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Bianca Orsi

Assistant Professor at Leeds Business School

Antonio José Alves Junior

Full Professor at Universidade Federal Rural (UFRRJ) do Rio de Janeiro

André de Melo Modenesi

Associate Professor at Universidade Federal (UFRJ) do Rio de Janeiro. Conselho Nacional de Pesquisa (CNPq) and Fundação Carlos Chagas (FAPERJ) research fellow.

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Bianca Orsi

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Antonio José Alves Junior

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André de Melo Modenesi

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Abstract

Currency internationalisation is understood as the process in which a domestic currency is used for various purposes between a resident and a non-resident, specially, in transactions between non-residents. Evidence of strong currency internationalisation is when the agents of a foreign country adopt that currency as their national currency (dollarization). Literature focuses on developed economies. The main benefits are: reduction of transaction costs; international seigniorage; macroeconomic flexibility; leverage gain; and reputation. Currency internationalisation comes at relevant costs, especially for emerging countries. Given the globalisation process and the increasing demand for an international currency, they may be subjected to excessive exchange rate volatility. With the internationalisation of currencies issued by emerging countries (which, in contrast with central currencies, are only internationalised across a few functions of money), a question needs to be posed: the actual costs outweigh the benefits of such a partial currency internationalisation?

Resumo

A internacionalização cambial é entendida como o processo em que uma moeda doméstica é usada para diversos fins entre um residente e um não residente, especialmente, em transações entre não residentes. Evidência de forte internacionalização cambial é quando os agentes de um país estrangeiro adotam essa moeda como sua moeda nacional (dolarização). A literatura se concentra nas economias desenvolvidas. Os principais benefícios são: redução dos custos de transação; ganhos de senhoriagem internacional; flexibilidade macroeconômica; ganhos de alavancagem; e

reputação. A internacionalização cambial tem custos relevantes, especialmente para os países emergentes. Dado o processo de globalização e a crescente demanda por uma moeda internacional, eles podem ser submetidos a excessiva volatilidade cambial. Com a internacionalização das moedas emitidas por países emergentes (que, ao contrário das moedas centrais, são apenas internacionalizadas em algumas funções), uma questão precisa ser colocada: os custos efetivos superam os benefícios de uma internacionalização parcial da moeda?

Keywords: Currency Internationalisation; Currency Hierarchy; Emerging Market

Palavras-Chave: Internacionalização de moedas; Hierarquia de Moedas; Mercados Emergentes

JEL: E42; F00; F38

1 Introduction

The international use of currencies, i.e. currency internationalisation is a topic which has been discussed by many researchers over the years, since the monetary regime of the Gold Standard, to Bretton the Woods and to the current regime dominated by the US dollar, the *floating dollar standard* (Medeiros and Serrano, 2003). The International Monetary System is, however, marked by an acute asymmetry between the national currencies, which can be illustrated in the form of a currency hierarchy. While the US dollar and other central currencies from developed economies are positioned at the top of the hierarchy (the so-called central currencies), many other currencies from emerging and developing economies (the peripheral currencies) are placed at an inferior level.

The competition among currencies can be viewed as a ‘natural’ result of a complex political and economic struggle between countries. As some economies gain international relevance, new international currencies would arise, although they play different roles on the International Monetary System, i.e. across various types of currency internationalisation. In this mainstream perspective, the internationalisation of currencies mainly reflects market forces, such as the relative weight of central countries on international trade as well as the development of their financial market. Notwithstanding, this process also requires institutional support and innovation from national governments – the ‘political willingness’ to promote the internationalisation of their currencies (De Conti, 2011). The political decision is a necessary, yet not sufficient, condition for greater use of a domestic currency beyond its national frontier, such as less restrictive regulations of the foreign exchange market to allow non-residents to operate, openness of capital account and currency convertibility. Given the complexity of the possible consequences involved in each of these policy decisions, it becomes particularly difficult to work out the balance between costs and benefits of currency internationalisation and their respective consequences over the economy.

This asymmetric feature of the International Monetary System raises, therefore, many policy questions. Should developing and emerging countries try to internationalise their currencies to overcome the subordinate position in the currency hierarchy? Should we aim for a multipolar monetary system? For instance, would the benefits of having a dominant and single international currency, such as advantages in transaction costs,

outweigh the gains of having a plethora of currencies to choose from? Policymakers must take these questions into account as they consider whether a currency internationalisation strategy should be put forward.

