COMMITTEE ON INTERNATIONAL RELATIONS
THE UNIVERSITY OF CHICAGO

The University of Chicago

Domestic Politics Constrain How Great Powers Pursue Monetary Hegemony: A Comparison Between the United States and China Currency Swap Policies

by João Victor da Silva

June 2022

A paper submitted in partial fulfillment of the requirements for the Master of Arts degree in the Master of Arts Program in the Committee on International Relations

Faculty Advisor: Matthias Staisch

Preceptor: Burcu Pinar Alakoc

Abstract: The political economy literature shows that monetary hegemony guarantees significant privileges to a country's economy — governments gain greater flexibility in their budgetary and current accounts without incurring significant macroeconomic imbalances. Such greater economic policy flexibility also shapes the global balance of power since governments have fewer fiscal constraints to enhance their military spending. One of the main instruments governments can use to enhance or preserve their currency's position in the international monetary system is establishing currency swap lines with other central banks. Yet the policies of central banks differ, and so do their effects on currency power. Why? I contend that a country's political regime explains the different constraints it faces in its quest for monetary hegemony. In this thesis, I develop a theoretical framework to elucidate the difference between currency swap policies in democracies and autocracies. I test this theory in a comparative analysis of the Fed and PBOC currency swap policies. I find that the United States restrains access to its currency swap lines with countries that are critical to the stability of the global economy and that levy small credit risk to the Fed. Ultimately, the US monetary authority fears domestic political backlash from their international operations. In the case of China, credit risk is not a concern due to the lack of popular scrutiny. Swap lines are extended to advanced and developing economies as financial stability and economic development instruments. However, China's swap line policies cannot fully succeed since the authoritarian nature of the government impedes the implementation of reforms necessary for a country's monetary rise: free capital flows and liquid capital markets.

Table of Contents

Introduction

What allows a country to build its national security apparatus? It is money. Unfortunately, economic, political, and military affairs studies are usually disentangled. Yet, they are deeply interdependent. In the increasingly complex international political scenario we are encountering, it becomes crucial to approach relevant issues through a multidisciplinary perspective. Currently, the most pertinent dispute on the international stage is between the United States and China. Naturally, these confrontations pass through monetary matters. After all, countries need money to gain military and political power. Accordingly, this thesis proposes demonstrating how the United States and China central banks' currency swap policies – the main instrument of international monetary cooperation – will differ to achieve global monetary dominance.

To explain those differences in currency swap policies, I developed a theoretical framework with two dimensions. The first dimension explains the general behavior of a country's international monetary policy. It builds on the realist perspective that one of the primary elements of state behavior under an anarchical international order is to "maximize their relative power over other states" (Mearsheimer 1994). Then, I apply the relative power perspective to the concept of the hierarchy of currencies to demonstrate that central banks will act to either enhance or preserve their currency position in the hierarchy (Cohen 2014; Mehrling 2021; Murau et al. 2021).

The second dimension of my theory explains how domestic politics constrain countries under different political regimes to conduct the most efficient policies to enhance the status of their currencies. For democracies, central banks will limit the access to swap lines for countries with systematic importance to the global financial system. Swap operations with countries with riskier credit conditions will be refrained to avoid domestic backlash from potential losses that such operation might result in, even though it is usually in the country's interest to extend swap lines to a significant number of countries. In contrast, authoritarian regimes will not face constraints in establishing swap lines with countries with higher credit risk. The difficulty they will face in rising in the hierarchy of currencies relates to their unwillingness to give up their power over economic management to liberalize capital flows and develop a highly liquid capital market – two elements necessary to raise a currency's international usage.

I find that the United States and China's currency swap lines policies align with my thesis's theoretical framework. The analysis of United States currency swap lines decisions indicates that the United States swap lines established by the Federal Reserve (Fed) coincide with periods of crisis; financial stability is the primary justification for making such swap arrangements; concerns with the credit risks of these operations make the United States establish swap lines with countries that have robust macroeconomic conditions.

In the case of China, I find that it cooperates with a wider variety of countries than the United States, both with advanced and developing economies. Moreover, credit risk is not a significant concern to the People's Bank of China (PBOC) when settling these swap operations. In fact, China has established swap lines with countries facing macroeconomic imbalances, including countries that have defaulted on their sovereign debt. Unlike the United States, China has portrayed swap lines not only as a device for promoting financial stability but also as an instrument to promote economic development by facilitating bilateral trade and investments. Swap lines were also set as components of China's international infrastructure program, the Belt and Road Initiative. This shows China's intent to use international monetary cooperation to facilitate its access to new investment and trade opportunities and secure the supply of critical commodities to its economy. Nonetheless, China did not pursue any significant policy change to eliminate capital flows restriction and develop liquid capital markets.

I divide the thesis into six chapters. In the first chapter, I review the literature on the topics relevant to this research, including the use of swap lines as a tool for central bank cooperation and multidisciplinary studies on international relations, national security, and economics in the context of international monetary policy. The second chapter displays the thesis' theoretical framework. In the third chapter, I explain the research design set for this paper. In chapter four, I show my results and findings. The results and findings chapter is divided into three sections. The first section will display when the Fed and the PBOC established bilateral currency swap lines. The second section shows how the U.S. and China's central banks justify the currency swap agreements. The third section demonstrates the characteristics of the currency swap counterparts of China and the United States. The fifth chapter discusses the results interpretations and the research limitations. Finally, in the sixth chapter, I summarize the main findings and recommend paths for future research.

I. Literature Review

- *Currency Swap Lines as a Tool for Central Bank Cooperation*

Currency swap lines are not an innovative instrument to help central banks achieve their policy mandates. The use of currency swap lines dates to the early 20th century. Until the 1970s, a fixed exchange rate system was the base of the global economy. As a result, during the gold and gold-exchange standards periods, international monetary cooperation focused on maintaining this system stable. The goal was to preserve exchange rate parities (Borio & Toniolo 2008; Kindleberger & Aliber 2011). Without currency swaps, countries would face balance of payment crises that could only be tackled with unpopular adjustments, like interest rate hikes or currency devaluations. The problem is that such adjustments resulted in contractionary effects on the economy and were unpopular domestically (Amatori & Colli 2019; Williams 1934). Consequently, currency swaps were a critical tool to avoid such adjustments.

However, with the fall of the Bretton Woods system in the 1970s, swap lines gained a new purpose. Swap lines became an instrument for safeguarding financial stability under a system that promoted financial and economic integration (DeRosa 2009; Borio & Toniolo 2008; Sahasrabuddhe 2019). After all, global crises became more recurrent with the integration of financial systems. As a result, the reserve currencies central banks, especially the Fed, had to act as *de facto* international lenders of last resort. Foreign banks suffering liquidity problems could intensify these global crises. In Fed's case, Mehrling (2011) explains that such currency swap arrangements "amounted to an extension of discount window borrowing to foreign banks, but with foreign central banks as intermediaries taking all credit risks" (121). Currency swap lines turned out to be one of the few effective policies in mitigating global financial crises (Bahaj & Reis 2018; Obstfeld et al. 2009; Burgeon & Sgard 2009; Duran 2017; Stone et al. 2009; Goldberg et al. 2011).

Especially in the aftermath of the Great Financial Crisis, currency swap lines were framed as an instrument for financial stability and as a device to promote economic development and political objectives (Nozahie 2017). China became the first country to promote swap lines under a developmental and political framework as part of its strategy to internationalize its currency (Cohen 2017; Eichengreen & Kawai 2015; Lai 2021). Ultimately, the current international monetary system promoted a significant shift in the use of swap lines: from an instrument to sustain exchange rates parties to a device that primarily promotes financial stability, economic development, and political objectives.

- *International Relations, National Security, and the Economy*

National security and economics are at the core of great powers' international policy. After all, material factors are usually considered one of the main elements of the equation to assess the power of a state in the international system (Fels 2014). Despite some disagreements among scholars about the actual relevance of economic factors to a state's power, it seems evident that for a state to become a great power in the international system, it must experience a condition of economic prosperity that allows it to have the material resources to build its military capacity and have the potential to coerce other states through economic measures.

In the intersection between national security and monetary policy studies, one of the few scholars that have addressed this topic is Paul R. Viotti. In *The Dollar and National Security: The Monetary Component of Hard Power* (2014), he placed monetary issues at the core of national security by stressing the privileges, costs, and challenges that the United States' national security faces with the dollar. To some extent, I aim to expand the emerging literature on the connection between monetary matters and national security. I want to show how a theoretical framework can apply national security and monetary economics concepts to explain central banks' currency swaps decision-making behavior. Moreover, I seek to demonstrate how this framework fits in explaining part of the growing confrontations between the United States and China (Allison 2017; Kissinger 2012; Doshi 2021).

Essentially, the economic advantages that a reserve currency status provides to a country determine a significant part of its national security capabilities. Since a state can enhance its economic power by dominating the monetary system, the strength and international acceptance of a country's currency affects its military capabilities. The famously known concept of "exorbitant privilege" – coined by the former French finance minister Valéry Giscard d'Estaing in 1965 – succinctly explains that the United States benefits economically from the reserve currency status of the dollar. The United States can have a twin deficit (current account and budget deficits) without experiencing economic disequilibrium – at least in the short-term – because of the dollar reserve currency status (Eichengreen 2013; McBride & Siripurapu 2021; Norloff 2010).

