truly in the spirit of Keynes,¹⁶ as it increases their room for maneuver when gearing their economic policies (particularly an autonomous monetary policy) to the needs of their own domestic economies. The conflict between domestic and external goals of a country's monetary policy will therefore be solved definitively, to the benefit

¹⁶ As Keynes (1980: 234) wrote in the Preface to the April 1943 Clearing Union White Paper issued by the British Government, in reforming the international monetary architecture as he proposed, '[t]here should be the least possible interference with internal national policies, and the plan should not wander from the international *terrain*.' This objective was already pointed out by Keynes in *The General Theory*, when he wrote that '[i]t is the policy of an autonomous rate of interest, unimpeded by international preoccupations, [...] which is twice blessed in the sense that it helps ourselves and our neighbours at the same time. And it is the simultaneous pursuit of these policies by all countries together which is capable of restoring economic health and strength internationally, whether we measure it by the level of domestic employment or by the volume of international trade' (Keynes 1936: 349).

of growth, employment, and macroeconomic stabilization. This opens a whole new field of research for the design and conduct of monetary policy all around the world.

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