There is an extensive literature on the costs and benefits of currency internationalisation, which are mainly summarised in the work of Cohen (2011), who is a distinguished International Political Economy scholar in the field of currency internationalisation. This literature, however, seems to focus on the costs and benefits of issuing a currency that stands on the highest positions of the currency hierarchy. This approach overlooks the recent internationalisation of peripheral currencies as it overestimates the advantages of this process for emerging and developing countries and it fails to account for the main disadvantages of the international use of these currencies. The current paper addresses these research questions mentioned above by analysing each of the costs and benefits discussed in the literature on the perspective of the internationalisation of peripheral currencies.

Some strategies of currency internationalisation, generally advocated by mainstream economists, propose the full convertibility of national currency and the authorisation of residents to hold deposits in foreign currencies. In this view, as the full convertibility increases the international liquidity of a national currency, and the deposits in foreign currencies reduce transaction costs, the internationalisation of the national currency would be easier and stronger. However, as we argue in this paper, some economists fear that such a policy strategy would also expose domestic economy to financial crises and cause further destabilisation, which would, in turn, backfire the internationalisation process. Moreover, it could open doors to the possibility of partial currency substitution or, on the extreme, full dollarization. Thus, instead of such a strategy internationalisation help currencies to improve their position in the hierarchy, it could cement their subordinate role in the International Monetary System.

This paper is organised as follows. After this introduction, section 2 reviews existing literature on currency internationalisation, which is focused on developed economies – issuers of central currencies. Special attention will be given to Cohen contribution. Following, section 3 presents an analysis on the benefits and costs of currency internationalisation, which takes into account the case of emerging and developing

economies – issuers of peripheral currencies. Finally, section 4 summarises the main conclusions of this paper: the actual costs seem to outweigh the benefits of the (partial) internationalisation of peripheral currencies.

2 Currency internationalisation and the hierarchical international monetary system

2.1 The functional analysis of currency internationalisation

Currency internationalisation is generally conceptualised as the process wherein a domestic currency is used beyond its national frontier. The literature on this topic is widely discussed in the fields of economics and International Political Economy, which builds a bridge between international relations and international economics (Cohen, 2008). To understand the role of different currencies in the international monetary system, Cohen (1971), an International Political Economy scholar, was the pioneer in proposing the analysis of this process through the lenses of the traditional functions of money, i.e. medium of exchange, unit of account and store of value.

Table 1 summarises these three functions of international money, which are analysed in both private and public (or official) sectors. The private sector considers the functions of money in terms of the choices of individuals to use one currency or another, while the official sector focuses on the monetary authority decisions regarding foreign currencies. In the analysis of Cohen (1971), a currency is fully internationalised when it performs all the three functions of money outside the domestic economy.

Table 1: The Roles of International Money

Functions of Money	Private	Official
Medium of Exchange	Vehicle currency, Trade Settlement	Intervention currency
Unit of Account	Trade Invoicing currency	Exchange Rate Anchor
Store of Value	Investment currency	Reserve currency

Source: Cohen and Benney (2013).

The medium of exchange refers to the ability of money to facilitate trade by serving as a general method of payment in the international market. Without an international currency that emerges as medium of exchange, a transaction between two countries would only happen if one of these countries is willing to hold the currency of the other, similar to a barter economy. Therefore, a fully developed international money arises as the solution to circumvent the double coincidence of wants (Cohen, 1971).

In the private sector, a currency is an international medium of exchange when it is used as a vehicle for foreign exchange operations and/or an instrument for trade settlement. Although these two roles are closely related, they are not synonyms (Cohen, 2013). The vehicle currency serves as an intermediary to triangulate the currency pairs that are not traded directly (Goldberg and Tille, 2005). The trade settlement currency is the one used as a medium of exchange for international transactions of goods and services. In the official sector, central banks use an international medium of exchange for interventions in the foreign exchange market.

