

China's Central Bank Digital Currency (CBDC): The End of Dollar Dominance?

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Abstract: This article reflects on the meaning of China's Central Bank Digital Currency (CBDC) with respect to money and power relations to argue that it does not represent a rupture of the dollar centric international monetary and financial system (IMFS). It contributes to unravel the dynamics between money and state power that set the foundations of global monetary and financial arrangements. It stresses the fundamental place of currency dominance and of the existence of an underlying currency hierarchy in explaining the broader configuration of the IMFS. While China has significant material capabilities which, in theory, could qualify it to challenge the dollar, this has not happened yet. Hitherto, the yuan has had a marginal participation in international transactions. The existence of a digital currency may be a further step towards an eventual transformation of the status quo. Still, experience suggests that the road ahead for the Chinese currency to consolidate globally is long and winding.

Keywords: Central Bank Digital Currencies; China; e-CNY; dollar; International Monetary and Financial System

Resumo: Este artigo reflete sobre o significado da moeda digital (CBDC) chinesa com respeito às relações sobre moeda e poder para argumentar que o advento do e-CNY não representa uma ruptura do sistema monetário e financeiro internacional (SMFI) centrado no dólar. Este artigo contribui para desvendar as dinâmicas entre moeda e o poder dos Estados que estabelecem as bases dos arranjos monetários e financeiros globais. Enfatiza-se o papel fundamental da dominância monetária para explicar as configurações mais amplas do SMFI. Embora a China tenha capacidades materiais significativas que, em teoria, poderiam qualificá-la para desafiar o dólar, isso ainda está longe de acontecer. Até aqui, o yuan tem uma participação marginal nas transações internacionais. A existência de uma moeda digital pode ser mais um passo em direção a uma eventual transformação do status quo. Ainda assim, a experiência sugere que o caminho à frente para a moeda chinesa se consolidar globalmente é longo e sinuoso.

Palavras-chave: Moedas Digitais emitidas por Bancos Centrais (CBDCs); China; e-CNY; dólar; Sistema Monetário e Financeiro Internacional

Classificação JEL: F33; F5; G15

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1. Introduction

While the global economy melts amidst the Covid-19 pandemic, China set the ground to launch the world's first official digital currency (The Economist 2020), rekindling once again the debate on the future of the international monetary and financial system (IMFS). The dollar's demise has been promised countless times ever since it was officially recognized as the key international currency at the Bretton Woods Conference in 1944. Robert Triffin's (1961) predictions about the end of the dollar in the early 1960s appeared under new guises in the 1970s with the end of the Bretton Woods System, in the 1980s with the internationalization of the German marc and the Japanese yen, in the late 1990s with the launch of the euro and most recently with the 2007-2009 Global Financial Crisis (GFC) (for a collection of perspectives on the debate about the future of the dollar see, for example, Helleiner and Kirshner 2012). Financial innovations and new forms of money – from fiat to digital money – have also long been at the core of outlooks about “inevitable” transformations in the IMFS configuration. Hitherto, all those predictions were proven inaccurate, revealing the rigid and somewhat invisible features that explain the dollar's endurance, besides the limits of our understanding about money and power relations.

Up until now, the Chinese yuan has been in all probability the greatest contender to challenge the dollar's supremacy (Cohen 2019). The large asymmetry between China's economic weight and the limited role of its currency in the IMFS has been a source of tension since before the GFC. The GFC served to catalyze rearrangements in monetary and financial global governance structures, reducing some major incongruences of Chinese underrepresentation. That embodied, for instance, China ascent as the IMF's third largest shareholder and the inclusion of its currency in the IMF's Special Drawing Rights basket in late 2015.⁴ Meanwhile, China has partnered with other underrepresented countries to build alternative multilateral institutions, such as the BRICS' New Development Bank (NDB) and its Contingent Reserve Arrangement (CRA), and launched initiatives of its own, such as the Asian Infrastructure and Investment Bank (AIIB). Backing up its economic diplomacy, Beijing is excelling in doing its homework to gradually make the yuan accessible outside its borders while limiting its volatility. Notwithstanding all its efforts at home and abroad – plus China's gigantic and growing economic capabilities –, the dollar remains the sole currency leader.

In this light, what does a Chinese Central Bank Digital Currency (CBDC) mean to the underlying power relations in the IMFS? Is it an additional step towards the yuan's internationalization which corners the dollar's international leading position? Does it represent a major break in current monetary international relations? This article explains the digital yuan as an additional form of expression of the Chinese currency. To that extent, it innovates as much as the various historical instruments of monetary expression have innovated, such as

⁴ The quota rearrangement was a result of the IMF's 2010 reform, which was ratified only in late 2015.

paper money, checks, credit and debit cards and mobile payment. The form of expression differs from a currency's content, which is its capacity to perform the functions of unit of account, medium of exchange and store of value, both at home and abroad. Such capacity is intrinsically linked with the material and immaterial power of its respective issuer.

This article reflects on the meaning of China's CDBC with respect to money and power relations to argue that it does not represent a rupture of the dollar centric IMFS. It contributes to unravel the dynamics between money and state power that set the foundations of global monetary and financial arrangements (Norrlof et al., 2020). It stresses the fundamental place of currency dominance and of the existence of an underlying currency hierarchy in explaining the broader configuration of the IMFS. Not long ago, scholars and experts have been misled into believing that emerging and developing countries would occupy a more influential position in the power structures of the IMFS (for a critical assessment see, for example, Alami et al. 2021). While China has significant material capabilities which, in theory, could qualify it to challenge the dollar, this has not happened yet (Cohen 2019). Hitherto, the yuan has had a marginal participation in international transactions. The existence of a digital currency may be a further step towards an eventual transformation of the status quo. Still, experience suggests that the road ahead for the Chinese currency to consolidate globally is long and winding.