Fundamentally, the position of the dollar as the leading currency in commercial and financial transactions and foreign exchange reserves generates a high external demand for dollar-denominated assets. This condition creates various benefits for the U.S. economy, like services from U.S. financial institutions and seigniorage revenue due to the higher demand for dollar bills (Cohen 2013). Most importantly, the heightened demand for dollar-denominated assets allows the U.S. government to issue new sovereign debt. Consequently, the government does not need a balanced budget because of a growing demand for its debt instruments. Given the high demand for dollar-denominated assets, foreigners virtually finance American consumption by acquiring public and private debt; however, this comes at a cost. The increased demand for dollars overvalues the U.S. currency vis-à-vis foreign currencies, making U.S. exports less attractive. That is one of the reasons why the United States continuously experiences balance-of-payments deficits. If the external demand for dollars remains relevant, the U.S. can sustain both a budget and balance-of-payments deficits without macroeconomic imbalances. Just a loss of confidence in the dollar could reverse such a trend (Triffin 1979).

Ultimately, the reduction of fiscal constraints due to the dollar reserve currency condition facilitates the U.S. government's ability to have the largest defense spending in the world. For instance, Thomas Oatley (2015) explains that *financial power* is the mechanism through which the U.S. government could overcome the so-called "crowding out constraint." Essentially, the

U.S.'s highly liquid capital markets and low credit risk conditions continuously attract foreigners to hold dollar-denominated assets. As a result, "[f]inancial power [...] enables the U.S. government to increase military spending without having to cut social welfare programs, without having to reduce private consumption, and without having to reduce private sector investment" (13).

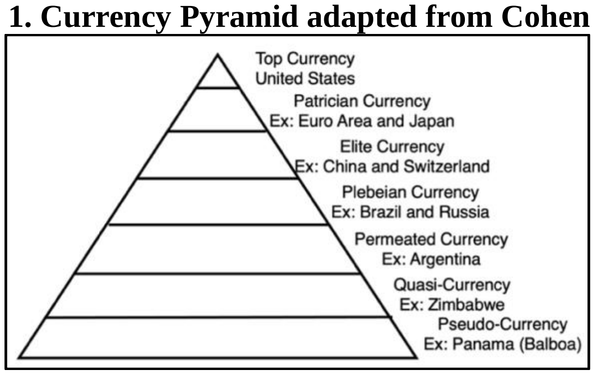
China also wants to achieve a higher level of monetary dominance to experience some of the privileges that the dollar provides to the United States. Therefore, Chinese officials are pursuing policies to internationalize its currency. For that, China's government is seeking to increase the use of its currency in trade and financial transactions and raise the renminbi's allocation in the foreign exchange reserves compositions of central banks (Eichengreen & Kawai 2015; Cohen 2017). One of China's main strategies to internationalize its currency is the establishment of swap arrangements with other central banks (Ocampo 2017). Such swap lines would tighten financial, economic, and political relations between China and other countries. Consequently, the renminbi would become more attractive to foreigners. Gallagher (2016), in his analysis of China-Latin America relations, emphasizes that China is expanding its financial ties with Latin American countries as part of its "Yuan diplomacy" that seeks to consolidate its political and economic interests in the region (65). Since geopolitical considerations are relevant to the portfolio composition of central banks reserves and countries' trade policies, the active engagement of China in internationalizing its currency can indeed raise the status of the renminbi (Lusinyan et al. 2020).

Given that China still has underdeveloped capital markets and restrictions on capital flows – two conditions necessary for currency internationalization – China is adopting the so-called "one currency, two markets" policy. Edwin Lai (2021) explains that international transactions denominated in renminbi are happening in offshore markets like Singapore, Hong Kong, and London. In that way, China can allow transactions with full convertibility of its currency while retaining control over the financial sector and its macroeconomy in the inshore market.

Due to the intrinsic relationship between a country's monetary status and its political and military power reflections, my thesis theoretical framework incorporates concepts of power politics to explain central banks' policy behavior in settling swap arrangements. The realist assumption that a state's primary goal under an anarchic international system is survival is pivotal to my theoretical framework. Following John J. Mearshimer's (1994) assertion that one of the main patterns of state behavior is to "maximize their relative power over other states," I extend this assumption to central banks' international monetary decision-making behavior. After all, the status of a country's currency is fundamental to determining its economic capacity and, consequently, its defense budgets. If a country wants to expand its military capabilities, ascending in the hierarchy of currencies becomes critical. As countries increase their relative monetary power, they can experience the so-called "exorbitant privileges" of reserve currencies. For instance, Paul R. Viotti (2014) highlights that the dollar reserve currency status facilitated the ascension of the United States as the most powerful nation in the world. Since it is impossible to disassociate a country's military capabilities from its economic power, it seems appropriate to analyze economic policy decisions considering their impact on its national security apparatus. Ultimately, if a country wants to preserve or improve its position in the international system, the ascension in the hierarchy of currencies is a critical step.

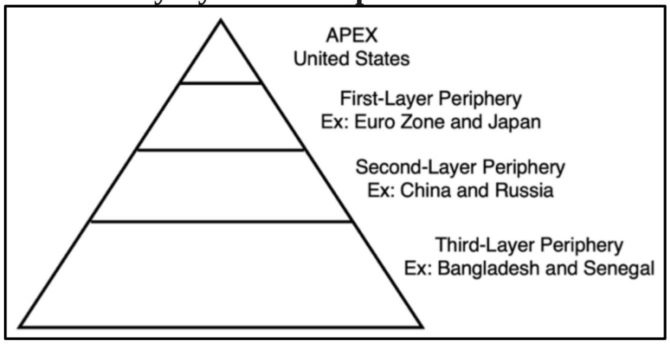
In order to build my theoretical argument, I rely on the concept of the "hierarchy of currencies" (Cohen 2014; Mehrling 2021; Murau et al. 2021) to highlight the idea that the currency at the top of the hierarchy has economic privileges that can be translated into greater military power. Fundamentally, the idea of a "hierarchy of currencies" aims to explain how the extent of a currency use limits or extends a country's economic policy. We can illustrate these differences with two extreme cases. As I described previously, the dollar, the most important global reserve currency, can "enjoy" the exorbitant privileges of its currency status since the high external demand for dollar-denominated assets allows the country to have looser fiscal and monetary policies as well as run continuous current account deficits without incurring significant macroeconomic imbalances. Differently, currencies like the Venezuelan Bolívar, which are experiencing hyperinflation, start to lose their use even domestically and become substituted by foreign currencies; thus, limiting the government's flexibility in defining its economic policy without generating further economic imbalances. As a result, to gain greater economic policy flexibility, countries at the top of the "hierarchy of currencies" will adopt policies to preserve their currency status. In contrast, a rising power at lower levels of the hierarchy will employ monetary policies to achieve the hierarchy's top (figures 1 and 2).

Figure 1. Currency Pyramid adapted from Cohen (2014)



Source: Concepts from Benjamin J. Cohen, *A Geografia do Dinheiro.* (2014), p.146-149.

Figure 2. Currency Pyramid adapted from Murau et al. (2021)



Source: Adapted from Murau et al., "The Hierarchy of the Offshore US-Dollar System: On Swap Lines, the FIMA Repo Facility and Special Drawing Rights." (2014), p.5. figure 1.

Considering the importance of global monetary dominance to a country's economic prosperity, I reject the economistic view that central banks' policies are essentially focused on their economic mandates (Aglietta and Mojon 2010; Mayes et al. 2019). I do not deny the argument that central bankers are focused on preserving the stability of their country's economy and that most of their policies are based on technical analysis. However, there is significant evidence that central banks, even those portrayed as "independent," consider political factors in their policy decisions. In the case of liquidity swap arrangements, some scholars have argued that domestic and international political factors influenced the Federal Reserve's decision to establish some of these lines (Broz 2015; Sahasrabuddhe 2019). Similarly, there is evidence that the political and institutional characteristics of the recipient country shaped China's currency swap arrangements decision. (Lin et al. 2016; Cohen 2017). Ultimately, political and diplomatic factors must be considered, especially in international monetary policy, because monetary cooperation is fundamental to address potential economic and financial crises (Eichengreen 1987; Borio et al. 2008).

Ultimately, I will depart from the current literature on currency swap lines which focuses mainly on the economic effects of such policies or the determinant factors that lead central banks to choose a recipient central bank over another. I seek to extend the incipient literature on the intersection of monetary matters and national security by theorizing how central banks in different positions in the hierarchy of currencies will differ their swap lines policies to ascent in the hierarchy; therefore, enhancing their state capability to spend on the military. In this research, I will place the use of currency swap lines under the perspective of national security and domestic politics to analyze how a monetary hegemon central bank (Federal Reserve) and a challenging power central bank (People's Bank of China) use swap lines to achieve their security objectives and how domestic political disputes can constrain the effectiveness of states objectives.