The second function of international money measures the relative value of assets, goods and services in the international market – the unit of account. In the private sector, a currency is internationalised as a unit of account when foreign investors use it to invoice trade operations. Although the currency used as trade settlement may differ from the currency used as trade invoicing, empirical evidence suggests that they are normally the same (Friberg and Wilander, 2008; Ito and Chinn, 2014). Regardless of the trade settlement currency, an international unit of account is used whenever there is a foreign transaction, as contracts must be denominated in a single currency (Cohen, 1971). A currency is also an international unit of account when the monetary authority of other countries adopt it as an exchange rate anchor, i.e. when the central bank pegs the domestic currency to an international unit of account.

The last function of money, the store of value, represents the ability of a currency to preserve its value through time. Economic agents store their wealth by investing in assets denominated in a currency that they believe to have a stable value, both with regards to exchange rate stability and inflation. This role of international money is often called ‘investment currency’ (Cohen and Benney, 2013). In the official sector, central banks also hold stable international currencies that are able to preserve their reserves.

Cohen (2011) distinguishes between two purposes of international currencies: the use for transactions between countries and within a single country. While the former refers to the process of currency internationalisation per se, the latter is called ‘currency substitution’. The most internationalised currencies are usually the ones with the highest potential of substituting those national currencies that do not perform the functions of money in the domestic market. The substitution process of the domestic currency for an international currency was coined ‘dollarization’ because of the strong and frequent presence of the US dollar in many countries whose currencies have no role in both international and domestic market.

It is important to notice, however, that these countries may adopt different degrees of dollarization (i.e., currency substitution). Currently, only a few countries have completely relinquished their domestic currency for an international currency, such as El Salvador and Ecuador. Most countries that have experienced some degree of dollarization have adopted only a partial use the US dollar, such as Panama and Argentina. Despite the term ‘dollarization’, other currencies are also used beyond their national frontier. The euro, for instance, is also adopted by other European countries that are not members of the Eurozone, such as Montenegro and Kosovo. Curiously, less internationalised currencies are also adopted in other countries. This is the case of the South African Rand, which is used in countries with political and geographical proximity with South Africa, e.g. Namibia and Eswatini.

Although currency internationalisation and currency substitution are two different concepts, they are intrinsically linked. The foreign currency chosen to substitute a national currency is, in most cases, highly internationalised, i.e. it is a currency that performs the functions of international money. Thus, the process of currency substitution is a consequence of the national currency’s poor performance of the functions of money, while it evidences the internationalisation of the foreign currency. Therefore, the episode of dollarisation experienced in Latin America reinforces the power of the US dollar, but it is not the foundation of its internationalisation.

2.2 Financial liberalisation or currency Internationalisation?

Although the functional definition of currency internationalisation is widely adopted in the literature (e.g. Krugman, 1980, Kenen, 1983, De Paula et al., 2015, De Conti and Prates, 2018), in which the more functions of international money a currency performs, the more internationalised it is, researchers in this literature often take on different perspectives to analyse this phenomenon.

Kenen (2011) complements this functional approach by focusing on the type of actor that demands the currency – residents or non-residents. He argues that a currency may be internationalised when traded between a resident and a non-resident, but a currency shows strong internationalisation when it is used in transactions between non-residents. For instance, in the bond market, the internationalisation of the US dollar is evidenced by the demand of non-residents not only to hold but also to issue bonds denominated in this currency. However, a stronger indication of currency internationalisation is observed when a US dollar bond issued by a non-resident is negotiated offshore with other non-resident investors (Lim, 2006; McCauley, 2006; Kenen, 2011).

The distinction between weaker and stronger forms of currency internationalisation can be important when assessing the international status of a currency. While central currencies (issued by developed economies) are generally internationalised and traded between non-residents, some peripheral currencies (issued by emerging and developing) have recently become more internationalised, but in the weaker form of internationalisation. Essentially, these currencies are only internationalised across a few functions of international money, and mostly traded between a resident and a non-resident. The current foreign exchange regulation in Brazil, for instance, hinder the trade of Brazilian Real (BRL) between non-residents. In practice, this means that the BRL offshore market does not exist, which, in turn, prevents the BRL from achieving a stronger form of internationalisation.