Following this introduction, the next section reviews the concept of "currency", emphasizing its inherent connection with the power of states. The third section presents underlying aspects of currency internationalization, particularly the "monetary invasion" of other currencies' domains, which gives rise to a currency hierarchy. The fourth section reflects on the problem that, while the hierarchy is among currencies, its consequences are experienced by the issuing states, which enjoy different levels of policy autonomy depending on the international role of their currencies. The fifth section builds on the theoretical discussion to analyze the case of China's digital currency. The sixth section concludes the article.

2. Back to basics: what is a currency?

A currency is conventionally defined as something that can work as a unit of account, a medium of exchange and a reserve of value – in the words of Hicks (1967, p.1), money "is defined by its functions . . . money is what money does." It can be shells, rocks, gold, printed paper or anything that economic agents believe can perform the three classical functions of money. In other words, the capacity of a currency to fulfill these functions is inherently linked with a mutual confidence that others will accept "it" as a currency. A currency is literally anything that societies believe can be a currency⁵. What is used as a currency has no meaning

⁵ Shaikh argues that (2016, p. 167): "Money is the grammar of exchange. It arises naturally out of the process of exchange when the latter is extended in its reach and regularized in its occurrence. Like grammar, money is codified and controlled by the state at some point in its development. But neither grammar nor money requires the state for its invention.". Similarly, Aglietta (2018, p.31-32) suggests that: "Money can be defined as a relation of belonging: a relation that links each member of a social group to the whole. At this level of abstraction, money

on its own, but what the underlying social convention defines as being its value. Societies' beliefs and values evolve over time and, being a social institution, money evolves accordingly.

Accompanying the world's social and technological advances, in our times money has been changing from material to virtual forms. After Richard Nixon ended the dollar-gold standard in 1971, there has been a predominance of fiduciary monetary standards, in which money is untied from any precious metal. Thereafter, the instruments that exercise the functions of money have diversified and multiplied, from "plastic money" to electronic and digital money. More recently, a number of financial innovations have been occurring in the realm of account-based money, i.e., the type of money which requires an intermediary to make a transaction happen. This intermediary role, which was traditionally played by banks, now is disputed with an ever-growing number of big tech firms. The account-based money contrasts with the token-based money, where usually physical tokens (such as paper money) are directly exchanged between agents in a transaction (Carstens 2019, 2021a, 2021b). Bitcoins and other cryptoassets, which are digital token-based money, have revolutionized the world's payment system by allowing economic agents to make direct transactions even when they are geographically very distant (Bank for International Settlements 2020, 2021). In a world where only physical tokens existed, international transactions had to be based on account-based money.

The emergence of private digital currencies has been celebrated by some as the possibility of removing from the state the monopoly on the issuance and regulation of monetary standards and financial intermediation. While the digital technology is a novelty, private money experiments are not (Carstens 2019). Throughout time, they have risen and – inevitably – fallen (Carstens 2019, 2021a, 2021b). When founded on a large network of customers, private money can fulfill the medium of exchange function and help to grease the payments system. Yet, by definition, private agents lack public agents' attributes, such as the capacity to define and enforce a polity's legal system. Private agents operate their business subject to one (or more) public authority. The tax they owe to operate cannot be paid in their own issued money. There is no "sovereign" private entity where its private money is the mandatory legal tender. This is why private money fails in fulfilling the unit of account function and why, even if it can work as a reserve of value among private agents for some time, ultimately it is impossible for private money to work as a full currency.

It is not the technology that makes a currency trustworthy and stable, but the issuer underpinning it. Corroborating Keynes' (1923) argument that it is state power that provides stability in the intertemporal value of the currency – instead of its convertibility into a "barbarous relic" like gold –, the dollar only increased its worldwide dominance since the end

resembles a language. It produces meaning for others. This meaning is value: an abstract space of measurement in which the diverse activities that take place within a human group can be exchanged ... money is the means by which society gives back to each of its members what it judges each of them to have given to it. This definition makes clear that money is an institution external to economic actors, who have various strategies for accessing it. Money provides the power to be a member of the market society, at the level of the amounts of money that can be mobilised according to the prevalent logic within that society".

of the Bretton Woods System (Ilzetzki et al. 2017; Committee on the Global Financial System 2020). The dollar and the dollar denominated assets are deemed as safe because they are guaranteed by the material and immaterial power of the United States. A symbolic manifestation of the world's trust in the US power was when, despite being at the epicenter of the global financial turmoil ensued by the bankruptcy of Lehman Brothers in September 2008, economic agents “flew for safety” demanding dollar denominated assets. More recently, while the United States was failing to contain the human and economic cost of the coronavirus pandemic, the dollar remained the financial safe haven for public and private economic agents. The dollar's appreciation in moments of crises epitomizes the understanding of currencies as social myths, and simultaneously puzzles scholars and financial experts who want to rationalize complex human behavior.

The argument that explains why private money cannot replace state money also helps to enlighten why some state currencies are unable to work as a full currency within their own monetary domains. State currencies are as good as their underlying issuer. As put forward by Cohen (2015), the “quality” of currencies is based on the power of the issuing state: strong states have solid and widely desirable currencies; weak states have formal issuing power, but face a partial or total rejection of their societies in accepting the monetary standard “sovereignly” imposed. Governments can control the supply of money but have little control over its demand.

