

# Why will the pre-eminence of the dollar last?

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## Abstract

The financial crisis of 2007-08 contributed to the insurgence of widespread uncertainty about the future of the dollar. A broad theoretical debate on the decline of the dollar and its consequences re-opened. A large body of studies, seeing the origin of an international currency as a market-led process, regards as inevitable the advent of new international currencies either alongside the dollar or even as a replacement for it. According to several economists the United States will lose very soon their pre-eminence in economic terms and consequently the dollar will cede its international role to renminbi. In this paper we propose to trust in an international fiat money depends on domestic and international political conditions. The acceptance of a currency as an international means of payments needs a guarantee of currency holders property rights' of currency's holders and, at the same time, in the case of a fiat money, it is the outcome of a political-economic exchange between states. Taking account of these theoretical aspects we conclude that the dominance of the dollar as an international currency is going to last.

## Introduction

The financial crisis of 2007-08 contributed to the insurgence of widespread uncertainty about the future of the dollar. This prompted several countries, notably the BRICS, to call for the creation of a new international monetary system. At the same time the crisis also re-opened a broad theoretical debate on the decline of the dollar and its consequences.

A large body of studies, seeing the origin of an international currency as a market-led process, regards as inevitable the advent of new international currencies either alongside the dollar or even as a replacement for it. In this view (see Subramanian, 2011) the United States will lose very soon their pre-eminence in economic terms and consequently the dollar will share its international role with other currencies or it will be replaced by another currency, like the renminbi.

Within this line of study, however, there are differences of opinion as to the speed of this process. According to some scholars (such as Krugman, 1980; Matsuyama et al., 1993; Hartman, 1998 and Rey, 2001), the existence of network externalities tends to slow down the dollar's loss of status as an international currency. This hypothesis is borne out by the case of the pound, which was supplanted by the dollar only several decades after the US economy, in terms of both output and volume of exports, became considerably larger than that of the UK.<sup>1</sup>

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\* We thank Gampiero Cama for his valuable comments.

<sup>1</sup>According to Triffin (1960), even after the United States had an economic dimension much more significant than that of the UK, it took 30 to 70 years before the dollar supplanted the pound sterling as an international currency.

Taking this perspective, some scholars (Eichengreen, 2010; Campanella, 2014) argue that the advent of the euro and the renminbi as an international currency would mean the end of the single reserve currency system and the advent of a multi-currency reserve system. According to others (Subramanian, 2011), the replacement of the dollar with the renminbi in international trade would be much more rapid than that of the pound with the dollar.

Set against this line of study, which emphasizes the role of the market and of demand in the emergence of an international currency, is the so-called chartalist approach (Fields and Vernengo, 2012), which focuses on the role of the state in promoting the acceptance of a fiat national money as an international currency. This approach ultimately backs up the conclusions of the hegemonic stability hypothesis (Kindleberger, 1973), namely that on an international level only a hegemonic country can surrogate the functions which at a national level are carried out by the state in ensuring the value of money by accepting it in payment of taxes. In the chartalist view, the pre-eminence of the dollar is primarily linked to the political-military dominance of the United States. Since the latter is likely to last for some time, the dollar's decline will inevitably be slow. Both the market view and the chartalist view capture important aspects of the origin of international currency; however, they disregard others.

In this paper we propose to assess the prospects of the dollar and of its competitors, particularly the euro and the renminbi, overcoming the shortcomings of the approaches just mentioned. On the one hand, unlike the chartalist view, we emphasize how trust in an international fiat money depends not only by the state capability of the issuer, but also by domestic political conditions, *in primis*, institutional guarantees of the protection of property rights of the holders of the currency and of the assets denominated in it.

On the other hand, unlike in the market-led view, we intend to show that an international fiat currency is not the result of spontaneous and impersonal market forces, but it is the outcome of a political-economic exchange between states. This exchange, unlike a cooperative agreement, only takes place under certain conditions, notably when there is a significant imbalance in state capability between the leading country and the other countries in the system. In this case, these countries give marginal weight to the fact that the state issuing the international currency, due to its ability to use seignorage, has a significantly higher relative gain and can thus further expand its military strength.

The development of the arguments just mentioned leads to the conclusion that the dominance of the dollar as an international currency is going to last. In fact, the Eurozone for various reasons do not seem to be able quickly to act as a leader capable of affirming the euro as an international currency. At the same time China, at present, besides not having a political-military power competitive with that of the US, is still not able to protect the property rights of the holders of renminbi or assets denominated in it because neither it is a market economy nor a democracy.

The paper is divided into four sections. Section 1 provides a short review of the literature on the future role of the dollar in the international monetary system. In Section 2 we seek to identify the preconditions for the emergence of an international fiat currency. Taking these conditions into account Section 3 narratively describes a theoretical scheme in which the international currency emerges from a political-economic exchange between member countries. Based on this scheme (formally developed in the Appendix), in Section 4, we discuss the possible future of the dollar and the international monetary system. The

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However, in a recent contribution, Eichengreen and Flandreau (2009) showed that the dollar overlooked sterling as reserve currency in the mid 1920s.

conclusions review the topics discussed in the previous sections once again and draw some lessons for the future.

## **1. An overview of the literature on the prospects for the dollar**

The dollar still plays a dominant role in the international monetary system –as a unit of account, as a means of payment and as a store of value (Goldberg, 2011). Indeed, it is a key invoicing currency in international trade. As shown in Figure 1, the share of exports invoiced in dollars is far higher than the share of each country’s exports to the United States. If these shares were equal, the points for each individual country should be on the diagonal in the figure.

[insert Figure 1 here]

The dollar’s function as a unit of account can also be seen in the fact that many countries choose to take the dollar as a reference currency in exchange arrangements. According to the classification suggested by Reinhart and Rogoff (2004) and Ilzetzki et al. (2010), shown in Table 1, in 2010 eight countries were dollarized or had a currency board linked to the dollar, while 90 countries had a pegged exchange rate against the dollar.

[insert Table 1 here]

The US dollar is by far the most important transaction currency on foreign exchange markets. In 2010, about 85 percent of FX transaction volume was in dollars (Table 2). This share appears to be stable over time.

[insert Table 2 here]

The US currency also has a dominant role in financial transactions. In 2013, almost 40 percent of outstanding international securities were denominated in dollars (Table 3).