Another perspective taken in the literature refers to a regulatory analysis of currency internationalisation, i.e. currency convertibility. McCauley (2006) and many other researchers in this field (e.g. Cohen, 1998, Arida, 2003) follow the approach that defines an internationalised currency as one that can be freely traded between residents and non-

residents of a country for several different purposes, as described in the functions of international money conceptualised by Cohen (1971). The Chinese Renminbi is a good example of the impact of regulatory restrictions on currency convertibility, which is often dependent on the type of actor involved in the transaction. Transactions between residents and non-residents (onshore) is highly regulated and controlled by the monetary authority. For this reason, the Renminbi traded on mainland China (CNY) is mostly non-convertible. In contrast, transactions between non-residents (offshore), traded in other foreign exchange markets such as in Hong Kong, are not subjected to strict regulation. The Renminbi traded offshore from mainland China (CNH) is fully convertible.

This regulatory understanding of currency internationalisation often relies on the argument that the free convertibility of a currency, granted by the lack of regulatory restrictions or interventions on the foreign exchange market, assures international agents and promotes the internationalisation of the domestic currency. For this reason, some economists promote the liberalisation of capital movements as the solution to the problem of currency convertibility (Arida, 2003). Indeed, regulatory restrictions may curb currency internationalisation, as the instruments used by the central banks can prevent or discourage international agents to access the domestic currency. This argument, however, overlooks the fact that currencies are qualitatively different: removing regulatory restrictions on the currency movements (*de jure* convertibility) does not imply or lead to a greater demand for the domestic currency in the international market (*de facto* convertibility) (Prates, 2002; Carneiro, 2008). Taking the Chinese Renminbi as an example, the full convertibility (*de jure*) of the CNH alone is not enough to guarantee its internationalisation (*de facto*), but it is a pre-condition to currency internationalisation.

In parallel to the literature on currency internationalisation¹, Post-Keynesian economists have been the pioneers in developing another approach to understand the international demand for currencies – the currency hierarchy literature (e.g. Andrade and Prates, 2013, De Paula et al., 2015, Kaltenbrunner, 2015, De Paula et al., 2017a, Fritz et al., 2018,

¹ Currency internationalisation (and currency convertibility) may also be analysed in terms of the capacity of domestic actors to issue debt in local currency. This limitation of emerging and developing countries to borrow in local currency was coined by Eichengreen et al. (2003) as the ‘original sin’.

Kaltenbrunner, 2018). These authors mostly use Keynes' (1936) liquidity premium theory to characterise the position of a currency in the hierarchy. The US dollar, the most liquid currency of the International Monetary System, is positioned at the top of this hierarchy, followed by other central currencies, with some degree of liquidity. The central currencies are marked by their ability to perform several functions of money at the international level. At the bottom of this hierarchy, in a subordinate position, are positioned the peripheral currencies, with a very low liquidity premium and limited ability to perform any functions of international money.

3 The benefits and costs of currency internationalisation: Are we getting the calculus right?

3.1 The Benefits of Issuing an International Currency

Currency internationalisation is often understood as a natural consequence of the expansion process of issuing countries, which would spill over its economic and political strength in a favourable international context. Kim and Suh (2008), Gao and Yu (2008) and Cohen (2011), among others, criticized this idea for neglecting the strategic dimension of this process. Essentially, if the economic and political conditions define the possibilities of currency internationalisation, its nature and speed will depend on policy decisions that will guide the necessary institutional innovations that need to take place. The strategy of currency internationalisation should also consider that the logic of interstate competition guides international relations. A country that ventures into the internationalisation of its currency seeks to obtain a more favourable position in trade, finance, and international relations. However, one should expect other countries and the market to react, which can range from adapting to the new international money to policies to hinder its use by the domestic actors. Thus, the benefits that motivate the decision to internationalise a currency must be carefully analysed, and then contrasted with the possible costs.

One advantage of currency internationalisation as a trade intermediary is directly related to reduction of transaction costs, i.e. cutting off costs of international payments in

commercial and financial operations, such as bid-ask spreads, commissions, hedging, fees, and taxes. This approach suggests that transactions between economic agents in two different countries using a third currency as a means of payments face more costs than using the currency of one of them to settle the transactions. In the former case, where a third (vehicle) currency is involved, it is necessary to carry out at least two foreign exchange transactions. In the latter case, transaction costs are likely to reduce as there are fewer foreign exchange transactions.

It is important to emphasise that the distribution of these benefits among the economic agents of the issuing country is not uniform. Banks usually benefit the most from the internationalisation of the domestic currency, mainly because they have more manageable access to monetary authorities, enabling them to create liabilities denominated in domestic currency. Banks may also benefit from gaining access to other markets as the domestic currency becomes more accepted for international transactions, facilitating the process of currency internationalisation.