A financially integrated world makes the exercise of monetary sovereignty an increasingly difficult task for currency competition is enhanced (De Paula et al. 2017, Ocampo 2017, Fritz et al. 2018, Bonizzi et al. 2021). The accumulation of private wealth requires stable anchors to work as the benchmark for prices and contracts and, thus, to be the means by which property rights are transferred in the present and over time. From a private sector point of view, the one nation/one money paradigm (Cohen 1998) makes little sense. The fact that some states are more successful than others in convincing economic agents that their anchors will hold in the future gives rise to a preference for certain currencies, which invade the monetary domains of weaker currencies. The financial integration of unequal states, which issue unequal currencies, serves to reinforce the rigidity and hierarchy that characterizes the IMFS (Bonizzi et al. 2021), as it will be discussed next.

3. Two sides of the coin: currency internationalization and monetary invasion

While the state defines the normative bases that underlie social relations in all its dimensions, monetary and financial relations at the international level are characterized by the lack of a formal authority with coercive power. The state's monopoly of force is limited to its territorial space of jurisdiction. States can define the monetary standards and rules that shape contractual relations in the domestic financial markets. At the domestic level, trade and financial contracts must be signed and settled through instruments authorized by the state. In

practice, however, some states will be less able to enforce their monetary standards. In some cases, states might even formalize the domestic use of a foreign currency, a process which is known as dollarization. With or without due legal support, the fact is that some domestic currencies invade the monetary domains of others.

Monetary invasion is the corollary of currency internationalization. If one currency is being used across the issuing state’s border, that means another state is having its monetary domain invaded by a foreign currency. A currency can be used outside its borders to fulfill one or more of the three functions of money at the private market and/or official policy level, as outlined by Cohen’s (1971, 2015) taxonomy of the roles of international money (see Table 1). For instance, private domestic companies may use a foreign currency to invoice and settle trade contracts (invasion of the unit of account and medium of exchange functions) while retaining their investments in domestic currency (no invasion of store of value function). The government may allow the domestic currency to float freely, without a foreign exchange anchor (no invasion of the unit of account function), while accumulating reserves in a foreign currency (store of value function) which it uses to intervene in the foreign exchange market (medium of exchange function). Partial internationalization and partial invasion of monetary domains are more usual than any of the possible extremes. Currency choices will vary according to private and public agents’ preferences for different economic purposes over time and space, shaping the evolution of the monetary geography.

Table 1. The roles of international money

Levels of analysis	Functions		
	Medium of exchange	Unit of account	Store of value
Private	Foreign exchange trading, trade settlement	Trade invoicing	Investment
Official	Intervention	Anchor	Reserve

Source: Cohen 2015, p. 9.

In the absence of a “global state” with monetary and financial enforcement power, domestic currencies compete in the international field. A historical overview reveals that the supply of currencies with international appeal has always been limited to a handful of moneys (Neal 2015; Eichengreen et al. 2017; Gourinchas et al. 2019). Political and economic factors interact to rule out most contenders. To inspire confidence in their currencies, issuers need to have solid politic, social, and economic institutions, along with an external projection that usually goes along with military power. Guaranteeing the value of a currency is related to a state’s capacity in securing its geographic territory. It is also tied with the tracked record of the issuer’s values and its underlying society. Who can trust a state that repudiates debts, steals from creditors, and disregards private property rights? Yet, ensuring the “rules of the game” is not enough to make a currency attractive for foreigners. Besides a history of macroeconomic stability, issuers of competitive international currencies host wide and deep financial markets,

providing liquidity to the custody and settlement of contracts. To this end, the magnitude of the stocks and flows traded, which is intrinsically related to the economic size and openness of the issuer. The larger the issuer's linkages, the greater the network externalities for its currency at the international level. Third parties are more likely to accept it as a means of payments and to hold it as a store of value if they believe that others will do the same.

While the Bretton Woods Conference established the dollar as the *lingua franca* for monetary and financial affairs in the post-War period, the dollar dominance did not end together with the Bretton Woods System. In fact, it did not start with it either. Eichengreen and Flandreau (2009) and Chitu, Eichengreen and Mehl (2014) show that the dollar emerged as the leading currency before its "official" ascendance in 1944, overtaking sterling as early as in 1929. Thus, while the Bretton Woods System most certainly served to reinforce the dominance of the US dollar in the IMFS, the roots of its leadership both precede and surpass its role as the base of the international system of payments from 1944 to 1971. Inspired by Susan Strange's (1971a, 1971b) first systematic taxonomy to differentiate the role played by currencies in the international domain, Cohen (2015, 16-17) asserts that the dollar remains a "Top Currency" – "the most esteemed of international currencies," – and that "no other money comes close."

Indeed, the dollar is the leading currency in global private and public use to denominate commercial and financial contracts, besides consistently responding for around two thirds of the reserve assets held by Central Bank since the end of World War II. The Society for Worldwide Interbank Financial Telecommunication (SWIFT) platform reports that, in May 2021, 41% of international transactions registered on it were settled in dollars (excluding payments within Eurozone). The euro accounts as the second most traded currency internationally, with 40% of total payments, and the Chinese yuan is only the seventh-leading currency, accounting for just under 2% of total payments. The dollar daily turnover in the foreign exchange market exceeds US\$ 6 trillion, with the greenback appearing as a counterparty in half of the world's transactions. In terms of derivative instruments, the dollar represents 90% of the volume traded in foreign exchange swap contracts (BIS 2019b). The Chinese currency ranks only as the eight in terms of daily transaction volume in the foreign exchange market, according to the Triennial Central Bank Survey of Foreign Exchange and Over-The-Counter, OTC, Derivatives Markets (BIS 2019a; Committee on the Global Financial System 2020). Interestingly enough, the BIS shows that (i) comparing the results of the 2016 and the 2019 surveys, there was a slower growth in the use of the yuan; and that (ii) the effective turnover of the Chinese foreign exchange market is smaller than the one projected by the econometric model that controls the indicator by countries' per capita income (BIS 2019a, p. 35).