[insert Table 3 here]

Lastly, the dollar still occupies a dominant position in states’ foreign reserve holdings. In 2013, dollar assets accounted for about 2/3 of the total reserves held by the industrialized and developing countries (Table 4).

[insert Table 4 here]

Although, as we have just seen, the dollar maintains its role as the most prominent currency in the world, there has long been a lively debate about its future role. After the financial crisis of 2007-08 several scholars concluded that the dominant role of the US currency is undermined by the macroeconomic imbalances of the United States, particularly its massive current account deficits, and the country’s relative economic decline (Chinn and Frenkel (2008). These two factors adversely affect two of the three fundamental economic characteristics that a currency must have if it is to be an international currency, that is to say, confidence in the future stability of its value and the pre-eminence of the issuing country in the world economy.<sup>2</sup>

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<sup>2</sup> The third characteristic is the high level of liquidity of the financial market of the issuing country.

According to a few economists the leaders of the United States, faced with the alternative of either reabsorbing internal imbalances or satisfying world demand for dollars, have opted for the latter course. Macroeconomic imbalances, in particular the persistent current account deficits from which they derive, have undermined confidence in the future value of the dollar.

Some other economists argue that the United States will lose very soon their pre-eminence in economic terms and consequently the dollar will lose its role of international money. In particular, Subramanian (2011) has shown by means of an econometric analysis on historical data that the economic dimension is the determining factor if a national currency is to become an international currency. More precisely three size indicators (gross national product, trade and net creditor status) explain "about 70 per cent of the variation in the reserve currency status of the major currencies over the last 110 years". Because size is the key determinant of reserve currency status, and because in the coming years the economic size of China will in every respect (especially in terms of GNP and trade) be higher than that of the United States, the RMB will inevitably replace the dollar as the international currency.

The scholars who argue that the decline of the dollar as an international currency is inevitable and imminent, however, are divided on the way it will happen. According to some, the transition out of the dollar will not be smooth, but abrupt. According to Persaud (2004), "at any time, there tends to be a single dominant currency in the financial world – not two or more, just one ... In the currency markets, the spoils go to the victor, alone – they are not shared". According to the same Subramanian, the process of the American currency being replaced by the Chinese currency will be rapid, unlike the transition from the pound to the dollar. In fact this transition only apparently took place after the Second World War, that is to say, several decades after the point in time when the US economy surpassed the British economy in size (in other words, in the 1920s). This delay would be explained by the fact that, as Schenck (2010) shows, in the period between the wars the British authorities promoted the use of the pound by the colonies in every possible way. So it was principally political factors that slowed down the replacement of the pound by the dollar.

Other economists believe, however, that the transition out of the dollar will be delayed by the existence of network economies (Cohen, 2010). Thus, for a certain period of time we will have an international monetary system where several international currencies coexist (the dollar, the euro and the RMB) – in other words, a multiple reserve currency system (MRCS).

There are different opinions as to the functionality of such a system. Eichengreen (2010; p. 3), for example, believes that it "... will be an improvement over a system in which countries seeking to accumulate reserves find themselves having to accumulate dollars. No one country will monopolize the seigniorage gains. Spreading the seigniorage across three, four or five countries is not socially optimal, but it is an improvement over a situation where one country enjoys the exorbitant privilege of issuing the reserve currency".

An MRCS would be desirable not only because it would help reduce the "exorbitant privilege" enjoyed by the country issuing international currency, but also because it would partly solve the Triffin Dilemma, by lowering the ever-growing balance of payments deficit pressure on a single currency. Indeed, if because of the persistent current account imbalances of a reserve currency issuing country, confidence in the currency issued by it were to decline, central banks could rebuild their portfolio in favour of other reserve currencies (Lee, 2010).

Several concerns have been expressed by various economists regarding the proper functioning of an MRCS. According to some scholars, a system of this type would be highly unstable (Witteveen, 1980). Diminished confidence in a certain reserve currency, for example due to persistent current account deficits in the issuing country, could cause a run on it. On the one hand, there would be serious fluctuations in exchange rates, while on the other, the country affected by the loss of confidence would see a worsening in its balance of payments deficits.<sup>3</sup>

In addition, an MRCS may accompany the emergence of a competition between the issuing countries with the aim of promoting the use on the markets of the currency they have issued. The consequences of this competition can be benign or malign depending on the forms it takes.

If the reserve currency issuing countries are encouraged to implement reforms in order to increase confidence in the currency they issue, the struggle between reserve monies has beneficial effects. Conversely, if the reserve currency issuing countries use their political influence to induce certain governments to use one reserve currency rather than another,<sup>4</sup> the effect can be adverse. Within such a perspective a plurality of monetary blocks may emerge, as happened in the interwar period.

This latter case is held by Cohen (2010) to be more likely than the former. It should be noted, in fact, that Asian countries, especially China, have extremely large amounts of dollar assets. China, therefore, given its ambitions to act as a global power and to claim a wider role for the RMB, may have an interest in undermining confidence in the dollar, thus destabilizing its value. This leads Cohen (2010, p. 163) to suggest that "prospects for the future, therefore, are cloudier at best. A weakening dollar is unlikely to be replaced by any other single currency. The outlook, rather, is for a more fragmented currency system, with three or four monies in direct competition in different parts of the world".

According to some scholars, the emergence of unrest and fragmentation in the international monetary system could be avoided if the conditions for the existence of a super-national bank money (SBM) were created (Alessandrini and Fratianni, 2009a; 2009b). This money should be based on a cooperative agreement between a limited number of countries interested in stabilizing the international monetary system.<sup>5</sup> As the SDR (Special Drawing Rights) the SBM would be composed of a basket of national currencies. However, unlike the SDR, it could be created endogenously by the participating countries and could be used as a real currency in settlements between central banks.

The different positions on the future of the dollar and, more generally, of the international monetary system described above are based on different conceptions regarding the factors that turn an asset into an international currency. It is, therefore, appropriate to clarify the determining factors for an international currency. This will be the focus of the next section.

## **2. The requirements of an international monetary system based on fiat money**

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<sup>3</sup>This type of criticism is refuted by Eichengreen (2010) on the basis of the hypothesis that when managing their portfolios, central bankers adopt longer-term views than private individuals, they, in fact, do not need to satisfy impatient investors.

<sup>4</sup> Similarly to what Susan Strange has described in reference to "Master Currencies".