II. Theory

In this thesis, I seek to explain two questions: why do countries have different currency swap policies? What constraints the effectiveness of their currency swap policies towards their monetary hegemony objective? To answer those questions, I develop a theoretical framework in which I argue that central banks' swap line policies will differ according to the country's position under the "hierarchy of currencies" and the domestic political constraints over their economic policies.

Ideally, a country that wants to protect or improve its position in the currency hierarchy should extend access to swap lines to most countries that do not pose substantial credit risks. Suppose more countries have access to swap lines. In that case, the swap partners will experience more significant economic and financial integration. They will perceive the reserve currency issuer as a reliable partner, which will make them increasingly confident in using the given reserve currency in international transactions and as reserves.

Despite achieving a reserve currency status being a critical element to strengthening a country's economy and improving its military capabilities and international political leverage, countries face domestic constraints to achieve the top of the hierarchy of currencies, both in democracies and autocracies. The constraints in advancing the use of swap lines are, in both cases, related to the objective of the political incumbents to remain in power.

In democracies, the limitation of extending the provision of currency swap lines is related to such an action representing the provision of an international public good (Kindleberger 1986). As Scott Barrett (2007) argues that "[t]he benefits of supplying global public goods can also be overlooked, or misinterpreted, or neglected for reasons of incompetence or ideology" (11). In the case of extending swap line provisions, I argue that democratic political leaders fail to communicate the benefits of such measures adequately to constituents. The communication ineffectiveness is related to the complexity of the topic, which makes electors incapable of fully understanding the effects of this policy (Somin 2010). On the contrary, electors will not act according to their self-interest by incentivizing swap lines to multiple countries. After all, as Caplan (2008) demonstrates, the American electorate, at least, distrusts foreigners. In that sense, voters will comprehend swap lines as instruments used to "bailout" foreign countries instead of fulfilling national interests.

In the case that a central bank in a democracy expands swap facilities to a wide variety of countries in sizeable volumes or if one of the swap operations resulted in a loss to the monetary authority, the media, politicians, and many citizens would explore the situation to question that legitimacy of such a policy. Since a high reputation is essential to safeguard greater institutional independence from political interference and gain greater credibility over the conduct of monetary policy, I expect central bankers to avoid enacting policies that could result in sizable critiques from public opinion. Consequently, I would anticipate democracies to establish currency swap lines agreements only with countries that are pivotal to the stability of the global economy, which is necessary to preserve or enhance the currency status in the hierarchy of currencies. Otherwise, political and bureaucratic incumbents could face political backlash and not achieve their objective of remaining in power.

An illustration of the domestic political backlash against swap lines is the numerous debates in the U.S. Congress in the aftermath of the Great Financial Crisis. One of the most vocal critics of Fed swap policies was then-congressmen Ron Paul (R., Texas). For instance, one of Mr. Paul's bills to increase the transparency and accountability of the Fed's policies got approved in the House with a large margin (327-98 vote) in 2012 (Moody 2012). The Senate later rejected the bill. Nevertheless, there is an ongoing discussion in U.S. Congress regarding Fed's relations with foreign central banks. In a hearing in March 2012, Mr. Paul characterized the U.S. swap lines to the ECB as a "bailout of the European monetary system" (Paul 2012). Recently, in 2021, Senator Rand Paul (R., Kentucky), son of Ron Paul, reintroduced the so-called "Audit the Fed" bill, which includes the audit of the Fed's transactions with foreign central banks (Paul 2021). These recurrent congressional disputes regarding the Fed's policies demonstrate how central banks in democracies continuously face public scrutiny over their actions.

In autocracies, the constraints that the political leadership faces are different. After all, financial openness, and economic liberalization, which are critical elements for achieving reserve currency status, can also represent a threat to the capability of autocrats to remain in power. Freeman and Quinn (2012) show that financially integrated autocracies are more likely to democratize than financially closed autocracies. This happens because the elites in autocracies gain a greater bargaining position over tax rates when diversifying their assets to overseas investments. As a result, they became less worried that the rise of the democratic regime would impose confiscatory taxes on them. However, that is not the only reason authoritarian states do not want to give up substantial control over their economies.

The two primary instruments that authoritarian leaders can use to remain in power are state coercion and the preservation of support from the coalition that sustains their position in power (Desai et al. 2009; Escriba-Folch 2013). In that sense, financial openness and liberalization represent a weakening in the two main instruments autocrats use to remain in power. Without significant control over the economy, authoritarian governments can neither manage the economy in favor of the winning coalition nor use economic policy and financial legislation to coerce citizens and enterprises that are not following the government's demands or expectations. Consequently, I do not expect authoritarian leaders to readily promote free capital flows and develop highly liquid capital markets. As an illustration, in figure 3, I summarize the argument regarding the domestic constraints that democracies and autocracies face for achieving their objectives of rising in the hierarchy of currencies.

Figure 3. Domestic Constraints on Effective International Monetary Policy

	Regime Type	
	Autocracy	**Democracy**
Leadership Objective	Remain in power	Remain in Power
Mechanisms to Remain in Power	Winning coalition support + State coercion	Electoral support
Domestic Constraints	Economic openness restraints the use of mechanisms to remain in power	International lender of last resort role may result in political backlash
International Monetary Policy Limitation	Free capital flows and liquid capital markets are not achieved. The alternative is the use of offshore markets.	Access to currency swap lines becomes limited to core states

III. Research Design

This research will have a qualitative nature. I conduct a comparative analysis of the Federal Reserve and the People's Bank of China's currency swap lines policies to test my theoretical framework. I selected the U.S. and China to comprehend currency swap lines policies from a national security perspective because both countries have the largest economies in the world and are constantly challenging each other's dominance in the international political system. Moreover, the distinct positions of those countries' currencies in the hierarchy facilitate the observation of the policy strategies that each one will adopt to gain or preserve monetary hegemony.

The results and findings chapter of this paper is divided into three sections, and each of those sections will rely on different sources to obtain the results. The first section, which will compare the historical use of currency swap lines by the Fed and the PBOC, will rely on central banks' statements and data on the volume and size of these transactions in different periods.

The second section of the results and findings chapter will analyze the decision-making behavior of the Fed and the PBOC. In the case of the Federal Reserve, I have examined all the FOMC (Federal Open Market Committee) meetings and conference calls transcripts from 1994 to 2016, in which there are comprehensive discussions on currency swap operations. There was a total of 30 transcripts to be analyzed. Since the Fed releases transcripts only five years after the meetings, to analyze the 2017-2021 period, I relied mainly on the analysis of the meeting minutes. Seven meeting minutes comprehensively addressed the use of currency swap lines in this period. For assessing the PBOC currency swap lines, I did not have access to meetings transcripts and minutes because the PBOC does not release those documents to the public. Most of my analysis relied on the PBOC annual publication of the "RMB Internationalization Report" from 2009 to 2021. Moreover, I also based my analysis on reports and PBOC officials' statements and interviews published on PBOC and BIS (Bank of International Settlements) websites. In sum, the examination of those documents aims to comprehend central bankers' justifications and ponderations in their international monetary decisions.

In the third section, I compare the countries that are recipients of U.S. and China currency swap arrangements. I use data from the Council on Foreign Relations, World Bank, IMF, Heritage Foundation, and The Economist Intelligence Unit.

IV. Results and Findings

- *When the Fed and the PBOC Establish Bilateral Currency Swap Lines?*

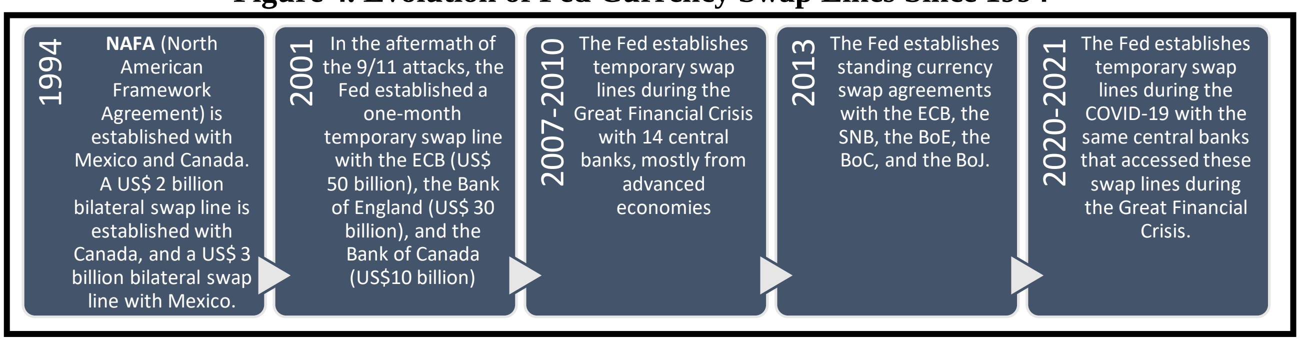
Central bank swap arrangements date back to the early-1960s when the Federal Reserve created a network of swaps with other central banks, with the primary objective of defending exchange rate parities (Cooper 2008, 90). However, after the fall of the gold-exchange standard in the 1970s, this type of instrument started to be less used. In the 1990s, when significant financial crises began to erupt, currency swap lines regained relevance. After all, the global financial integration that the world economy started to experience in the 1980s made countries more susceptible to suffering domestic impacts from external crises. However, financial stability is not the single reason for using swap lines as a monetary cooperation method. Countries can also appeal to this instrument to raise the status of their currency. If a government seeks to internationalize its domestic currency, swap lines are an attractive instrument since they can facilitate bilateral trade and investment by reducing the exchange rate risks.[1]