For example, one can speculate that one of the largest private banks in Brazil, Itaú, is a candidate to reap good advantages if the real, the Brazilian currency, were to become accepted for the settlement of Latin American inner transactions. This bank has been accumulating know-how in regional financial activities, from which it already extracts a relevant fraction of its income. According to the report called “Management discussion & analysis and complete financial statements”, Itaú obtained, in the first half of 2021, approximately R\$ 12.8 billion in net income. Of this total, R\$4 billion came from its activities abroad, of which just over R\$1 billion came from Latin America corporate and investments finance, retail and private banking, and asset management activities. The internationalisation of the real in this continent would possibly boost its business due to the bank's ability to expand its loans with lower liquidity risk due to access to reserves in real with the Central Bank of Brazil. At the same time, if Brazilian banks increase their activities in the region, the Real would be more acceptable.

Non-financial companies could also benefit from this reduction in the transaction costs internationalisation granted that they could explore business opportunities abroad. The main advantage stems from reducing their exposition to risks of currency mismatch between their assets (revenue) and liabilities (costs) and, the associated hedging costs.

Once again, currency internationalisation benefits the economic agents asymmetrically. Companies that are closer to international trade and finance are able to benefit more from the reduction of international transaction costs than others. Although there is no absolute loss for other residents in terms of transaction costs, currency internationalisation promotes changes in relative economic and political positions among resident agents. The analysis of this unbalances are, however, out of the scope of this paper.

One should ask how emerging countries can internationalise their money as a means of payment to achieve benefits from reducing transaction costs in international trade and finance. According to the Post-Keynesian approach, an international currency is more likely to be used as a means of payment if it becomes desired as a store of value (Orsi, 2019). As there are other currencies that are already established as a store of value, such as the dollar and the euro, the new money have to show differential attributes to be seen as a diversification opportunity for private investors and foreign governments. However, as this attribute can represent costs to issuing countries, one has to ask if it would be overcome by benefits.

Another benefit generally discussed in this literature is the **seigniorage gains** obtained by the country issuer of an international currency. The narrowest definition of seigniorage gains, in the context of a closed economy, refers to the difference between the nominal value of money and its cost of production. At the international level, in a broader definition, the seigniorage gains would arise from the acceptance of the domestic currency by foreign agents in exchange for exported goods and services, representing a benefit in terms of real resources for the economy. The accumulation of domestic money by foreigners would, therefore, be equivalent to an interest-free financing for the issuing country. Cohen (2011) estimates that the United States, in 2005, earned around US\$ 18 billion in seigniorage *stricto sensu*, as a result of an average interest rate of 4% per year applied to around US\$ 450 billion in cash, which were held by foreigners.

A second component of the seigniorage comes from the accumulation of financial assets denominated in the internationalised currency by non-residents. This component will supplant the *strictu sensu* seigniorage as the non-residents accumulation of foreign currency would be a worse financial option than maintaining the reserves invested in

bonds denominated in the issuing country's currency, the amounts of these financial assets in their hands are supposed to be greater than this currency.

This is the case of the maintenance of international reserves, by the Central Banks, in American government bonds, and the cash balances of companies and individuals in government bonds and other financial assets, which would reflect the preference for international liquidity. As this demand would represent an additional demand to that of residents, US asset prices would tend to be higher than in the absence of such demand, or, to put it another way, funding costs in the United States would be lower. Warnock and Warnock (2009) estimated this annual liquidity premium for the United States at 80 bps, representing an even larger "subsidy" of around US\$ 150 billion in 2008. Gourichas and Rey (2005) calculated the benefit of financial accumulation as the difference between the costs of raising dollars for Americans and the return on assets abroad. The excess return would be on the order of 300 bp per year.

Despite the relevance of international seigniorage gains, the main question is how could emerging economies develop strategies to capture any seigniorage gain? One can state that as long as emergent countries can sell debt denominated in their currency to foreigners, they can benefit from a cut in interest rates like developing countries do. However, foreign governments and corporations demanded international money at the top of the currency hierarchy as a reserve-of-value, reflecting a global preference for liquidity. In the case of emergent currency, foreign investors do not demand them as reserve-of-value but as a short-term investment asset. These investors do not demand safety but make speculative gains during phases of low liquidity preference.