<sup>5</sup> See Alessandrini and Fratianni (2009b).

Most of the "declinist" contributions are based on the assumption that the emergence and decline of an international currency is a market-driven process. The main theoretical model on which these contributions are based is by Matsukata et al. (1993).<sup>6</sup> This approach leads scholars, who predict the future of the dollar on the basis of the historical experience of the decline of sterling as an international currency and its replacement in this role by the US currency, not to take into account of the changes in the type of currency used internationally.

In the Gold Standard the currencies of the member countries were convertible into gold, in other words, into a commodity money. In this monetary system not only was the pound convertible into gold, but it was considered an almost perfect substitute for gold since its exchange rate against the commodity money of reference had not changed since 1717.<sup>7</sup>

Unlike the classical gold standard, the current international monetary system does not envisage the convertibility of the international currency into a commodity money. It is based on a fiat money, that is on a money without intrinsic value, the dollar, and on the convertibility into dollar of the currencies of the other countries participating in the system.

Since an instrument must be accepted by the community as a means of payment if it is to become money, it is necessary that this community has confidence in its future value. It becomes, therefore, crucial to clarify how this trust is produced in the case of a commodity money (in other words, a money whose face value corresponds to its intrinsic value) or a fiat money (in other words, a currency without intrinsic value) (Giannini, 2004). Obviously, in the case of commodity money confidence in its acceptability is given by its to have an intrinsic value. Not so in the case of fiat money.

In this case, it is necessary to provide institutional mechanisms that ensure confidence in the value of the key currency of the system and in the convertibility of other currencies into the key currency. This guarantee can result from an institutional apparatus that lays down rules of conduct of the issuing country and of the countries participating in the system and ensures compliance with them.

The construction and preservation of an institutional framework to guarantee a currency with no intrinsic value are inevitably the result of political choices and not the result of impersonal market forces.<sup>8</sup>

Several contributions in the International Political Economy approach highlight the importance of these choices in the emergence and duration of an international currency, especially if it is a fiat currency.

As Cohen writes (2010, p. 129): "... to ignore the political side in a context like this is like trying to put on a production of Hamlet without the prince."

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Applying the chartalist view on international currency, Fields and Vernengo (2011) advocate the hegemonic stability view. The international currency is the creature of the dominant international state. "The dollar is the key currency because the United States can impose that key commodities are traded in its own

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<sup>6</sup>For a survey of these models see Trejos and Wright (1996).

<sup>7</sup> On the reasons for this, see Grossman (1988).

<sup>8</sup>The Bretton Woods system, being based on two levels of convertibility, had many features of a system based on fiat money. No wonder, then, that it is configured as a form of legalization of monetary affairs. See Simmons (2000) and Gazzo and Seghezza (2012).

currency. ... The role of the dollar in international markets, and the advantages that come with it, are the spoils of hegemonic power."

But where does this hegemonic power come from?

There has been a wide-ranging debate within the IPE on the definition of power, in particular of hegemonic power.<sup>9</sup> Much of the literature on international relations defines state power simply as the ability to influence the outcome of events by pressuring or coercing the behaviour of other countries (Kirshner, 1995).<sup>10</sup>

Within this perspective, Helleiner (2008) stresses the importance of a country's ability to influence other countries either directly or indirectly, inducing them to accept its currency as an international currency. An example of indirect influence is the way in which Britain in the nineteenth century promoted the use of the pound by establishing "... far-flung official posts of the British empire".<sup>11</sup> Similarly, "after the Second World War, the dollar's global role was boosted not just by the rapid growth of private US trade and investment abroad but also by the dramatic growth of US overseas aid, technical assistance and military spending."<sup>12</sup>

Forms of direct influence by one power over other countries to force them into accepting its currency as a key currency can take the form of acts of coercion, giving rise to what Susan Strange has called "master currencies", or there can be inducements, such as aid packages, military protection or promises of market access.

Carla Norrlof (2014) focuses on the current international monetary system and attributes dollar hegemony to the monetary capability of the United States. This depends not only on the economic size of this country, but also on its having substantial military force (Bergsten, 1975; Cohen, 1977; MacNamara, 2008). As historical experience shows, the use of the latter is a way of forcing countries to respect treaties signed and to honour obligations issued.

Having considerable monetary capability, the United States can exert different forms of power.

The exercise of bargaining power on the part of a country lies in its ability to affect the costs and benefits of certain choices of other countries by force, persuasion or payment<sup>13</sup>, while by exerting structural power,

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<sup>9</sup>For a survey see Baldwin (2002).

<sup>10</sup> Cohen (2009) believes, however, that the ability to influence the choices of others presupposes absolute decision-making autonomy on the part of the hegemon. This autonomy, in the international monetary system, comes from the ability to postpone the adjustment process and to divert the costs associated with it. Once a country has this autonomy, it is able to influence the decisions of other countries.

<sup>11</sup> See Helleiner (2008; p.362).

<sup>12</sup>*Ibid.*

<sup>13</sup> A prime example is the bargain the United States offered Germany in the 1960s, where by Germany agreed to prop up the dollar price of gold in exchange for maintaining US troops in Germany (Zimmerman, 2002). Similarly, after the collapse of the Bretton Woods system, the United States offered military protection to Saudi Arabia and the UAE in exchange for a commitment on their part to fix the price of oil in dollars and to hold their reserves in dollar denominated assets (Spiro, 1999).

the United States derives benefit in particular from imposing a liberal economic regime and from creating an open market for goods and capital<sup>14</sup>.

The IPE explanations like those outlined above, by emphasizing the role of military and political variables in explaining the emergence of a currency as an international currency, tend to attribute this process exclusively to the hegemonic country's ability to impose the rules of the game. However, the widespread acceptance of an international fiat currency seems explicable, not so much as the result of an act imposed by a hegemonic country but as the outcome of a political exchange between states.<sup>15</sup>

This exchange, however, cannot be reduced to a cooperative solution like the one outlined by neoliberal institutionalists with reference to the Bretton Woods system. Taking this perspective, Giannini (2004; p. 328) writes: "The cooperative regime, of which the Bretton Woods system still remains the highest expression, is characterized by the more or less formal attempt to arrange for ad hoc mechanisms for the creation of international liquidity with which to lighten the external constraint weighing down on individual economies". This position assumes that states decide to cooperate in order to produce a public good, in this case an international currency.