The dollar's share in foreign exchange flows, banks loans, debt issues, denomination of international trade contracts, and international reserves has remained relatively stable in recent decades, despite the relative decline of the US GDP as a share of the world's GDP (Ilzetzki et al. 2017; Committee on the Global Financial System 2020). This serves to illustrate that the international use of a currency is not a mere reflection of the size of economies, and

why the economic weight of the Chinese economy will not necessarily be translated into a broader international use of its currency (physical or digital). At the same time, the asymmetry between the economic weight of an economy and the international use of its currency is a source of tension in the IMFS, not least because the international use of a currency is a source of power for its issuing state, as discussed next.

4. Currency hierarchy and asymmetries in the IMFS

The tension between the role of the money that provides international liquidity and the world’s confidence in the value of this money – the Triffin dilemma – is an enduring feature of an IMFS which relies on domestic currencies to lubricate the international payment system. The original Triffin dilemma was associated with the need to expand the international liquidity to the global economy while maintaining the world’s confidence that the dollar value in terms of gold would hold, even when the US dollar liabilities exceeded US’ gold reserves. Under the post-Bretton Woods System of flexible exchange rates, fiduciary dollar, and almost free capital mobility, the “modern” Triffin dilemma has been associated with the capacity of the US to continue to provide the global economy with the safest assets (Gourinchas et al. 2019). Currently, “the problem of confidence” is whether the US can continue to do that given that the size of its economy is shrinking in relation to the rest of the world and that the US is the world’s largest debtor (see Table 2).

Table 2. Selected Economies: Net International Investment Position, 2019

	Percent of World GDP	Percent of GDP
United States	-12.6	-51.3
Germany	3.1	70.7
Japan	3.9	66.8
Brazil	-0.8	-39.8
Russia	0.4	21.0
China	2.4	14.4
India	-0.5	-15.0
South Africa	0.0	8.0

Source: Elaborated by the authors. Data from IMF, External Sector Report 2020.

It is often assumed that there must be some balance between the economic size of a country and the international use of its currency. This assumption has been a source of many wrong predictions about the future of the IMFS. A recent example was in the aftermath of the GFC, when this argument was used to predict a larger participation of emerging economies’ currencies in the IMFS. In 2011, the World Bank’s Global Development Horizons Report said that “as emerging economies account for an ever-growing share of the global economy and participate more actively in cross-border trade and finance, one sees that their currencies – particularly the renminbi – will *inevitably* play a more important role in the international

financial system” (World Bank 2011, p. 7, emphasis added). In a similar view, a discussion paper of the IMF (2011, p. 6, emphasis added) stated that “it seems likely – if not *inevitable* – that emerging market currencies will account for a larger share of international reserves”. Also, according to the IMF (2011, p. 19), “the move to currency internationalization by [emerging markets] is a lagging indicator of the global economic transition already underway, and to a large extent, the shift to a multipolar [international monetary system] would be consistent with ongoing global adjustment”. These claims found echo in the academic literature, even among the greatest specialists on international currencies. At that time, Barry Eichengreen (2011, pp. 121-122) noted that “as the world economy becomes more multipolar, its monetary system, logic suggests, should be similarly more multipolar”.

While it is true that the asymmetry between a country’s economic size and the role of its currency engenders several tensions in the IMFS, it does not necessarily follow that this tension will be resolved by assembling fairer distribution of the economic and political advantages that come along issuing a currency that is used by the rest of the world. For a long time, academic literature has been trying to understand “how global currencies work,” as says the title of a very good collection of articles in the area (Eichengreen et al. 2017). Although scholars have not unveiled what really determines the rise and dominance of a currency beyond its borders, it seems clear that the answer is more complicated than the IMF’s staff (2011, p. 4) idea that “it is essentially an organic, evolutionary, and market-driven process”. It is misleading to argue that “the market” leads the process of currency internationalization for at least two interrelated reasons, both of which have been addressed by existing literature.

The first reason why economic size and market preferences do not automatically translate into a higher international status of a currency is because money matters are above all a matter of the state, and of the underlying distribution of power in the international system. This is even more important when there is a euphoria about the role to be played by private cryptocurrencies, which gives life to the old libertarian dream of taking away from the state the monetary power monopoly (Skidelsky 2019). To put it simply, the international use of a currency embodies a political aspect related to the material and immaterial power of states (implicit, for example, in the capacity of the US to provide the world with the safest assets in the world while also being the world’s largest debtor). Having the tools and the capacity to make a currency economically attractive – sustaining price stability, maintaining a good reputation for effective policy management, promoting financial-market development, and so on (Cohen 2014) – does not mean that states can choose, or control the process of currency internationalization. While the international appeal of a currency is most certainly related with satisfying market needs, it is also subordinated to the asymmetric distribution of power and to the capacity of only a few countries to supply “attractive” currencies.