Since the dollar is already the primary global reserve currency, the United States does not need to use swap lines to expand the international use of its currency. As the monetary hegemon,

[1] When the swap line matures, the exact exchange rate of the first transaction is used in the final settlement. Therefore, central banks eliminate the exchange rate risks.

the United States is interested in preserving the stability of the global economy and financial system; so it does not lose its centrality in the global economy. The analysis of the periods in which the United States has settled currency swap lines reveals that swap agreements coincide with periods of financial instability. In figure 4, it is possible to observe that the Fed established swap agreements in periods of great financial turmoil like the Mexican Peso Crisis (1994), the 9/11 terrorist attacks (2001), the Great Financial Crisis (2007-2010), the Euro Crisis (2013), and the COVID-19 pandemic (2020-2021). Ultimately, the coincidence of swap lines with significant events that disrupted financial markets and economic activity demonstrates that the Fed uses swap lines to fulfill the role of an international lender of last resort, which is fundamental to sustaining the current international monetary system, which is centered in the dollar.

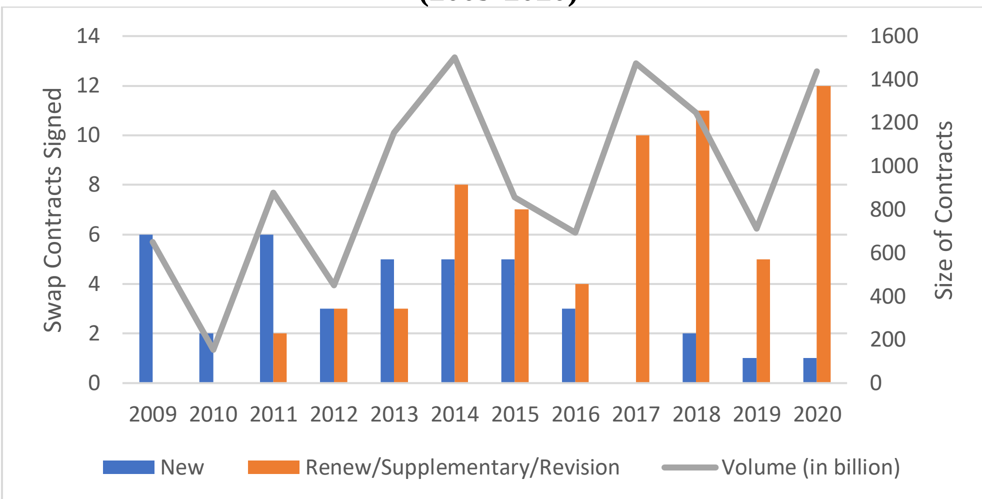
Figure 4. Evolution of Fed Currency Swap Lines Since 1994



Source: Federal Reserve

Differently, China – whose currency still holds a small share in foreign exchange reserves of central banks and small usage in international financial and commercial transactions – does not restrict the settlement of currency swap lines with other central banks in periods of crisis. Indeed, China began to establish such arrangements during the Great Financial Crisis. But, in distinction from the United States, it offered these swap lines to countries with little systematic importance to the global economy. Figure 5, for instance, which displays the number and volume of bilateral currency swap contracts settled each year by the PBOC, demonstrates that it is increasingly and continually cooperating with other central banks to accomplish its strategy of enhancing the status of its currency.

Figure 5. Number and Volume of Currency Swap Agreements Established by the PBOC (2009-2020)



Source: 2021 RMB Internationalization Report

- *How the Fed and the PBOC Justify their Currency Swap Lines Agreements?*

- Federal Reserve

When I analyzed the transcripts and minutes of the FOMC meetings and conference calls, I noticed that swap lines gained space in the discussion between the Committee members during economic and financial stress periods. Since the fall of the gold exchange standard in the 1970s, the Fed established currency swap lines with other central banks in periods of global financial instability. Therefore, it seems reasonable to conclude that currency swap lines are essentially a tool used by the Federal Reserve to fulfill the global liquidity demand, preserve the stability of the international monetary system, and preserve the role of the dollar as a global reserve currency in periods of crisis.

Such a perception is corroborated by the analysis of Federal Reserve's documents that publicize the rationale for establishing these swap lines. Those documents emphasize the importance of currency swap lines as an essential tool to minimize the effects of the global crisis on the U.S. economy and maintain the stability of the international monetary system. For instance, at the March 22, 1994, FOMC meeting, there was a lengthy discussion about the benefits and risks of establishing a swap line with Mexico. Several FOMC members expressed concerns about establishing swap lines with Mexico based on the Fed's legitimacy in conducting such international operations and the credit risk involved in the transaction. Nevertheless, the prevailed opinion was from the then-President of the New York Fed, Mr. William J. McDonough, who argued that:

> "I think that one of the functions of the Federal Reserve is to seek monetary stability in a broader framework than just the American economy itself because of the obvious interlinkages of world markets […] I think that has a great deal to do with why we created swap lines with the major trading partners of the United States and countries that in the past have been a very important part of the world's interlinked financial system. Mexico, because of a very much better performance over the last twelve years, has now reached a stage where its economic performance seems to me to justify being included as a major partner of the United States and the other participants in the world economy. It also is a country, being on our border, in which serious financial instability would have a very definite possibility of spreading across the border and creating problems in our own markets" (*Meeting of the Federal Open Market Committee March 22, 1994, 5*).

Mr. McDonough explicitly emphasizes the necessity of establishing currency swap lines with Mexico because financial turmoil in Mexico could have spillover effects on the U.S. and global economy, given the significant relevance of the Mexican economy to the world. The issue of financial instability is the foremost justification for the Federal Reserve establishing currency swap lines. In a 2005 Fed publication, it is highlighted that the currency swap arrangements conducted in the aftermath of the September 11th attacks seek to "facilitate the settlement of [foreign financial institutions] dollar obligations and to guard against possible disruptions to the global payments system" (*The Federal Reserve System: Purposes & Functions* 2005, 56).

Similar justifications are observed during the Great Financial Crisis and the Covid-19 Crisis. In December 2007, in the first stages of the financial crisis, Nathan Sheets, one of the FOMC directors, defended the establishment of swap lines with the European Central Bank (ECB) and the Swiss National Bank (SNB) to preserve the stability of U.S. financial markets and spur confidence over economic agents. He claimed that:

> "This temporary arrangement with the ECB is proposed to allow dollar funding problems now faced by European banks, particularly at terms longer than overnight, to be addressed more directly by their home central bank. Improved conditions in European dollar trading would guard against the spillover of volatility in such trading to New York trading and could help reduce term funding pressures in U.S. markets. In addition, these measures may help address the difficulties in the foreign exchange swap market, which Bill has discussed. Establishment of this liquidity swap line, along with the TAF, could have positive confidence effects" (*Conference Call of the Federal Open Market Committee on December 6, 2007*, 7).

During the COVID-19 pandemic – the latest event that caused substantial economic and financial instability – the Fed defended the extension of currency swap lines stating that "[t]he [swap lines] extension would benefit the U.S. economy by helping forestall potential pressures in offshore dollar funding markets that could spill over to U.S. financial conditions while much of the global economy remains on an uncertain recovery path from the pandemic" (*Minutes of the Federal Open Market Committee June 15–16, 2021*, 5). Ultimately, the recurrent vindication of establishing currency swap arrangements is based on the stability of the global and domestic financial systems. On the one hand, this type of justification can appeal to the U.S. electorate and politicians to reiterate that the Fed is acting according to the country's interests. On the other hand, the focus on preserving the stability of the international monetary system is vital to sustaining the dollar hegemony as a reserve currency. After all, as Kindleberger and Aliber (2011) describe, "the world depends on U.S. leadership for lack of a better alternative" of an international lender of last resort (256). In that sense, the Fed swap lines became a critical tool for safeguarding the trust of foreign economic agents in the dollar and, thus, guaranteeing the dollar's status as the primary reserve currency.

Another recurrent topic of discussion among FOMC officials about the use of swap lines regards the credit risk of these operations. In essence, currency swap lines with advanced economies have low credit risk since the major central banks in the world tend to have sizable foreign exchange reserves. The swap partners could use the reserves to fulfill their international obligations. Yet, the risk of any financial transaction is never null. Consequently, Fed officials are generally attentive to the risks that such operations impose, especially because swap lines are not instruments that have the focus on managing the domestic economy, which is the Fed's principal source of attention. There is an understandable legitimacy concern that if some of these swap lines result in losses to the Federal Reserve, the institution can become the target of public scrutiny, which would damage its credibility.