In a similar perspective, lie scholars who believing that a dominant money destabilizes the international monetary system (Alessandrini and Fratianni 2009a), and think that It is desirable to create an international currency, as Keynes's Bancor, on the basis of a cooperative agreement between states. These positions require that cooperative behavior is prevalent and rational by states, and in particular by the Great Powers.

However, several scholars of international relations showed that the probability that the Great Powers cooperate at an international level is low for two fundamental reasons amply described by Waltz (1979). In fact, almost inevitably the gain that one party derives from a cooperative agreement is greater than that which accrues to the other. The latter, concerned that this alters the balance of power, sees no benefit in cooperating. In particular, in the case of fiat money, as opposed to commodity money, the problem of the relative gain resulting from cooperation becomes very significant.<sup>16</sup> Indeed, in a system based on fiat money, the issuing country comes to enjoy the right of seigniorage, the right that Giscard d'Estaing, referring to the role of the dollar in the Gold Standard, termed an "exorbitant privilege". The use of a fiat money at the international level has effects not just on global wealth, as the neo-liberal institutional approach suggests, but also on the balance of power between countries.

### **3. A contractarian view of international money**

The current theoretical explanations for the existence of an international currency are based on two different theoretical approaches: the chartalist hypothesis and the search-theoretic hypothesis (which supports the market view).

As we know, the chartalist approach sees the currency essentially as the unit of account that makes it possible to make economic calculations. As such, it is based on the state imposing a particular asset as the

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<sup>14</sup> See Cohen (1977; p. 56) and Strange (1987; p. 553).

<sup>15</sup> In this meaning, the international currency, becomes, according to Susan Strange's term, a "negotiated currency".

<sup>16</sup> In addition to that, as Waltz (1979) has underlined, a cooperative agreement reduces the autonomy of a country; in other words, it constrains its freedom of action in its relations with other states.



currency in an economic system (Ingham, 2004). The moneyness of this asset is founded on the state rather than on the confidence of the market. Indeed, it is the state that guarantees its value, by accepting it in payment of citizens' tax obligations, while the central bank ensures the solvency of public debt (Helleiner, 2003).

When applied to international currency, the chartalist approach assumes the existence of a hegemonic country that, mimicking the functions of the state in the national economy, it imposes its currency on weaker countries by exercising, through its central bank, the functions of lender of last resort on a world level.

Within the framework of the gold standard and the Bretton Woods system, the monetary power of the hegemonic country was limited by the obligation to ensure the convertibility of its currency into gold. After the collapse of Bretton Woods, the dollar lost all connection with gold and the international monetary system became very similar to the national monetary systems based on fiat money.

The main shortcoming of the chartalist approach is that it puts the emphasis only on the supply side, while leaving out the role of demand in the process of generating an international currency.

Unlike what happens in the chartalist approach, in search-theoretic models the role of demand is crucial. In the extensions of these models to international money (Matsuyama et al., 1993; Trejos and Wright, 1996), and in particular to fiat money (Li and Matsui, 2005), the probability of meeting an exchange partner with foreign money increases in proportion to the size of the country and its degree of openness. It follows that in international exchanges the currency of the larger and more open country tends to prevail as a means of payment.

However, search-theoretic models neglect the problem of trust in the stability of the value of the various means of payment. This factor can be disregarded only in the case of commodity money, the amount of which is given exogenously and which is therefore not subject to the risk of over-issue, as is the case with convertible or fiat money.

In order to understand when we have the conditions for political exchange from which the international currency emerges, it is necessary to take into account both the demand for and supply of an instrument and a system of payments.

As North (1990) points out, changes in institutions are driven by two forces: on the one hand, the incentive to create new institutions flows from "economic development", while on the other, the "institutional environment" limits the set of institutions that can in fact be created.

In the case of an international currency "economic development" is the demand for new instruments that can satisfy the growth of international trade or that are compatible with economic and social domestic changes. It is taking into account the first aspect that we can explain the transition from exchange fairs to convertible banknotes to fiat money.

Considering the second aspect, we can explain the difficulties of individual countries to accept a system based on commodity money in the period between the wars. At that time, in fact, as it is well illustrated by Eichengreen (1992), the advent of mass political parties and the formation of labor unions helped make rigid downwards wages and prices. Consequently, compliance with the rules of the Gold Standard became, socially and politically, much more expensive than in the past. Any adjustment measures of current account imbalances were reflected more than in the past on the unemployment rate. In this context the demand

emerged for an international monetary system that would allowed governments a higher autonomy in the management of monetary policy. That request was satisfied with the system defined in the Bretton Woods Agreements.

Although the demand for monetary innovations has a crucial role in the evolution of the international monetary system, explain this evolutionary process only taking it into account would inevitably lead to an explanation spoiled of functionalism (Giannini, 2004). Because the evolutionary process of the payment system is characterized, also at the international level, by a gradual shift towards instruments with ever-lower intrinsic value, for these instruments to be accepted there must be an authority that builds confidence or guarantees their value. In the international arena that authority can only be exercised by a power that has a state capability significantly higher than that of other countries.

After WWI states began to have greater control over their national currencies (Helleiner, 1994). Consequently, they demanded a system of international payments that was no longer based on commodity money but on something like a convertible currency with amounts set discretionally (Helleiner, 2003). It is no coincidence that in the period between the wars institutions were created, such as the League of Nations and the Bank of International Settlements, which were crucial to the architecture of the Bretton Woods system and the dollar standard.

However, in the interwar years, the demand for more flexibility of money supply was not satisfied. At that time, the conditions in international relations were lacking that would allow the emergence of a power to perform the functions of the state in the domestic economy. The state capabilities of the Great Powers were balanced: in short, there was a multipolar balance. In this context, the demand for an international currency characterized by elasticity of supply greater than that guaranteed by the Gold Standard could not be satisfied. This demand would only be met after WWII.

The historical evolution of payment technologies raises the question as to which conditions are necessary for a currency without intrinsic value to be used at the international level. These conditions can be ascertained by adopting a modified search-theoretic model with fiat money. The full version of this model is shown in the Appendix.

As in search-theoretic models, it is assumed here that the acceptability of a national currency as international money depends on the probability that it is used in exchanges. Unlike these models, however, it is assumed that the acceptability of the currency also depends on the trust that individuals have in the future value of the currency.

An international fiat currency may come about, therefore from a political exchange between states.