This incapacity to fully control the international appeal of a currency, derived from the asymmetric distribution of power among states, is related with the existence of a currency hierarchy, in which there is not space for all at the top. In other words, “doing your homework” is no guarantee of climbing the international currency ladder. In the international political

economy literature, the existence of a hierarchy among currencies has been associated with the image of a pyramid, “narrow at the peak, where one or a few moneys dominate, and increasingly broad below, reflecting varying degrees of competitive inferiority,” as put forward by Cohen (2015, p. 16). The concept of a currency hierarchy has also been explored by economists, notably within structuralist approaches, which emphasize the center-periphery dimensions of global economic relations, which result in fundamental macroeconomic and financial asymmetries (Andrade and Prates 2013; Paula et al. 2017; Fritz et al. 2018; Ocampo 2001, 2017; Prates 2020; Bonizzi et al. 2021). According to this view, it is possible to argue that cross-border demand of emerging markets’ currencies is not motivated by currency purposes (unit of account, medium of exchange, or reserve asset) but rather by the financial return they provide, i.e., they are demanded as financial assets and not as currencies.

Recognizing the impacts to the international monetary landscape derived from the asymmetric distribution of power among states, which gives rise to a currency hierarchy, is useful to analyze the case of China. To be sure, China is what is left from the many (wrong) predictions made about emerging markets, most notably the “BRICS” (Brazil, Russia, India, China, and South Africa), in the aftermath of the GFC. At the time, Eichengreen (2011, p. 8), for example, argued “where the Renminbi leads, other emerging market currencies, such as the Indian Rupee and Brazilian Real, could eventually follow.” Similarly, Cohen (2009, p. 21) said, “several states around the world today are thought to harbour ambitions to amplify their monetary power – including, most prominently, the four BRIC countries (Brazil, Russia, India, and above all China). One way to do this is to promote internationalization of their currency”. While Eichengreen, Cohen and others recognize that the path to currency internationalization is not an easy one, predictions about the future of the IMFS tend to stress the domestic elements of the aspiring currency without paying enough attention to the structural, international elements that might prevent currencies from increasing their international appeal.

5. The significance of China’s CBDC for money and power international relations

China came out ahead of other countries in introducing a CBDC. In recent years, the main emerging and advanced economies have accelerated studies on how and when to adopt CBDCs (Auer, Cornelli and Frost, 2020; BIS 2020; Boar, Holden and Wadsworth 2020; Boar and Wehrli, 2021). In this regard, China is not an exception. However, China finds itself in a particular context that has stimulated further progress in the direction of adopting a CBDC since (i) China is already the economy that most uses electronic and digital means to make payments; (ii) China’s technology companies in the new digital economy and in the communications area are disputing and, in some cases, leading the technology frontier, in areas such as 5G, e-commerce, production of telecommunications equipment, among others; and (iii) the Chinese government has an enormous capacity to plan and adopt production and consumption guidelines and standards, i.e., to design and carry out industrial and technological policies. An additional stimulus for the Chinese government to accelerate its strategy in this

area has been the trade war with the United States and the Facebook's announcement of a digital currency, the Libra (Deutsche Bank Research 2020, p. 13; Arner et al., 2020).

China's CBDC is a further spark in the growing tensions between China's economic weight and the role of its currency in the IMFS. After four decades of rapid growth, China has become the world's largest economy when measuring in terms of purchasing power parity, accounting for 18.3% of the world's total. In market values (current dollars), China follows behind the United States. In terms of trade in goods and services, China is the main trading partner for more than 100 countries (in comparison the United States is the main trade partner for 57 countries) (Financial Times 2020). China is also a prominent player in terms of net ownership of financial assets abroad (IMF 2020). At the end of 2018, Chinese international reserves reached the amount of US\$3,168 billion, while its stock of direct investment abroad was US\$1,939 billion. China also stands out as the third largest net creditor in the world, behind only Japan and Germany, with an international investment position of US\$2,120 billion, equivalent to 2.4% of global GDP (Table 2).

The international role of China's currency is dwarfed in comparison to its economic weight (Table 3). The renminbi remains the world's eight most traded currency (US\$284 billion, 4.3% of the foreign exchange market turnover⁶), with the dollar on the other side of 95% of all renminbi transactions (BIS 2019a). After skyrocketing from the 29th (0.1% of total) most traded currency in 2004 to the eight (4% of total) in 2016, the 2019a Triennial Central Bank Survey was the first which did not record a further climb of the renminbi in the global rankings. Average daily turnover in contracts in renminbi accounted for only 0.5% of total turnover, an increase in comparison with 0.4% in 2016, but a very small share in comparison with the dollar-denominated contracts which accounted for nearly half of total turnover in all currencies (BIS 2019a). Similarly, foreign exchange reserves allocated in renminbi amounted to US\$267 (just over 2% of the world's total, being the fifth largest currency share), behind allocations in dollars (59.5%), euros (20.6%), and yen (5.9%), according to the IMF's Currency Composition of Official Foreign Exchange Reserves (COFER).

⁶ As there are two currencies in each transaction, the sum of individual shares total 200%. The dollar was on the side of 88% of all trades in April 2019.