In the FOMC's first vote for establishing a currency swap agreement with the ECB, one of the committee members, Mr. William Poole, voted against the swap line agreement. In the meeting, he claimed that swap lines with the ECB were unnecessary. Moreover, he underscored his concern that such type of operation may appear to economic agents as a "coordinated intervention in the foreign exchange market" instead of its actual objective of being a source of dollar liquidity for financial institutions overseas (*Meeting of the Federal Open Market Committee on December 11, 2007,* 13). Despite Mr. Poole being outvoted, the Committee members kept discussing the risks and necessity of establishing swap lines in future meetings.

When FOMC officials first discussed the establishment of currency swap lines with emerging market economies in late-2008, Mr. Nathan Sheets acknowledged the credit risk of these transactions. However, he argued that swap lines with Mexico, Brazil, South Korea, and Singapore were recommended because "[…] given the large reserve holdings of these countries, their prudent policies, the weight they place on good relations with us, and the safeguards built into the swap agreements, we judge the risk to Federal Reserve resources to be very low" (*Meeting of the Federal Open Market Committee on October 28–29, 2008,* 11). Then-President of the New York Fed, Timothy F. Geithner, explained in the same meeting that these emerging market economies central banks held sizeable dollar reserves and a significant part of these resources was deposited in accounts at the New York Fed. Therefore, the credit risk was negligible. According to Geithner:

> "If they defaulted on their piece of the swap and the falling value of their currency left us with some exposure, we would have the ability to take assets from their accounts to cover any loss. So it's better than the fact that this is a sovereign credit and it is better than the fact that we have an asset on the other side of the swap, because they hold substantial foreign exchange reserves with us. The way to think about this is just as a mechanism to help them transform the composition of their dollar reserves in a way that might be more effective in responding to lender-of-last-resort needs in dollars, rather than having to sell Treasuries or agencies into the market in a period of panic or distress to meet that cash need. I meant it as a confirming question" (*Meeting of the Federal Open Market Committee on October 28–29, 2008,* 20).

In 2009, when the Committee was designing the rules for establishing standing currency swap lines, only the ECB, the SNB, the Bank of Japan, and the Bank of England received such a privilege. The justification for limiting the access of a few central banks to standing currency swap agreements was based on credit risk and minimizing moral hazard concerns. Mr. Nathan Sheets claimed that:

> "We propose that these lines be structured broadly—as the temporary lines have been—with short-maturity draws and safeguards to ensure that the credit risk to the Federal Reserve is nil. In addition, the pricing structure for the swap lines would be negotiated

> with an eye toward mitigating moral hazard by providing funds to institutions at a rate that is attractive during times of stress but not attractive during normal times" (*Meeting of the Federal Open Market Committee on November 3–4, 2009*, 16).

Fundamentally, the worries regarding the credit risks of currency swaps are a genuine concern of a monetary institution in a democratic country like the United States. After all, the Federal Reserve has a high degree of independence to enhance the credibility of its actions. Nonetheless, their credibility also relies on the accountability of their actions. Considering that the role of an international lender of last resort is not well established in the legal framework (Perry 2020), Fed officials need to guarantee the low credit risk of these operations to avoid political and legal backlash against themselves. As expected from our theoretical framework, the Federal Reserve will limit the number of currency swap counterparts to avoid domestic political backlash. In that sense, credit risk will be a fundamental component in defining which central banks the Fed can establish swap lines to guarantee the stability of the global economy while avoiding incurring losses.

The issue of credit risk also reverberates over the issue of the Fed constituting currency swap lines with emerging market economies. After all, the Fed faces a dilemma in setting swap lines with these countries. Ideally, as a strategy to preserve the dollar's position as a global reserve currency, the Fed should extend currency swap lines to the most relevant economies, including emerging and developing markets. Such a policy path would make the dollar an even more reliable source for foreign market agents to prioritize the use of dollars in invoices, commercial and financial transactions, and as a reserve currency. However, the worries about the credit risks involved in these transactions refrain the Fed from extending swap lines to emerging markets, as demonstrated previously. Two particular FOMC meetings highlight this dilemma faced by Fed officials.

In a meeting in October 2008, Fed officials discussed for the first time the establishment of temporary currency swap lines with emerging market economies' central banks, which were restricted to Brazil, Mexico, Singapore, and South Korea. In this meeting, two main questions permeated the discussion of the swap agreements with emerging economies: (1) why those countries were chosen? (2) how to mitigate the credit risk?

For the second question, we have already assessed Mr. Geithner's explanation for the reasoning why those four countries did not impose great risks for the Federal Reserve experiencing losses in their swap agreements. Yet, it is necessary to note that it was even proposed the establishment of repos (repurchase agreements) instead of currency swap lines because it would reduce the credit risk (*Meeting of the Federal Open Market Committee on October 28–29, 2008*, 28).[2] Thus, demonstrating that Fed officials were continuously looking for potential alternatives to avoid losses.

To justify the reasons why the Fed would only cooperate with Brazil, Mexico, Singapore, and South Korea, Nathan Sheets, an FOMC member, set the three fundamental reasons for establishing swap lines with these four countries; for him:

> "We see the case for these swap lines as resting on three important observations. First, each of these economies has significant economic and financial mass. Mexico, Brazil, and Korea are all large economies with GDP of around $1 trillion, and Singapore is a major financial center. Given the structural interconnectedness of the global economy and the financial fragilities that now prevail, a further intensification of stresses in one or more of these countries could trigger unwelcome spillovers for both the U.S. economy and the international economy more generally. Our interdependencies with Mexico are particularly pronounced. Second, these economies have generally pursued prudent policies in recent years, resulting in low inflation and roughly balanced current account

[2] Repos differ from currency swap lines in the sense that in repos contracts, the seller sells the asset or security with an agreement to buy the asset or security back afterward. In a swap contract, both parties are actually exchanging financial instruments.

> and fiscal positions or, in the case of Singapore, sizable surpluses. Accordingly, the stresses that these countries are feeling seem largely to reflect financial contagion effects from the advanced economies, including sharp reductions in risk appetite, rapid deleveraging by global investors, and a drying up of liquidity in dollar funding markets. Third, there is good reason to believe that swap lines with the Federal Reserve would be helpful in defusing the economic and financial pressures that they now face" (*Meeting of the Federal Open Market Committee on October 28–29, 2008*, 10).

Basically, Mr. Sheets was demonstrating that under a globalized economy and integrated financial system, relevant economies, despite their lower development status, should be supported to maintain the stability of the global economy and monetary system. That is why Sheets emphasizes either the economic size or the relevance for international financial to ponder the possibility of establishing swap lines with emerging economies. Moreover, the author characterizes the recent economic policies of those countries as "prudent" to highlight the low risk that such a transaction imposes on the Fed.

Unsurprisingly, the selection of these four countries was not only based on technical issues. There were political and diplomatic implications in restricting the access for currency swap lines only to Brazil, Mexico, Singapore, and South Korea. Then-President of the Federal Reserve, Ben Bernanke, said that:

> "[W]ith respect to the choice of four countries that Nathan proposed—as he mentioned, we have talked to the Treasury and the State Department. I spoke to Secretaries Paulson and Rice about this. There was an interesting confluence of agreement that, if you are going to do this, these are the right four countries and we probably shouldn't do more, both from an economic perspective and a diplomatic perspective in the sense that these are the countries that among the emerging markets are the most important from a financial and economic point of view" (*Meeting of the Federal Open Market Committee on October 28–29, 2008*, 16).

To some extent, Mr. Bernanke's statement reflects that the Federal Reserve is not entirely isolated from the political demands of other government branches or organizations. International monetary cooperation ultimately relies on political decisions. The restriction of access to swap lines had essentially two objectives. First, those countries have considerable global economic significance and close political attachment to the United States. Second, the restriction of access to swap lines for those four countries was fundamental to avoid a large number of emerging economies starting to request swap lines from the Fed, which could generate political pressure on the U.S. government (*Meeting of the Federal Open Market Committee on October 28–29, 2008*, 12). Thus, the Fed had to define clear boundaries of swap lines access, so it would not disappoint other U.S. allies. Differently, Aditi Sahasrabuddhe (2019), who also analyzed the selection of Fed currency swap partners, sustains that the selection of these four emerging economies intended "to reinforce alliances in the global economy, as they had gained an increased voice in the global economic governance framework and were aligned with the U.S. within the existing governance framework, and with U.S. preferences for non-reform" (462). Yet, such a perception is still speculative since we do not have access to the discussion between Fed officials and members of the Treasury and the State Department. After all, the acceptance of countries, which were outspoken critics of the international monetary system, could make them more favorable to the U.S. economic interests. Ultimately, what we can actually conclude from this transcript is that Fed officials had a genuine concern in balancing domestic concerns (credit risks) with international monetary stability (expansion of swap lines).