In particular, a country commits itself to ensuring confidence in the stability of the value of the currency issued by it and the payment system focused on it.

To fulfil this commitment, first of all, this country must commit not to manipulate the value of the currency and the assets denominated in it. In a few words it has to ensure adequate protection of property rights of its currency's holders. As evidenced by North and Weingast (1989)<sup>17</sup>, this protection is a condition for the

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<sup>17</sup> As these scholars have shown, the British monetary and financial market could develop before other markets since the transfer of power from the king to parliament imposed by the Glorious Revolution entailed a significant increase in the protection of property rights.

development of efficient money and capital markets. Therefore, a country that wants to promote its currency as an international currency has to accept the rules of market .

Having satisfied this pre-requisite, the country which wants its currency to become an international money has to induce the other countries of the system to behave consistently with the rules necessary for allow a monetary system based on fiat money to work.

This objective can perhaps only be achieved when there is a specific balance between powers, in particular when the other countries give little importance to the relative gain by the country issuing the international currency. This situation occurs when there is a large imbalance of power between the leading country and the follower countries. In this case, in fact, a further increase in the state capability of the leader country financed by seigniorage produces a modest marginal loss for the other countries.

The model shown in the Appendix suggests, therefore, that an international fiat money is a joint product of a political exchange: it is a public good produced by the issuing country, even though that country maximizes its interest by exploiting the right of seigniorage.<sup>18</sup> Other countries accept that the issuing country exploits the right of seigniorage because they benefit from a public good that reduces the transaction costs of exchanges. In short, the existence of an international money without intrinsic value is a political exchange between states.

The existence of an international money without intrinsic value rests on two critical characteristics.

**Firstly**, the states must give more importance to the absolute rather than the relative gains that accrue from cooperative behaviour. A national currency that also becomes an international money acquires seigniorage rights that, in turn, modify the international political balance in the issuer's favour. In certain circumstances, the other countries may find it difficult to accept a situation that reinforces the political-military power of the issuing country. This is the reason why states may give more weight to the relative rather than to the absolute gains that derive from the use of a convertible or international fiat money.<sup>19</sup> This happens especially when the Great Powers have a similar level of political-military might and fear any alteration in the balance of power. Conversely, if the privilege of seigniorage is the prerogative of a country whose political-military strength is significantly greater than that of other countries, the problem of relative gains becomes marginal for these countries and they tend to give overriding importance to the absolute gains they obtain from the existence of a public good such as a convertible or international fiat money (Grieco 1990).

**Secondly**, a country creates trust in the payment system only if it is in its interest to do so. This condition is more easily satisfied in the case of a hegemonic country if it enjoys economies of scale which it has gained from its dominant position and also exploits the right of international seigniorage. When both these conditions are met, a political exchange emerges with a supply of and demand for institutions that create trust in a fiat international currency.

The existence of these conditions lay behind the Bretton Woods system, which "... was based on a tacit deal between the United States and its principal allies that spanned trade, finance and security ... the US dollar was the lynchpin of the transatlantic and transpacific deal. Freer trade depended on monetary stability,

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<sup>18</sup> This process is analogous to the concession of the monopoly to issue banknotes to private banks, which then became central banks; see Broz (1997).

<sup>19</sup>Therefore, as underlined by Rogoff (2001), cooperation between states with the aim of establishing a global money is improbable. For a different point of view see among others Arestis et al. (2004), Bonpasse (2007) and Greenwald and Stiglitz (2008).

which, in turn, depended on the special role of the dollar."<sup>20</sup> Since other states undertook to accept the dollar as an international currency, the United States was able to finance its current account deficits by printing dollars. At the same time, the United States undertook not only to ensure the security of these states but also to maintain confidence in the value of the dollar.

The current monetary system is a continuation of the Bretton Woods system. In this system, even without the constraint of fixed exchange rates, member states are required to comply with two important obligations in managing their international monetary policy, namely the prohibition of restrictions in payments of international transactions and multiple currency practices.<sup>21</sup>

Who guarantee the respect of these rules?

Unlike what happens in a system based on commodity money, such as the gold standard, a system founded on fiat money, because it is based on a political exchange, presupposes an institutional apparatus to oversee compliance with the rules and, if necessary, their adaptation over time. As noted by Abbot and Snidal (1988), the legalization of monetary relations is a means to reinforce the credibility of the system by increasing the costs of failure to meet commitments.

However, a country that does defect would not incur these costs if there were not a body to prevent defections by financially supporting countries and encouraging behaviour consistent with system stability.

Within the framework of the Bretton Woods system this task was delegated to the IMF. In the current international monetary system the IMF has maintained the function of monitoring compliance with rules. In addition it gives support in case of financial and currency crises. This function consists mainly in the provision of loans conditional on the implementation of macroeconomic and microeconomic policies aimed at consolidating the country's ability to remain within the dollar standard.

The authority of the IMF, both now and in the past, is ensured by the financial and political-military support of the United States (Henning, 2012 ; Woods, 2006).

The effectiveness of this support is guaranteed by the large size of "state capability of the United States" (Ikenberry *et al.*, 2009). The most widely used measures of capability are GDP and military spending. In 2011, the United States had a GDP almost equal 40 percent of the countries conventionally referred to as the Great Powers. Its military spending was higher than all these other countries put together (Table7).

[insert Table 7 here]

The points made above allow us to achieve three major conclusions:

- a. when there is a leading country, that is, one country with a state capability much higher than others, it is likely that there is an international money. The most important historical example of this situation was the Bretton Woods system and the current dollar standard. Indeed, unlike past systems, these monetary systems are based on a framework of rules and institutions designed to build confidence in the international money (Pauly 1997; Simmons, 2000).
- b. When a multipolar equilibrium prevails, it is unlikely that the currency of a given country will be accepted as an international money. No Great Power agrees to use as an international currency the currency of another Great Power, as the latter could derive a significant relative gain by being able to

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<sup>20</sup> See. Mastanduno (2009; pp. 129-30).

<sup>21</sup> These obligations are contained in Article VIII of the Bretton Woods Agreement.

take advantage of the right to international seigniorage. Historically a situation like this happened between the world wars. Indeed, at that time there was a demand for a system that, unlike the Gold Standard, would guarantee greater elasticity of supply of international money. Institutions that could contribute to the functioning of such a system were also conceived. As Pauly writes (2007; p. 191): "The activities that now make up what the IMF calls its surveillance function developed on the intellectual base constructed mainly by British and continental European economists in the interwar period." The demand for international monetary innovations in the interwar period could not be met because there was no leading country recognized as such on the international scene. Kindleberger (1973) attributes this situation to the unwillingness of the United States to assume the role as leading country. And in fact, the composition of military power shows that in the period between the wars there was a certain balance of forces (Table 8).