Table 3. Economic Weight vs. International Role of Currencies

	Economic Weight		International Role of Currencies				
	Global GDP ¹	Global GDP PPP ²	International loans ³	International debt ⁴	FX transaction volume ⁵	Official FX reserves ⁶	SWIFT payments ⁷
United States / USD	24.1	15.9	52.7	63.4	88.3	59.5	40.9
Euro Area / EUR	15.5	7.38	26.0	23.0	32.3	20.6	40.1
Japan / JPY	5.7	4.0	4.7	2.3	16.8	5.9	3.75
China / CNY	17.7	18.3	n/a	n/a	4.3	2.4	1.2

Notes: ¹ IMF, World Economic Outlook April 2021. ² IMF, World Economic Outlook April 2021. ³ Data refer to Q4 2020. Outstanding international debt security, ECB report on the international role of the euro, Table A6. ⁴ Data refer to Q4 2020. Outstanding international debt security, ECB report on the international role of the euro, Table A4. ⁵ As two currencies are involved in each transaction, the sum of shares in individual currencies total 200%. Data refer to 2019. BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-Counter (OTC) Derivatives Market 2019. ⁶ Data refer to Q1 2021. IMF, Currency Composition of Official Foreign Exchange Reserves (COFER). ⁷ Data refer to May 2021. RMB Tracker, SWIFT.

Source: Elaborated by the authors.

This is despite the government's efforts to internationalize the yuan. These efforts ultimately stumble in the yuan's position in the IMFS hierarchy. The yuan's appeal as an international currency requires some financial liberalization in China, so that foreigners can buy and sell yuan-denominated assets (Prasad 2016, chapter 6; Vermeiren and Dierckx 2012, pp. 1160-1661). However, the gradual opening of the Chinese financial account has been accompanied by an increase in the volatility of its currency, clearly reducing its appeal as a stable unit for public and private economic agents (Das 2019). To that extent, the gap between what the Chinese economy represents in real terms and the role its currency plays in the IMFS can be explained, at least in part, by the inherent difficulties of increasing the international appeal of a currency which still occupies a relatively low position in the IMFS hierarchy.

The existence of a digital yuan could be a step towards an eventual transformation of the IMFS insofar as it is part of a bigger picture of China's strategy to place its currency in the international arena. To be sure, the renminbi's potential threat to the dollar is related to its content – being the Chinese state-guaranteed currency – rather than its form – physical or digital. The digital renminbi is simply an additional form of expression for the Chinese state currency. While being digital does not change the content of the currency, it is possible to argue that being the first CDBC, means that the Chinese currency will be able to occupy spaces that the dollar cannot enter yet. This movement can contribute to strengthen and eventually change

the content of the Chinese currency, which would contribute to increase the yuan's capacity to challenge the dollar.

It has also been argued that CDBC's will increase the government's control over economic activities, which would also contribute to China's might and would most likely be reflected in the international use of its currency. A digital yuan could expand government control over households and business, as their spending on purchasing goods, services and assets would be more easily traceable. It could, for the same reasons, increase tax efficiency. Additionally, as a recent report from the Deutsche Bank (2020, p. 3) highlights, the Chinese government may force local and multinational companies to use this new form of payment, with potentially beneficial spillovers on the internationalization strategy. While these and other effects are possible, none of them directly or automatically leads to a new IMFS.

Aside from China's efforts, there is also an external element related to the United States own fragilities which might contribute to a change in the IMFS landscape. From a political and social point of view, the United States has experienced periods in which its leaders tried to withdraw the country's leading international role in the name of a nationalism with a populist bias (Haass 2018; Mearsheimer 2019; Ikenberry 2020). In addition, there is also the United States debtor position, which could contribute to the appeal of other international currencies, including the yuan. Thus, the success of a digital yuan would not necessarily be a demonstration of the Chinese strength, but perhaps an additional reflection of the current vulnerability of the United States.

In spite of (i) the existing tensions between China's economic weight and the international role of its currency, (ii) the potential benefits of a digital yuan to increase China's might, and (iii) the United States own fragilities, a radical rupture with the current IMFS centered on the dollar is unlikely to happen in the foreseeable future. Until now, China has not explicitly challenged the US-shaped international system (and therefore the US structural power that underlies it). In the case of finance and global trade, but also in political and security issues, the rules of the game in force were created from the asymmetric position of the United States. The gold-dollar standard, the creation of the IMF and the World Bank, the GATT-WTO system, the United Nations and the Security Council, NATO, and so on, are examples of multilateral institutions generated and shaped by the United States asymmetric interaction with the rest of the world. The United States has managed to reinvent rules when they no longer served to its strategic interests. There are countless examples in this regard, but it is sufficient to remember the unilateral abandonment of the fixed exchange rate regime that linked the dollar to gold (and the other currencies to the dollar) in the early 1970s, when the US Treasury Secretary blatantly exposed the privileges enjoyed by the dollar: "it is our currency, but it is your problem".

So far, the Chinese rise in all its dimensions has taken place within the scope of trade and financial rules created in the post-war period by the United States. China has not sought to change the status quo, and instead has adapted to it and grew by engaging on a broad trade and

financial integration with the rest of the world. Its success in this regard has forced the United States to reassess the desirability of supporting their own “open liberal order”. In this context, the populist nationalism of Trump’s administration is less surprising the Chinese defense, repeatedly expressed by Xi Jinping, that the world remains open. This apparent contradiction will possibly gain more intense colorations in the post-COVID19 era.

6. Final remarks

China’s CBDC has rekindled once again the debate about the future of the dollar and of the IMFS. This article has analyzed the meaning of China’s CBDC to the underlying power relations in the IMFS and has argues that it does not represent a rupture of the prevailing dollar dominant IMFS. The main argument of this article is that the form of the currency (physical or digital) is less relevant than is content (the power of its issuer). To that extent, China’s CBDC is an additional form of the currency issued by China. While there are certain particularities related to China’s CBDC – such as being the first and occupying places that the dollar cannot, and increasing the efficiency of the Chinese State – none of them directly leads to a new IMFS.