In an FOMC conference call in November 2011, Fed officials brought the expansion of swap lines to emerging market economies again to the discussion. Yet, the Committee members rejected the idea of expanding the swap lines to more countries. At this discussion, then-

President Ben Bernanke sustained the Fed should not do the extension of swap lines to other countries because of the "greater counterparty risk" that such operations with emerging markets involve. Also, he argued that the concerns of emerging markets were "still prospective rather than actual for the most part" (*Conference Call of the Federal Open Market Committee on November 28, 2011*, 18-19). Therefore, this statement underscores the great attention that Fed officials give to the issue of limiting credit risks in such currency swap lines, despite their importance to the U.S. in fulfilling its natural role as an international lender of last resort. Ultimately, this passage again shows the dilemma between domestic and international demands that monetary authorities in democracies face when making policy decisions.

- People's Bank of China

In the case of the Federal Reserve, it is possible to observe that the U.S. monetary authority understood currency swap lines as an essential instrument of international monetary cooperation to guarantee domestic and global financial stability. Yet, Fed officials limited the use of such devices to minimize the credit risks of such operations since potential losses faced by the Fed could result in political and legal backlash, typical of democratic countries. China's currency swap lines policy, however, presents both similarities and differences from those practiced in the United States. On the one hand, the PBOC currency swap lines converge with the Fed because such an instrument is considered an important tool to promote global financial stability. On the other hand, the PBOC does not demonstrate significant concern about the credit risks of such operations. In the reports, interviews, and speeches analyzed, Chinese officials perceive swap lines as an instrument that can enhance China's and its economic partners' development by facilitating bilateral trade and investments. The swap lines are also an instrument to facilitate the development of the Belt and Road Initiative, as well as a tool to reform the international monetary system by emphasizing the importance of reducing the dollar monetary hegemony.[3] Essentially, currency swap lines are one of the primary tools of Chinese economic officials to promote the internationalization of the renminbi.

International financial stability is an objective of both the U.S. and Chinese monetary authorities. After all, being both the two largest economies in the world, it is in their utmost interest that the global economy is stable so they can also prosper. However, differently from the Federal Reserve, PBOC officials do not understand that the current international monetary system, which is centered on the dollar, is being helpful to all countries in the world. In fact, in a 2009 essay, the then-President of the PBOC, Mr. Zhou Xiaochuan, defended a comprehensive reform of the international monetary system. Xiaochuan claimed that the international monetary system should gradually evolve by developing a supranational currency and central bank. Mr. Xiaochuan identified that central banks of reserve currency-issuing countries face a dilemma between fulfilling their domestic and international policy demands; for him:

> "Issuing countries of reserve currencies are constantly confronted with the dilemma between achieving their domestic monetary policy goals and meeting other countries' demand for reserve currencies. On the one hand, the monetary authorities cannot simply focus on domestic goals without carrying out their international responsibilities; on the other hand, they cannot pursue different domestic and international objectives at the same time. They may either fail to adequately meet the demand of a growing global economy for liquidity as they try to ease inflation pressures at home, or create excess liquidity in the global markets by overly stimulating domestic demand" (Xiaochuan, 2009)

Despite defending the replacement of the dollar with a supranational currency instead of emphasizing the renminbi as a replacement for the dollar, the author acknowledges that such a process would be complex. Moreover, it is critical to realize that despite the extraordinary

[3] The Belt and Road Initiative is an infrastructure program developed by the Chinese government, which seeks to modernize the infrastructure of Asia, Europe, and Africa to promote the economic, political, and cultural integration between the countries of these regions.

growth rates that China was experiencing at the time, the renminbi was still not a currency that could challenge the dollar hegemony. Therefore, Mr. Xiaochuan's essay should be interpreted as a symbol of global discontent with the dollar. It stresses the necessity to reduce the dollar's influence on the global economy.

In subsequent years after the publication of Mr. Xiaochuan's essay, the international monetary system did not experience significant changes. However, China started to promote the internationalization of its currency actively. Bilateral currency swap agreements were one of the primary instruments to spur the use of the renminbi internationally. Since the strategy of China is not constrained to solely maintaining the stability of the global financial system, the PBOC uses swap lines without taking great precautions regarding the credit risks of such operations. In fact, in a 2009 monetary policy report, in the incipient phases of the renminbi internationalization strategy, it was stated that:

> "As a responsible member of the international community, China has called for trade and investment cooperation at the level of the real economy, more trade financing cooperation, and efforts to promote the relevant reform to reshape the international financial order and to the best of its ability has also joined international efforts for crisis assistance. The PBC implemented these policies, provided fund assistance in various forms, and made commitments for assistance, contributing to regional economic and financial stability and international cooperation in crisis response" (*China Monetary Policy Report Quarter One, 2009,* 16).

Ultimately, such a passage synthesizes the nature of future statements from Chinese monetary authorities who, for instance, characterize currency swap lines as an instrument for financial stability and economic development. As an illustration, in the "2021 RMB Internalization Report," it is claimed that "the PBC will steadily promote bilateral local currency swap, optimize the framework of local currency swap, and make the swap play its role in supporting the development of the offshore RMB market and promoting trade and investment facilitation" (38). Ultimately, promoting trade and investments is usually not considered under an international monetary cooperation framework. Indeed, swap lines can foment bilateral investments and trade by reducing the exchange risks and costs of using the dollar for these transactions. Yet, the main objective of swap lines is to provide liquidity for foreign financial institutions in periods of financial turmoil.

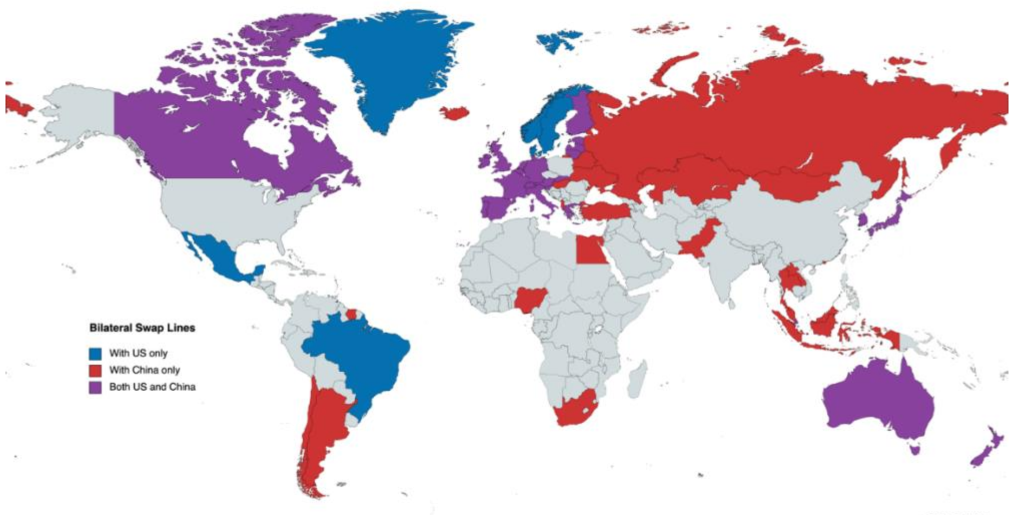
The lack of domestic political constraint that Chinese authorities face allows China to achieve this "dual mandate" of swap lines – both as an instrument of financial stability and economic development. The Chinese appeal to bilateral swap arrangements as a tool for development allows China to gain political and economic leverage, especially over developing economies. Inclusively, China uses its Belt and Road Initiative program to promote the renminbi's internationalization. In a 2017 speech, a PBOC official argued that swap lines were being established with countries participating in the Belt and Road Initiative "to reduce the reliance on major currency such as the US dollar," promoting foreign currency use and reducing exchange rate risks (PBOC 2017).

In sum, China uses bilateral currency swap arrangements as part of its strategy to internationalize the renminbi and rise in the hierarchy of currencies. Instead of justifying its swap line action in preserving the stability of global finance as the Fed does, the PBOC frames currency swap lines as a mechanism to stimulate economic development by reducing costs and risks of international trade and investment; thus, enhancing the attractiveness of the renminbi to other countries, especially those with a lower development status.