[insert Table 8 here]

After the collapse of the gold-exchange standard no currency was accorded the status of an international money, monetary blocks were formed and there was also a return to barter in the form of clearing agreements.

- c. When a multipolar equilibrium prevails, and when there is no international currency, therefore, the emergence of a multicurrency system is unlikely, as is the coexistence of a plurality of international currencies. This system presupposes the prevalence of cooperative behaviour in international relations. In fact, it is likely that "dirty" competition between the Great Powers should emerge that is greatly influenced by their desire to consolidate and, if possible, expand their sphere of influence. In a situation like this the formation of monetary blocs is very likely. Each Great Power promotes the spread of its currency as a means of payment in the area where it has political and military influence and at the same time hinders the spread in this area of the currency issued by another Great Power. An historical example of a situation of this type is the international monetary system created between the wars. At that time, some monetary blocks were created, each of which came under the dominant influence of a power with a state capability decidedly greater than that of other participating countries (Eichengreen and Irwin, 1993).

#### **4. The prospects of the international monetary system**

We saw in Section 1 that the dollar still plays a dominant role in the international monetary system. Nevertheless, it is equally clear that this undisputed pre-eminence is no longer as unchallenged as it was under the Bretton Woods system. In that system the United States had an undeniable economic and political power and the member countries of the system were allied countries, over which America exerted major influence. At present, the economic and political power of the United States is, at least in relative terms, weakened. Equally, the dollar is used not only by allies of America, but also by non-allied and in some cases potentially hostile countries. Obviously, American influence over these countries is small.

In the context outlined above currencies tend to emerge which, according to various economists, could challenge the dollar's role as an international currency, such as the euro and the renminbi. In the short run, however, it seems unlikely that these two currencies can affect the dollar's role as the hub of the

international monetary system. The most recent data published by the ECB (ECB, 2014) showed that the euro is the second most widely used international currency after the dollar. However, its use is largely concentrated in the EU (ECB, 2009; Goldberg, 2005; Kamps, 2006; Auboin, 2012).

The most obvious limitation of the euro lies in the governance of the eurozone, which is unable to exercise any form of political and economic leadership in the international arena. As Cohen (2009b, p. 759) writes: "... the EMU is no more than a club - a gaggle of states with limited military capabilities and with foreign policy interests that only partly overlap or coincide."

Given these characteristics, it is doubtful whether the eurozone will be able to initiate the kind of political exchange between countries as outlined in paragraph 3 as a precondition for the emergence of an international currency (Pittaluga and Seghezza, 2012). Besides, the authorities of the euro area have never shown an interest in pursuing the objective of making the euro an international currency competitive against the dollar.

This intention has, however, been expressed by the Chinese authorities, in particular after the 2007-08 financial crisis. Between late 2008 and early 2009 the Popular Bank of China promoted currency swap agreements with six nations,<sup>22</sup> for a total of RMB 650 billion. The purpose of these operations was to make up for the shortage of dollars and to facilitate trade with the recipient countries.<sup>23</sup> Similar agreements were later also signed with other countries (Table 9).

[insert Table 9 here]

The regulation of trade using RMB and the issuance of financial instruments denominated in RMB on the Hong Kong market constitute other channels of internationalizing the Chinese currency. In 2012, cross-border trade in RMB already rose to 10.9 percent of Chinese trade. At the same time, the growth of the offshore market in Hong Kong has been impressive. RMB deposits in this market, which were RMB 263 billion in late 2010, had risen to 587 RMB billion by late 2011 (Zhang, 2012).

Despite this explosive growth, international usage of the RMB is still very low. In 2010, according to the BIS, the RMB was used in less than 1 percent of the world's foreign exchange transactions.

Why does the RMB will have difficulty to establish itself as an international means of payment and as a reserve currency despite the fact that China is the world's leading exporter and is close to overtaking the United States as the largest importer in the world?

**One reason lies in the inadequate protection China offers to the property rights of investors.** In China, the price of assets is not determined by the market but is manipulated by the authorities. There is no transparency in the way the markets function. Just as they do not leave it up to the market to determine the exchange rate, the Chinese authorities also do not seem to want to let the market determine the interest rate at which the state can borrow. The continued existence of controls on capital movements points out a will to a persistent political control on finance. At the same time the supervision and regulation of markets and institutions is unsatisfactory.

**A second reason has to do with the fact that China is not a democratic country.** It has been properly argued that authoritarian regimes, since they are lacking the constraints of a democracy, in particular the

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<sup>22</sup>To be precise, South Korea, Malaysia, Belarus, Indonesia, Argentina, Iceland and Singapore.

<sup>23</sup> According to the Popular Bank of China (2009): "In the context of the financial crisis, these new practices will promote bilateral trade and direct investment, and drive economic growth".

role of political parties and parliament, looks unreliable, and this hinders the existence of a climate of trust with other countries, in particular with democracies (Bueno de Mesquita and Lalman, 1992; Panebianco, 1997; 2004).

**The third reason is the poor development of the Chinese financial system.** For a currency to become a reserve currency there is need, in the issuing country, of low-risk liquid assets for foreign investors, that is, there must be broad and thick financial markets. At present, foreign holders of RMB have basically no alternatives to putting their cash in bank deposits.

**A fourth factor that is an obstacle to the emergence of the renminbi as an international currency is the geopolitical position of China.** Although the country is increasing its state capability, it is not yet in a position to exercise leadership on a large number of countries. Indeed, many neighbouring states, rather than recognizing China's leadership, regard the country with suspicion, if not hostility. The Great Asian Power is now hardly in a position to bring about the political exchange with a significant number of other countries, seen in Section 2 as a necessary precondition for the emergence of an international currency.