Unravelling the case of China’s CDBC is important because of the usual *frénésie* that surrounds monetary and financial matters, which overlooks the connections between money and state power. Not long ago, specialists argued that the BRICS currencies could eventually have a more prominent role in the IMFS, mistaking economic size with currency power in a similar way that was done when evaluating the potential of the German marc, the Japanese yen, and the euro in challenging the dollar. While there is a tension between China’s economic might and the international role of its currency, this does not mean that the IMFS will evolve to a more balanced equilibrium. The persistence of this tension can be explained by considering the existence of an underlying currency hierarchy in explaining the broader configuration of the IMFS.

To that extent, the existing evidence does not warrant any definitive diagnosis that China’s CBDC will represent an imminent disruption of the IMFS. In fact, China’s initiative to launch the first digital currency has triggered a wave of studies and similar efforts by other Central Banks around the world to develop their own CBDCs, including the United States (BIS 2021, Boar et al. 2020, Boar and Wehrli 2021, Carstens 2021a, 2021b). At the same time, the international position of the dollar remains solid, perhaps less for the merits of the US and more for the lack of safe and stable alternatives. All things considered, the successful economic rise of China, at least so far, still does not grant the Chinese State the objective conditions for its currency and its monetary and financial institutions to impose themselves as dominant at the global state. If the possibility of a greater role for the Chinese currency (physical or digital) in the future cannot be ruled out a priori, the advent of the digital yuan should not be overestimated.

References

- Aglietta, Michel. 2018. *Money: 5,000 Years of Debt and Power*. New York: Verso Books.
- Alami, I., Alves, C., Bonizzi, B., Kaltenbrunner, A., Koddenbrock, K., Kvangraven, I., Powell, J. 2021. 'International Financial Subordination: A Critical Research Agenda,' *Greenwich Papers in Political Economy*, No GPERC85
- Andrade, R. and Prates, D. M. 2013. 'Exchange rate dynamics in a peripheral monetary economy', *Journal of Post Keynesian Economics* 35(3): 399-416
- Arner, Douglas; Auer, Raphael; Frost, Jon. 2020. Stablecoins: risks, potential and regulation. *BIS Working Papers*, n. 905, November. Basle: Bank for International Settlements. Auer, Cornelli and Frost, 2020
- Auer, Raphael, Julio Cornelli, e Jon Frost. 2020. "Rise of the Central Bank Digital Currencies: drivers, approaches and technologies". *BIS Working Papers*, no. 880, August. Basle: Bank for International Settlements.
- Bank for International Settlements. 2019a. "Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets in 2019". Basle: Bank for International Settlements.
- Bank for International Settlements. 2019b. "BIS Quarterly Review: International banking and financial market developments". Dezembro. Basle: Bank for International Settlements.
- Bank for International Settlements. 2020. "Annual Economic Report 2020". Basle: Bank for International Settlements.
- Bank for International Settlements. 2021. "Annual Economic Report 2021". Basle: Bank for International Settlements.
- Boar, Codruta, Henry Holden, e Amber Wadsworth. 2020. "Impending arrival – a sequel to the survey on central bank digital currency". *BIS Papers*, no. 107, January. Basle: Bank for International Settlements.
- Boar, Codruta; Wehrli, Andreas. 2021. "Ready, steady, go? Results of the third BIS survey on central bank digital currency", *BIS Papers*, n. 114, January. Basle: Bank for International Settlements.
- Bonizzi, B., Kaltenbrunner, A. and Ramos, R. A. (eds.) 2021. *Emerging Economies and the Global Financial System: Post-Keynesian Analysis*. London and New York: Routledge.
- Carstens, Agustín. 2019. "The future of money and the payment system: what role for central banks?" *Lecture at Princeton University*, Princeton, New Jersey. Disponível em: <https://www.bis.org/speeches/sp191205.pdf>. Acesso: 10 set. 2020.
- Carstens, Agustín. 2021a. "Digital innovation and the future of money" *Remarks at ITAM Business Perspectives Seminar: Fintech*. Disponível em: <https://www.bis.org/speeches/sp210205.htm>. Acesso: 10 Jun. 2021.

- Carstens, Agustín. 2021b. “Central bank digital currencies: putting a big idea into practice” *Remarks at Peterson Institute for International Economics (PIIE) discussion on Central Bank Digital Currencies*. Disponível em: <https://www.bis.org/speeches/sp210331.htm>. Acesso: 10 Jun. 2021.
- Chitu, Livia, Barry Eichengreen, e Amaud Mehl. 2014. “When did the Dollar Overtake Sterling as the Leading International Currency? Evidence from the Bond Markets”. *Journal of Development Economics*, vol. 111: 225-245.
- Cohen, Benjamin. J. 2019. *Currency Statecraft: Monetary Rivalry and Geopolitical Ambition*. Chicago: University of Chicago Press.
- Cohen, Benjamin. J. 2015. *Currency Power: Understanding Monetary Rivalry*. New Jersey: Princeton University Press.
- Cohen, Benjamin. J. 2014. “Will History Repeat Itself? Lessons for the Yuan.” In C Eichengreen and K Masashiro (eds), *Renminbi Internationalization: Achievements, Prospects, and Challenges*. Washington, DC: Brookings Institution Press, pp. 27-52.
- Cohen, Benjamin. J. 2009. “Currency and State Power”. *Prepared for a conference to honor Stephen D. Krasner*, December 4-5, 2009.
- Cohen, Benjamin. J. 1998. *The Geography of Money*. Ithaca, New York: Cornell University Press.
- Cohen, Benjamin. J. 1971. *The Future of Sterling as an International Currency*. London: Macmillan, 1971.
- Committee on the Global Financial System. 2020. US dollar funding: an international perspective, *CGFS Papers* No 65, June. Basle, Bank for International Settlements.
- Das, S. 2019. ‘China’s Evolving Exchange Rate Regime’, *IMF Working Paper* WP/19/50.
- De Paula, Luiz Fernando, Bárbara Fritz, e Daniela M. Prates. 2017. “Keynes at the periphery: Currency hierarchy and challenges for economic policy in emerging economies”. *Journal of Post Keynesian Economics*, vol. 40, no. 2: 183-202.
- Deutsche Bank Research. 2020. “The Future of Payments, Part III. Digital Currencies: The Ultimate Hard Power Tool”. Disponível em: https://www.db.com/newsroom_news/2020/db-research-transition-to-digital-payments-could-rebalance-global-economic-power-en-11474.htm. Acesso: 10 set. 2020.
- (The) Economist. 2020. “China aims to launch the world’s first official digital currency”, April 23.
- Eichengreen, Barry. 2011. *Exorbitant Privilege: The Rise and Fall of the Dollar*. Oxford: Oxford University Press.
- Eichengreen, Barry; Amaud Mehl, e Livia Chitu. 2017. *How Global Currencies Work: Past, Present and Future*. Princeton: Princeton University Press.