This difference is capital. Even considering that emergent issuers can obtain gains of seigniorage issuing debts denominated in their currency, the costs of this option are higher. While the demand for top currencies grows every time international liquidity preference increases, the demand for emergent currency-denominated debt tends to vanish, bringing high costs to emergent economies.

Another advantage of currency internationalisation is that it would provide gains to the issuing country in terms of macroeconomic flexibility, as the currency itself could be used to cover the balance of payments deficits. Since World War II, only the United States of

America has thoroughly enjoyed the benefit of the continuous generation of a balance of payments deficits without reducing imports and raising interest rates to attract foreign capital. The USA has a privilege exorbitant, like Valéry Giscard D'Estaigne, the French minister of Finance, said in the 1960s.

While the United States used its exorbitant privilege to increase its economic and political power since II World War, on the opposite pole was the Latin American countries, who faced, time to time, hard external growth constraints that limited their policy space.

These countries could not use their currencies to compensate for deficits in their balance of payments. That is why they had to change their development policies, sometimes promoting non-orthodox institutional innovation, to deal with dollars scarcity while trying to sustain some level of growth.

However, since the 1990s, Latin American countries liberalized their capital account to attract financial investors to increase their macroeconomic performance and fight inflation with stabilization plans based on exchange rate anchor. So, in the wake of liberal economic policies and low international liquidity preference, they increased their interest rates to attract the capital flow. As the exchange rates became valued, domestic currencies became internationalised as 'short-term investment assets' (Orsi, 2019).

However, the macroeconomic policy of Latin American countries did not gain structural flexibility. As the balance of payment dynamics became more influenced by massive and volatile capital movements, the monetary policy had to sustain interest rates in high levels to avoid speculative attacks and capital flight. Every time international liquidity preference increases, local interest rates must go up to maintain the ghost of dollar devaluation and the fear of inflation pass-through distant.

So, even considering that currency internationalisation can bring flexibility to emerging countries, transforming domestic currencies into short-term investment assets is not the answer.

Political science introduces another perspective on the effects of the greater degree of freedom that the internationalised currency allows, emphasizing the gains in power.

Power would manifest itself through the capacity of a country to influence, to its advantage, the actions of other countries. Alternatively, power would also manifest itself through autonomy, i.e., the ability to act without being influenced or restricted by others.

Autonomy allows the issuing country of the international currency to increase its international leverage. The more foreigners depend on the internationalised currency, the more the issuing country has an advantage. This power will be exercised either directly, when the issuing country imposes its will to control the resources, or indirectly, by virtue of the institutional infrastructure created as the internationalisation process progresses. Without the need to demand it, countries dependent on the international currency must adjust their behaviour to the requirements of the issuing country.

An issuer of an internationally accepted currency also benefits from increasing reputation. As long as the international currency is a symbol of economic and political strength, it is a source of prestige in the community of countries. The case of the United States is exceptional, as the dollar is the top currency in the currency hierarchy. So, the country has an enormous capacity to mobilize real and financial resources and great control over international financial markets through its monetary policies and the administration of payment system.

Other countries also benefit from the internationalisation of their domestic money to increase their international influence. The example of Euro is self-evident. Countries that adopt Euro have more international prestige. They can also influence countries whose currencies are in low degrees in money hierarchy and some autonomy in the face of the United States. In this sense, should emerging countries try to issue international currencies to achieve leverage and improve their reputation? It depends. The experience Latin Americans had with its currency internationalisation as short-term investment assets suggest the opposite. Indeed, its reputation as a safe and promising economy during periods of low international liquidity preference vanished with the emergence of high international liquidity preference. It did not increase its autonomy neither its power to influence internationalisation. This strategy was a failure.

Alternatively, a country that issues a currency with regional strength can increase its political power to the extent that it can pay a relevant part of its imports and financial

expenses with its currency. Its regional projection would naturally increase, and it becomes easier to impose regional institutions in accord to its interests. The Chinese case, at present, seems to fit well into this category.