**Finally, a last reason for the difficulties the RMB faces in establishing itself as an international currency is the model of China's development.** The fact that Beijing pursues an export-led growth policy and, therefore, has a persistent current account surplus leads to several drawbacks. Firstly, the Popular Bank of China cannot easily meet the demand for money resulting from the growth of international trade. Secondly, this central bank is not able to perform the task of international lender of last resort – and these are functions which, however, as Kindleberger (1973) has shown, are essential to the stability of the international monetary system. For the renminbi to acquire the status of an international currency would seem necessarily to depend on radical changes in China's growth model and more precisely on the abandonment of its export-led growth policy.

Therefore, the dollar's decline will be slow. This is true not only, however, because of the existence of network economies, but also on account of the importance of an appropriate protection of property rights of foreign currency holders and the disposal of a political and military power such as <sup>24</sup> to guarantee the working of an international monetary system based on fiat money.

However, it is likely that the gradual military-political weakening of the US will be accompanied by a decline of the dollar as the key currency. Less convincing, however, is the argument put forward by various economists,<sup>25</sup> namely that the absence of a leading country, in other words the prevalence of a multipolar equilibrium, will lead to the coexistence of a plurality of international currencies.

As highlighted in the third conclusion of the model, the presence of a multipolar equilibrium makes it unlikely that a national currency will be universally accepted as an international currency, and indeed monetary blocs will tend to form. Presumably what will emerge is a situation similar to that which obtained between the wars.

Such a situation would result in an increase in transaction costs and consequently have adverse effects on international trade. It is surprising, therefore, that the literature on the consequences of the decline of the dollar as an international currency has focused exclusively on the United States, in particular on the loss of

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<sup>24</sup> James (2009; p. 44) assesses that: "The US dollar will be the major international currency as long as the United States remains the world's largest concentration of political and military might as well as of economic potential.

<sup>25</sup> See, among others, Eichengreen (??).

the right of international seigniorage, while failing to take into consideration the negative effects on the wealth of the world community.

## Conclusions

Contributions on the origin of an international currency tend not to distinguish between the different types of international currency. It follows that they use the same theoretical models to explain a system based on commodity money, such as the Gold Standard, and a system based on fiat money, such as the dollar standard.

In fact, in the case of a currency without intrinsic value, as is fiat money, the problem arises of how to ensure confidence in its future value. At the international level, as at the domestic level, the production of trust in a fiat currency is expensive. It requires, in particular, laying down institutional rules of conduct and ensuring they are complied with. A country bears these costs only if it is in its interest to do so. Such an advantage comes from the privilege of seigniorage, that is, the ability to purchase goods and services from other countries simply by printing fiat money. The country which is part of an international monetary system and holds the right of seigniorage has a relative gain from participation in the system greater than that of other countries. Thanks to this relative gain the country issuing the international currency may increase its state capability.

The other countries can accept this fact without being concerned about negative repercussions on their national security only if there is already a large political and military power gap between them and the issuing country. In this case, the gain they derive from the reduction of transaction costs resulting from the use of the international currency more than offsets the cost of the increased power divide.

From this basic theoretical framework we can draw some conclusions about the prospects of the international monetary system. The first of these conclusions is that the dominance of the dollar is going to last much longer. Despite its relative decline, the dollar satisfies certain assumptions of a political nature that are fundamental for the acceptance of a currency as an international currency. First, in the United States the protection of the property rights of the holders of dollars and dollar-denominated assets is guaranteed by a certain and transparent institutional framework. This, over time, has fostered the emergence in this country of a large and deep financial market. It is this market that allows the US to exercise the function of world's banker.

Secondly, the United States has, to date, a high state capability. This allows it to act as guarantor of respect of the rules of the system by the other countries. This function is performed both in the definition of new rules and institutions that ensure the proper functioning of the monetary system based on the dollar and in supporting the authority of institutions such as the IMF that are responsible for ensuring compliance with the rules.

At present, the states issuing currencies that are possible substitutes for the dollar, namely the states of the eurozone and China, are not, or not yet, in a position to meet the requirements just mentioned. They are, that is, not able to create and ensure the functioning of the institutions needed to run an international monetary system based on a fiat money. In particular, the eurozone is not yet a political union: its member countries do not yet have a single foreign policy and armed forces. The state capability of this area is therefore still limited and circumscribed.



The analysis of China's currency is, on the other hand, more complex. The renminbi faces several political difficulties if it is to become an international currency. Domestically, China is still a country in which the protection of the property rights of holders of RMB or assets denominated in it is uncertain; the authorities can manipulate its value. For this reason, besides the persistence of controls on capital movements, the formation of an efficient monetary and financial market is difficult.

On the international level, China not only commands a level of political and military power much lower than that of the United States, but it is also surrounded by countries that fear its political and military expansion and are thus presumably unwilling to recognize its leadership and to accept that it benefits from international seigniorage. It seems, therefore, likely that, at present, Chinese leaders, aware of this, set their sights not on the rapid internationalization of the renminbi but on the weakening of the dollar. This is the context in which to see the Chinese proposal, shared by other BRICS, of a significant enlargement of the use of SDRs: this would make it possible to distribute among more countries the benefits of international seigniorage, today the exclusive preserve of the United States.

A second conclusion of the theoretical scheme developed in Section 3 is that in the presence of a multipolar equilibrium, that is to say, in a situation where the Great Powers have similar state capabilities, an international currency is unlikely. Indeed, in such a context, the Great Powers are unlikely to accept that one of them can benefit from issuing a fiat international currency by exploiting the right of seigniorage.

This point leads us to believe that, in a multipolar equilibrium, areas where the currency of the politically and military dominant country is used as a means of payment and store of value will tend to emerge. That is, monetary blocs will emerge, as happened in the period between the wars. The formation of these blocs and the absence of an international currency inevitably undermines the growth of international trade. Therefore, it is unlikely that a period characterized by the coexistence of several international competing currencies or even by the elevation of an artificial currency like the SBM to the status of an international currency will follow the political-military decline of the United States and of the dollar.

The two outcomes outlined above require for there to be cooperative behaviour among Great Powers with similar state capabilities. The coexistence of several international currencies implies that each Great Power agrees that countries in its area of influence can use the fiat currency of another Great Power, and that the latter gains seigniorage from it. A fortiori, the creation and issuance of an international currency in the form of a basket of currencies, such as the SDR, implies a cooperative decision regarding the distribution of the benefits deriving from international seigniorage. However, particularly in a multipolar equilibrium in international relations, the prevalence of cooperative behaviour among the Great Powers is highly unlikely because of the importance that is attributed to differences in the relative gains of any agreements as part of such an equilibrium.