- Eichengreen, Barry, e Marc Flandreau. 2009. “The rise and fall of the dollar (or when did the dollar replace sterling as the leading reserve currency?)”. *European Review of Economic History*, vol. 13, no. 3: 377-411.
- Financial Times. 2020. “A New Cold War: Trump, Xi and the escalating US-China confrontation”. October 4.
- Fritz, B., Paula, L. F. R. and Prates, D. M. 2018. “Global currency hierarchy and national policy space: a framework for peripheral economies”. *European Journal of Economics and Economic Policies: Intervention*, vol. 15, no. 2, 208-218
- Gourinchas, Pierre-Olivier, Hélène Rey, e Maxime Sauzet. 2019. “The International Monetary and Financial System”. *Annual Review of Economics*, vol. 11: 859-893.
- Haass, Richard. 2018. *A World in Disarray: American Foreign Policy and the Crisis of the Old Order*. New York: Penguin Press.
- Helleiner, Eric, e Jonathan Kirshner, eds. 2012. *The Future of the Dollar*. Ithaca, New York: Cornell University Press.
- Hicks, J.R. 1967. *Critical Essays in Monetary Theory*, London: Clarendon Press.
- Ikenberry, G. John. 2020. “The Next Liberal Order: The Age of Contagion Demands More Internationalism, Not Less”. *Foreign Affairs*, July/August, vol. 99: 133.
- Iltetzki, Ethan, Carmen Reinhart, e Kenneth S. Rogoff. 2019. “Exchange Rate Arrangements in the 21st Century: Which Anchor Will Hold?” *Quarterly Journal of Economics*, vol. 134, no. 2: 599-646.
- International Monetary Fund. 2020. “External Sector Report 2020: Global Imbalances and the COVID-19 Crisis”. Washington, DC: International Monetary Fund. Disponível em: <https://www.imf.org/en/Publications/ESR/Issues/2020/07/28/2020-external-sector-report>. Acesso: 10 set. 2020.
- IMF. Internationalization of Emerging Market Currencies: A Balance between Risks and Rewards, *IMF Staff Discussion Note, SDN/11/17*, IMF, Washington, D.C, 2011a
- Keynes, John M. 1923. *A Tract on Monetary Reform*. London: McMillan.
- Mearsheimer, John J. 2019. *The Great Delusion: Liberal Dreams and International Realities*. London: Yale University Press.
- Neal, Larry. 2015. *A Concise History of International Finance*. Cambridge: Cambridge University Press.
- Norrlöf, C., Poast, P., Cohen, B. J., Croteau, S., Khanna, A., McDowell, D., Wang, H., Winecoff, W. 2020. “Global Monetary Order and the Liberal Order Debate”. *International Studies Perspectives*, vol. 21: 109-153.
- Ocampo, J A. 2001. ‘International Asymmetries and the Design of the International Financial System.’ Serie Temas de Conyuntura 15.

- Ocampo, J. A. 2017. *Resetting the International Monetary (Non)System*. Oxford: Oxford University Press.
- Prates, D. M. 2020. Beyond Modern Money Theory: a Post-Keynesian approach to the currency hierarchy, monetary sovereignty, and policy space. *Review of Keynesian Economics*, v. 8, p. 494-511.
- Prasad, E. 2016. *Gaining Currency: The Rise of the Renminbi*. Oxford: Oxford University Press.
- Shaikh, A. 2016. *Capitalism: competition, conflict, crises*. Oxford: Oxford University Press.
- Skidelsky, Robert. 2019. *Money and Government: The Past and Future of Economics*. London: Yale University Press.
- Strange, Susan. 1971a. "The Politics of International Currencies". *World Politics*, v. 23, n. 2, p. 215-231.
- Strange, Susan. 1971b. *Sterling and British Policy*. London: Oxford University Press.
- SWIFT. 2021. "RMB Tracker", February. Available at: <https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker>.
- Triffin, R. 1961. *Gold and the Dollar Crisis: The future of convertibility*. Yale University Press, New Haven, Connecticut.
- Vermeiren, M and Dierckx, S. 2012. 'Challenging Global Neoliberalism? The global political economy of China's capital controls.' *Third World Quarterly* 33 (9): 1647-1668.
- World Bank. 2011. *Global Development Horizons 2011 – Multipolarity: The New Global Economy*, Washington, D.C.