Eichengreen and Lombardi (2015) highlight the regional presence of China in Asia as an obvious way to renminbi internationalisation, even considering that renminbi is a candidate to global currency. China is the most relevant supporter of Asian Bond Market Initiative, Asian Bond Forum, Asian Bond Fund, Chiang Mai Initiative Multilateralization and ASEAN-China Free Trade Agreement. All of which work to further deepen economic and financial integration in the region.

Recently, the Belt and Road Initiative (BRI) gave new impulse to this movement of integration. It envisages investments in transport and energy infrastructure primarily concentrated in Asia and secondarily in Africa, in the order of US\$1 trillion. The expectation is that BRI will develop the regional economy in line with Chinese interests. One of the components of this project is the advancement of the renminbi's internationalisation, the currency of denomination for most of the financing to be carried out through Chinese banks and capital markets for companies and governments of countries directly affected by BRI (Chatzky & [McBride](#), 2020). The Chinese case reinforces the notion that currency internationalisation strategy should be coherent with the country's development strategy to increase its international reputation and leverage.

3.2 The costs of currency internationalisation

The costs and benefits of currency internationalisation have been widely discussed in the literature. While, mainstream economists mostly present an economic analysis of the potential benefits of issuing the key currency of the system (Tavlas, 1997), such as transactional costs, international seigniorage and flexibility of macroeconomic policy, the costs of the internationalisation of a currency seem to be underestimated. Driven by the lack of a political analysis of currency internationalisation, International Political Economy scholars presented further benefits of this process. However, once again, both

the economic and political costs considered are from the standpoint of issuing a central currency or the key-currency of the international monetary system.

In this literature, both mainstream economists and International Political Economy scholars failed to account for the costs of internationalising a currency issued by an emerging or developing economies (i.e. peripheral currencies), which, by definition, are located in the lowest positions of the currency hierarchy. Post Keynesian economists, who have been more recently contributing to this literature, have emphasised other risks involved in this process, such as exchange rate volatility, loss of monetary policy autonomy and financial fragility (e.g. Kaltenbrunner, 2018, Fritz et al., 2018).

So the question that needs to be raised is: are we actually “getting the calculus right”, as suggested by Cohen (2012)? Currency internationalisation is seen as a positive phenomenon that mostly brings economic and political prosperity, with a few, minor costs incurred in this process. Although this may be true for those currencies positioned at the top of the currency hierarchy, peripheral currencies, which are arguably have become more internationalised in the recent years, may not experience any of the benefits discussed in the previous session. In fact, these currencies have to endure further severe costs that are mostly disregarded in the literature.

De Conti (2011) brings a new factor to explain an additional determinant of currency internationalisation: political willingness. Though he recognises this factor per se is not enough to internationalise a currency, as this process is also a result of market forces, political strength and domestic regulation, it can still be a decisive factor in this process. Essentially, policymakers cannot force a currency to become more internationalised, but they have the tools to prevent it. In evaluating whether or not currency internationalisation should be promoted or avoided through policy making, a thorough analysis of the costs of currency internationalisation needs to be taken into consideration.

The first cost discussed in the literature is the loss of control of domestic monetary policy (Tavlas, 1997). This cost refers to the fact that a highly internationalised currency, or the key currency of the system must have its liabilities held by foreigners, which is currently the case of the United States. However, this cost of currency internationalisation presents two main flaws. First, the loss of control of monetary policy would be an issue of the key-

currency of the international system, and it would probably not present a threat to other currencies that are also internationalised. Thus, this is not a disadvantage of internationalising a currency, but a cost of issuing the most internationalised currency of the system. In fact, the cost of depending on an international currency is probably much higher than the cost of the responsibility to provide liquidity to the international monetary system. Second, inflation is not merely a monetary phenomenon, as argued by monetarists and other mainstream economists (Friedman, 1971). In that sense, despite the fact that controlling money supply may be more complicated with the presence of foreign actors, it does not mean that inflation will be harder to be tamed.

It is interesting to notice that the loss of control of monetary policy would be caused by another cost of currency internationalisation – policy responsibility. As the issuer of key-currency of the international monetary system, the US must provide liquidity to the rest of the world. In fact, it was precisely the liquidity provision after the Second World War in the form of credit to support the European economic recovery, and later reinforced in the Bretton Woods system, that reinforced the current international currency status of the US dollar. Although having the domestic currency under the possession of non-residents increases the difficulty to control monetary conditions in the domestic country, it also gives the country the power (benefits) of seigniorage and macroeconomic flexibility.