- *Who receives currency swap lines from the Fed and the PBOC?*

When a 2020 map of the Fed's and PBOC's bilateral currency swap arrangements is displayed, the distinct approaches that each country is tanking for enhancing or preserving their currencies' status in the international monetary system becomes evident. In figure 6, the countries colored in purple are the countries that have established swap agreements with both the Fed and the PBOC. It is noteworthy that all these central banks represent developed regions of the world and, therefore, are critical elements for the stability of the global economy and financial systems. Ultimately, it is not surprising that both the PBOC and the Fed cooperate with the central banks of the Canada, Australia, New Zealand, South Korea, Japan, Euro Zone, and Switzerland. Together, the countries under these central banks' jurisdictions corresponded to approximately 31% of the global economy in 2019.[4] Moreover, all these central banks' currencies have reserve status, except South Korea, Singapore, and New Zealand.[5]

Figure 6. U.S. and China Bilateral Swap Lines in 2020



Source: International Monetary Fund

For the United States, cooperating with the central banks of these countries is critical to the country sustaining the dominance of the dollar at the top of the international monetary system. The dollar centrality for the monetary system relies on the Fed playing the international lender of last resort role. Suppose that in periods of financial and economic disruption, the Fed does not act to safeguard the stability of the global economy. In that case, the Fed's inaction can

[4] Data from the World Bank.
[5] Data from the Currency Composition of Official Foreign Exchange Reserves (COFER) by the IMF.

jeopardize the dollar status and the U.S. economy itself. After all, the contemporary global economy is characterized by its high level of interdependency. Therefore, financial and economic disruptions in a relevant country can create a “domino effect” (Markwat et al. 2009; Brunnermeier & Oehmke, 2013). Such a crisis could trigger a loss of confidence in the monetary system, thus compromising the use of the dollar as a reserve currency and an international means of payment settlement. Therefore, it is in the utmost interest of the United States to cooperate, at least, with the economies strategic to the global economy’s stability. The only countries that the United States cooperated with, but not China, were countries that either had a significant regional economic role for the United States or were under the American political sphere of influence. Mexico, Brazil, Denmark, Norway, and Sweden are all longstanding allies of the United States and important economic actors in their respective continents.

For China, whose currency is still not pivotal for the stability of the international monetary system, cooperation with central banks of both developed and developing countries have the objective of increasing the renminbi use for foreign exchange reserves, trade settlements, and safeguarding the financial flows of offshore renminbi centers. Developed countries benefit from those swap lines to prevent possible disruptions in financial and commercial transactions with China. Developing countries can have an additional benefit from the swap lines of China because they can expand the size of their foreign exchange reserves, thus, improving the robustness of their financial statements. Since the primary goal is to boost the use of the renminbi instead of promoting global financial stability, China also cooperates with less relevant economies and even bears the risks of establishing swap lines with countries under macroeconomic distress. Basically, the renminbi is a tool for China’s financial statecraft strategy to achieve the position of a political and economic hegemon.

In figure 7, for instance, it is possible to observe that the macroeconomic conditions of the countries with which the United States established swap arrangements are superior to those of China's partners. Only the total reserves to GDP average is higher for the Chinese partner central banks than for American partners in the analyzed variables. The possible explanation for the different behavior analyzed in this variable is that China cooperates with more developing countries than the United States. Traditionally, developing countries face higher capital flows volatility and a more susceptible to macroeconomic crises. Therefore, developing countries' central banks tend to have higher reserves to GDP ratio than developed countries (Pina 2015).

Yet, the United States partners have better macroeconomic conditions in the four other variables analyzed – inflation, unemployment, GDP, and GDP per capita. Such a condition corroborates with this thesis' theoretical model, in which it is expected that democratic countries will restrain monetary cooperation with countries that have a critical position for the stability of the global economy and whose economic conditions are favorable, so the risks of a foreign central bank missing the reserves to repay the Fed is minimal. In the case of authoritarian regimes, foreign partners' selection is not constrained by domestic constituencies. It is ultimately a political decision of the country's leadership.

Figure 7. Swap Line Partners' Macroeconomic Data

2020 Data	Statistics	United States	China
Inflation, GDP deflator (annual %)	Average	1.11	5.97
	Max	5.86	44.86
	Min	-3.61	-2.92
Unemployment, ILO estimate (% of total labor force)	Average	6.25	7.09
	Max	13.67	28.74
	Min	2.97	0.95
GDP, current USD (in billions)	Average	2,181.03	1,092.94
	Max	13,021.21	13,021.21
	Min	210.70	2.88
GDP per capita, current USD	Average	45,004.18	22,766.56
	Max	87,097.04	87,097.04
	Min	6,796.85	1,188.86
Total reserves, including gold, current USD (% of GDP)	Average	30.89	32.17
	Max	144.02	144.02
	Min	3.20	3.20

Sources: World Bank and International Monetary Fund

The *Council on Foreign Relations* Sovereign Risk Tracker also provides valuable information to compare the swap line partners of the United States and China. Figure 8 shows that the United States established swap agreements fundamentally with countries that have low sovereign risk indexes. In contrast, China has established swap lines even with countries that have recently defaulted on their sovereign debt. The difference in behavior between the Fed and PBOC while choosing their currency swap partners reflects the different constraints that each monetary authority face.

In Fed's case, the domestic political constraint imposed by the democratic process is not the only motivator for the Fed selecting countries with stable macroeconomic conditions to establish swap line agreements. In the U.S., swap lines operate in a legal grey area. Collen Baker (2013), in his critique of the current legal framework of the Federal Reserve international swap lines, shows that the current framework has public policy and regulatory issues. One of the problems highlighted by the author is that despite the unlikeness of such events, foreign countries can default on their debt. So, those swap agreements could generate a loss to the Federal Reserve, which would need to be covered by the U.S. taxpayer (631). In that sense, the Fed leadership will probably choose only central banks with robust credibility to establish swap lines to avoid any potential legal liability against them in the case of a default in the swap lines.

The PBOC does not face the same legal and accountability constraints as the Federal Reserve. Accordingly, it has much more flexibility in choosing its swap line partners. Moreover, the political interference from the CCP over the country's monetary authority will facilitate the use of swap lines as a foreign policy instrument. Thus, beyond seeking to internationalize the renminbi, swap lines can serve as a part of the Chinese strategy to raise the country's economic and political leverage over countries facing economic distress (Wu & Wei 2014).

Figure 8. Swap Lines Partners' Sovereign Risk Index

CFR Sovereign Risk Index	United States	China
0	12	20
1-3	2	5
4-6	0	5
7-9	0	0
10	0	1

Sources: Council on Foreign Relations and International Monetary Fund

The economic and political status of the Fed and PBOC partners are also different. In figure 9, we observe that China's currency swap partners' average Democracy Index and Economic Freedom Index are both lower than those of the United States. Again, such a difference can be mostly attributed to different political regimes that reign in the U.S. and China. The electorate constrains institutions in a democracy to act according to popular expectations. In that sense, democracies will cooperate primarily with other democracies (Leeds 1999; Lai &

Reiter 2000). In contrast, China will not face such a constraint. Therefore, we can expect to observe China cooperating with a wide variety of countries with distinct political and economic regimes.

Figure 9. Swap Lines Partners' Economic and Political Status[6]

Index Average	United States	China
The Economist Democracy Index 2020	8.32	6.35
Economic Freedom Index 2021	75.61	67.90

Sources: International Monetary Fund, The Economist, and Heritage Foundation

Ideally, for a country to preserve or enhance its currency status, it would want to establish currency swap lines with several countries while keeping credit risks low. However, the data analyzed in this section demonstrates that the Federal Reserve is highly constrained in choosing its currency swap counterparts. The U.S. democratic regime constraints the Federal Reserve from expanding its swap lines to a wide variety of countries because of the domestic political backlash and legal restrictions that such elements could have on the Fed's leadership and the country's political incumbents. As a result, the data displayed in this section aligns with my theory that the Fed would restrict its swap line operations primarily to countries that have the three following attributions: (1) systematic importance to the global financial system; (2) robust macroeconomic conditions; and (3) some political attachment with the United States. Differently, China does not face domestic political constraints to select its swap line counterparts. Consequently, the PBOC will have greater flexibility in choosing its swap line counterparts. In seeking to internationalize the renminbi, the Chinese leadership will cooperate with developed and developing countries.

[6] Euro Area Economic Freedom Index: calculated as average of member countries scores.
Euro Area Democracy Index: calculated with "Western Europe" score.
No data for Macao in both indexes.
No data for Hong Kong in the Economic Freedom Index

So, it can fulfill its objective to promote the renminbi as a reserve currency, expand its currency use for financial and commercial settlements, and increase its political and economic leverage over countries experiencing economic tribulations. Those are the primary reasons China has more swap lines and cooperates with more emerging and developing economies than the United States.

V. Discussion

By reading the results and findings chapter of this thesis, one might wonder how national security is related to currency swap lines since central bank officials do not explicitly defend their policy decisions based on national security factors? This is indeed a valid question. Central bankers are not executors of their respective countries' national security. However, they have an implicit mandate to enhance their countries' economic policy capabilities, which facilitates the expansion of military spending. After all, if governments did not have relative power concerns, why would they even establish currency swap lines with other economies? Why would they bear the credit risk of such transactions? Central banks extend currency swap lines because they have the utmost goal of improving the economic capabilities of their countries. Since currency swap lines are the primary mechanism for international monetary cooperation, it seems evident that such an instrument is critical for a country to enhance or preserve its currency status. Through the extensions of swap lines, the reserve currency issuer can make foreign central banks rely on their currency as a safe asset. Swap lines are also a means to coordinate monetary policy response among central banks in periods of crisis and restore market confidence. In that way, the reserve currency issuer can mitigate crises and sustain the trust of economic agents in its currency. By achieving monetary hegemony, a country can experience the so-called "exorbitant privileges" that a global reserve currency offers. Countries can even experience high levels of economic growth without having a reserve currency. However, as Oatley (2015) argued, the financial power that the reserve currency status confer allows a country to finance, for instance, its military needs without requiring to reduce social spending or increasing taxation. A high position in the hierarchy of currencies is essential for reducing a country's fiscal constraints. That is why currency swap lines, the primary policy instrument to improve a country's monetary status, are critical to its national security.