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Table 1 - Countries reporting US-dollar based exchange rate arrangements

Arrangement	Number of countries			
	1995	2000	2005	2010
Dollarized or formed currency board	9	8	7	8
Pegged exchange rate regime against dollar	82	85	90	90
Maintained managed floats with dollar as reference	6	8	6	9
Total reporting	207	207	207	207

Source: Reinhart and Rogoff (2004) and Ilzetzki et al. (2010).

Table 2 - Turnover in traditional foreign exchange markets (percent)

Currency	1995	2001	2004	2007	2010
US dollar	83.3	90.3	88.7	86.3	84.9
Euro	53.7	37.6	36.9	37.0	39.1
Yen	24.1	22.7	20.2	16.5	19.0

Other industrialized currencies	24.2	33.9	38.6	40.5	37.9
Emerging market currencies	8.5	16.9	15.4	19.8	19.1

Source: Bank of international Settlements.

Table 3 - Shares in outstanding international debt securities by currency (percent)

YEARS	EUR	USD	JPY	OTHER
2000	30.4	43.6	9.6	16.5
2005	40.0	37.8	4.7	17.5
2010	41.2	35.2	3.2	20.4
2013	37.8	40.5	2.5	19.3

Source: ECB (2014).

Table 4 - Shares in foreign exchange reserves (percent)

YEARS	EUR	USD	JPY	GBP	OTHERS
2000	24.7	64.7	6.0	2.8	1.4
2005	26.7	63.7	4.3	3.4	1.7
2010	26.8	61.7	2.8	4.2	4.4
2013	24.4	61.2	3.9	4.0	2.9

Source: ECB (2014).

Table 5 - Economic weight in 2010 and 2030 under the convergence scenario

Countries	2010		2030	
	GDP (billions of dollars)	Share of world GDP(dollars percent)	GDP (billions of dollars)	Share of world GDP(dollars percent)
United States	14,658	23.5	24,019	17.2
China	5,878	9.4	22,440	16.1
EU-27	16,282	26.1	24,195	17.3
Japan	5,459	8.7	7,352	5.3
Russia	1,465	2.3	2,058	1.5
Others	18,710	30.0	59,702	42.7
Total	62,452	100.0	139,766	100.0

Source: Subramanian (2011).

Table 6 - Share of world trade under the convergence scenario (2010-2030)

Countries	2010	2030
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	Trade (billions of dollars)	Share in world trade (percent)	Trade (billions of dollars)	Share in world trade (percent)
United States	3,224	10.6	5,877	7.3
China	2,972	9.8	11,972	15.0
Germany	2,318	7.6	2,918	3.7
Japan	1,460	4.8	2,586	3.2
Russia	648	2.1	850	2.1
Others	19,765	65.0	55,662	69.7
World	30.397	100.0	79,905	100.0

Source: Subramanian (2011).

Table 7 - GDP and Defense Expenditures for the major powers (in billion \$ - 2011)

Countries	GDP current prices (2013)	% Great Power GDP current prices	Defense expenditures (2011)	% Great Power Defense expenditures
United States	16,768	39.8	711	61.4
China	9,181	21.8	143	12.3
Japan	4,899	11.6	59	5.1
Germany	3,730	8.8	47	4.2
Russia	2,097	5.0	72	6.2
France	2,679	6.4	63	5.4
Britain	2,806	6.3	63	5.4

Source: for the data on GDP, IMF world economic outlook database; for the other data Stockholm Institute Peace Research Institute "The 15 Major Spending Countries in 2006".

Table 8 - Defense Expenditures for the major powers (in million \$ 1987)

Countries	1930		1933	
	Great Powers' Expenditures	% Great Power's expenditures	Great Powers' expenditures	% Great Power's expenditures
United States	699	22.7	570	18.3
Japan	218	7.1	183	5.9
Germany	162	5.3	452	14.5

URSS	722	23.5	707	22.6
France	498	16.2	524	16.8
Britain	512	16.6	333	10.7
Italy	266	8.6	351	11.2

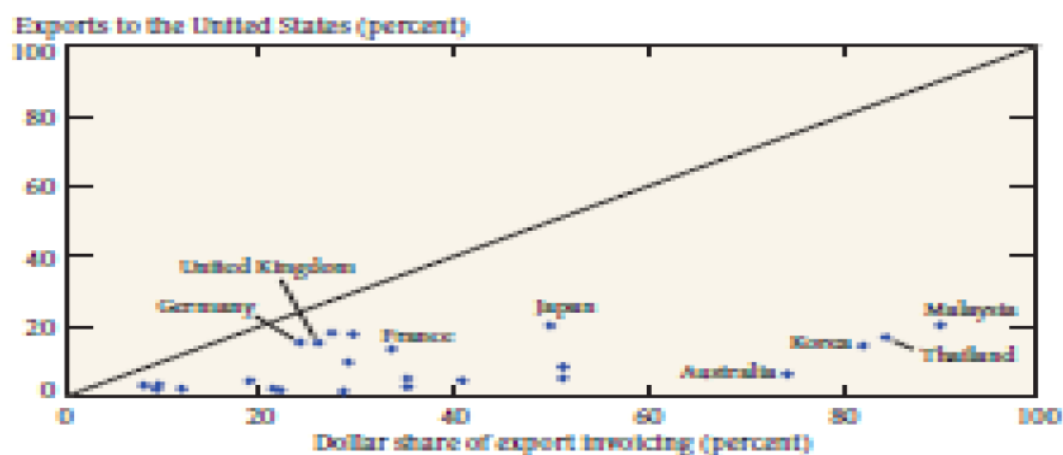
Source: Kennedy (1987)

Table 9 - China's bilateral currency swap agreements since the collapse of Lehmann Brothers

Country	Date	Amount
South Korea	December 12, 2008	RMB 180bn
Hong Kong	January 20, 2009	RMB 200bn
Malaysia	February 8, 2009	RMB 80bn
Belarus	March 11, 2009	RMB 20bn
Indonesia	March 23, 2009	RMB100bn
Argentina	March 29, 2009	RMB70bn
Iceland	June 9, 2010	RMB 3.5bn
Singapore	July 23, 2010	RMB 150bn

Source: Gad and Yongding (2011).

Figure 1 – Dollar use in the invoicing of exports



Source: Goldberg and Tille (2008). Note: Observations cover various years from 2000 to 2007.