The third cost of currency internationalisation, discussed by Cohen (2012), is the risk of exchange rate appreciation. Indeed, as the US dollar stands on the highest position of the currency hierarchy, it is considered the most liquid currency of the International Monetary System. De Conti et al. (2013) uses a Minskyan framework to explain the cyclical demand for currencies in the international market. In times of economic prosperity, when agents are less risk averse, investors are ‘searching for yield’ and capital flows move towards emerging countries. While this may cause an appreciation pressure on peripheral currencies, the demand for the key-currency of the system is still relatively stable. That is because the US dollar is not only used as a store of value (‘investment currency’), but also as means of payment and unit of account, both in the private and public sectors. So even though part of this international demand may shift towards EME, there is a stable, inertial factor that maintains the stability of the US dollar. Conversely, in times of economic recession or a general deterioration of international agents’ expectations about

international assets, there is a reversion of the capital flows towards a ‘safe heaven’ – the US dollar. That explains the reason why the key currency of the system may face constant appreciation pressures.

In terms of managing exchange rates in the US, it may be more difficult to devalue the US dollar. Even in times of economic crisis, as the 2008 financial crisis, in which the United States was the epicentre of the crisis, there was a large capital flows towards this country. On the other hand, the US have the privilege of greater policy autonomy: it is a ‘policymaker’ as opposed to a ‘policy-taker’ (Ocampo, 2001, Prates, 2020). In that sense, small changes in the interest rates attract large capital inflows, as dollar-denominated assets are extremely liquid. Consequently, the issuer of the key-currency of the International Monetary System may face exchange rate appreciation pressures, which can lead to deficits in the current account and have a negative effect on producers, as both exporters and importers will lose competitiveness (Cohen, 2012).

The fourth cost of issuing an international currency identified by Cohen (2012) is external constraint. This cost refers to the disadvantage of issuing a much internationalised currency as it creates international liabilities issues in the domestic currency. According to this literature, this cost may undermine the benefit of ‘macroeconomic flexibility’, given that these liabilities are very liquid, as they are denominated in an internationalised currency, it can increase the volatility of the exchange rate, as the demand for this money may change in the short term. Another risk is that this country becomes more exposed to changes in the international market.

Although many peripheral currencies generally do not denominate international liabilities (financial side of the unit of account), the type of currency internationalisation that emerging countries experience may lead to much heavier external constraints – the speculative currency internationalisation (Orsi, 2019). In periods of economic prosperity, when there is an excess of liquidity in the international market, there is an increasing demand for assets denominated in peripheral currencies, which generally offer higher returns, i.e. higher interest rates. Conversely, changes in the international liquidity preference in times of greater economic and financial distress, such as in the Global Financial Crisis or at the beginning of the pandemic, these capital flows are quickly reversed towards a ‘safe heaven’ (De Conti et al., 2013, de Paula et al., 2017b). Therefore,

as peripheral currencies become more internationalised in a broader sense, i.e. they are held by non-residents, these countries may experience greater exchange rate volatility and higher vulnerability to external factors, such as sudden changes in the international liquidity preference.

4 Conclusion

Existing literature focus on internationalised currencies that belongs to the top of the currency hierarchy. Little attention has been paid to those internationalised currency that belongs to the base of currency hierarchy. We addressed this literature gap. Accordingly, we re-evaluate benefits and costs of emerging economies currency internationalisation.

On the one hand, benefits of currencies – that belongs to the top of money hierarchy – internationalisation does not fully apply to emerging economies currencies. For example, one may not hope that an emerging country currency – such as Brazilian Real – will benefit of seigniorage gains. This will happen, in the best scenario, only very partially or marginally. The same maybe said to others benefits of currency internationalisation.

On the other hand, costs of internationalisation seem to be more relevant for emerging economies currencies. We are especially concerned with the dependence of those economies on “speculative investment currency” or the so-called carry trade capital. This concern is particularly relevant for Post Keynesians since the volatility of those capital flows enhance uncertainty.

Summing up, the actual costs seem to outweigh the benefits of a partial currency internationalisation. Given the complexity and relevance of the topic further research must be done. A natural further step is to analyse a specific case of currency internationalisation, such as the Brazilian Real.

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