In my theoretical framework, I proposed that enhancing a country's position in the hierarchy of currency should dictate the international monetary policy of countries. Yet, I also acknowledged that countries face domestic constraints to accomplish such an objective. Ultimately, the results and findings chapter of this thesis have corroborated my initial proposition.

In the case of the United States, the documents and data analyzed show that Federal Reserve officials understand central bank swap lines as a fundamental tool for guaranteeing the global financial system's stability. The stability of the international economy is critical because a profound crisis could endanger the continuity of the dollar hegemony in the international monetary system. Moreover, global financial stability is necessary to maintain the health of the U.S. economy. However, the Federal Reserve limits the use of swap lines because it has concerns regarding the legitimacy of the Federal Reserve executing this type of operation. Since swap lines operate in a legal "gray area" and the institution's officials fear having their credibility jeopardized by domestic political backlashes, they refrain from expanding such swap lines to countries that have greater credit risk, even though this could enhance even more the dollar's position in the international monetary system.

In this research, I found that since the fall of the Bretton Woods international monetary system in the 1970s, all the Federal Reserve currency swap arrangements coincided with periods of significant financial turmoil. Moreover, the analysis of the Fed's documents highlighted that its officials deemed necessary the use of swap lines to restore financial stability in periods of crisis. Nevertheless, they restrained the access of those instruments to countries that offered limited credit risk to the institutions. Finally, when I analyzed the profile of countries with access to U.S. currency swap lines, I observed that those countries had robust macroeconomic economic conditions and political and economic alignments close to the United States. For instance, the average scores of those countries in "The Economist Democracy Freedom Index" and the "Economic Freedom Index" were lower than those of China's swap counterparts.

In the case of China, a different policy behavior is observed. Like the United States, Chinese officials frame currency swap lines as an essential policy instrument to guarantee the stability of the international monetary system. Yet, China's swap policies are also portrayed as an instrument to foment economic development by eliminating the exchange rate risks in bilateral trade and investment transactions. Thus, China presents its swap lines as part of a necessary evolution of the international system, which should benefit both developing and advanced economies. Furthermore, swap lines are portrayed as a part of the renminbi internationalization strategy. Ultimately, it is not surprising that China's swap lines are not implemented only in periods of crisis like the U.S. does. I observed a continuous and increasing number of swap contracts being established with other central banks since 2008. Moreover, China does not restrain the access of swap lines to countries with robust macroeconomic conditions like the United States. Credit risk is not a concern because the renminbi's internationalization raises the Chinese political and economic influence over developing countries.

As we have seen, both Fed and PBOC officials want to enhance or preserve their position in the hierarchy of currencies. What impedes them from implementing more effective policies is their domestic political constraint. It would be reasonable for the United States to facilitate the access of more countries to currency swap lines to enhance the dollar reliability and consolidate its position as an international lender of last resort. Yet, the current democratic process impedes such expansion from occurring.

The democratic scrutiny over Fed's international monetary policy, however, could be eased with new legislation and an improvement in Fed's communication. Firstly, the United States Congress should pass legislation clearly stating Fed's authority over international monetary cooperation and emphasizing as one of the attributions of the Federal Reserve the preservation of the dollar status vis-à-vis other currencies. Such a clear statement would give the necessary legitimacy to Fed officials to establish policies to increase the international use of dollars and act as an international lender of last resort. Moreover, Fed officials should constantly publicize their action in international monetary cooperation and highlight the low risks that such operations impose on the Federal Reserve and how it benefits the U.S. economically and politically. Such a strategy could convince the public and politicians to support the Fed's mission of providing a global public good: dollar liquidity.

In contrast, Chinese officials will have more difficulties raising the renminbi's status. Although China has a much more comprehensive monetary cooperation policy than the United States, the renminbi will only be able to challenge the dollar hegemony if China opens its economy and develops its financial markets. A currency internationalization strategy that does not include the establishment of free capital flows and liquid capital markets will fail. China's "one currency, two markets" strategy, as described by Edwin L. -C. Lai (2021) is still far from being an ideal policy for China. Therefore, the renminbi's internationalization success will only happen with a transformation in the Chinese leadership mentality. Deng Xiaoping has shown that the Chinese Communist Party was able to reform and allow some degree of economic liberalization. China's economic growth record shows that liberalization has paid off in the past four decades. However, the increasingly authoritarian nature of Xi Jinping's regime will probably not allow an economic reform that reduces the government's ability to manage the economy. Thus, it is unlikely that we shall see the renminbi impose a credible challenge to the dollar in the following years.

International monetary cooperation is a vast topic, permitting research on this topic to cover many distinct aspects of it. Nonetheless, for this study, I had to restrain the analysis of central bank currency swap lines to the two countries that are more evidently challenging each other in the international political scenario: the United States and China. However, the theoretical framework presented in this thesis is certainly not applicable only to these two countries. It would be interesting to add other relevant central banks to the analysis to verify how their swap policies differ from the United States and China and if they are compatible with this thesis' theoretical framework.

A second limitation of this work was accessing the central bank's documents. In the case of the Federal Reserve, the main issue for this study regards the publication of FOMC meeting transcripts. Currently, the Fed only publishes the FOMC meetings transcripts five years after the meeting. Consequently, it was not possible to assess the actual discussion on currency swap lines during the COVID-19 crisis. Thus, this period analysis relied on meeting minutes, which are much more concise and do not reveal the actual debates between officials. In the case of China, the access to the discussion among PBOC officials is even stricter because the Chinese central bank does not disclose the transcripts of its meetings. So, the PBOC's policy behavior analysis had to rely on speeches, interviews, essays, and policy reports.

VI. Conclusion

Politically, the world is experiencing growing competition between the United States and China. Naturally, this competition is translated to many dimensions of power disputes in military, cultural, and economic affairs. Since the domination of the international monetary system reduces the limitations for a country executing its fiscal and monetary policies, it is natural that the power politics mentality will also be present in the realm of international monetary cooperation. After all, when a country rises in the hierarchy of currencies, it gains relative power. My theoretical framework showed that currency swaps policies reflect states' "power politics" objectives. Yet, the effectiveness of such swap lines facilitating the ascension of a country in the hierarchy of currencies will be constrained by domestic political factors.

In the comparative analysis of currency swap policies between the United States and China, the current two major global powers, I observed that the central banks of both countries act to enhance or at least preserve their currencies' status in the international monetary system. For the United States, the Federal Reserve has established swap lines to guarantee the global financial system's stability. However, it restrains access to such dollar liquidity facilities to countries with robust macroeconomic conditions to limit credit risks. This thesis' theory explains that the U.S. swap line policy behavior is aligned with the realist perspective, which understands that states want to maximize their relative power. Ultimately, the U.S. assuming the responsibility to safeguard the global economy's stability is fundamental to preserving the dollar's international status and all the privileges the United States gains with its position. However, the limited access to swap lines is also explained by this thesis' theoretical framework, which contends that in democracies, the electorate usually does not support a country's provision of global public goods.

For China, the authoritarian character of the government does not limit the extension of swap lines based on credit risks. In fact, China frames its swap lines as a tool for economic development and to support developing economies in periods of market stress. In that sense, it has established swap lines with advanced and developing economies, including countries that have recently defaulted on their sovereign debt. Nonetheless, the same authoritarian characteristic of the Chinese government also limits the efficacy of swap lines in making the renminbi rise in the hierarchy of currencies because economic reforms that liberalize capital flows and develop liquid capital markets are necessary. However, economic liberalization reduces the government's capacity to intervene in the economy, which jeopardizes its authoritarian power. In that sense, without the Chinese leadership willing to give up some of its power, the renminbi will face difficulties enhancing its status in the hierarchy of currencies.

Certainly, these "currency disputes" are not restrained to the conflicts between the United States and China. Further research should test this thesis' theoretical framework for other advanced and developing economies, especially for currency unions. After all, when there is a union, each country has less influence in shaping the central bank's policy decision. Nonetheless, if the community has a shared political and security interest, the central currency union bank can act according to the proposed theoretical framework. Interviews with central bank officials would also provide valuable information to the studies on the politics of currency swap lines.

Especially for the case of central banks that do not disclose meeting transcripts, interviews could make even more transparent the decision-making process of swap lines agreements.

Bibliography

Aglietta, Michael, and Benoit Mojon. 2010. "Central Banking." Essay. In *The Oxford Handbook of Banking*, edited by Allen N. Berger, Philip Molyneux, and Wilson John O S., 431–52. New York, NY: Oxford University Press.

Allison, Graham T. 2017. *Destined for War: Can America and China Escape Thucydides's Trap?* Boston, MA: Houghton Mifflin Harcourt.

Amatori, Franco, and Andrea Colli, eds. 2019. *The Global Economy: A Concise History*. Abingdon, Oxon: Routledge.

Bahaj, Saleem, and Ricardo A.M.R. Reis. 2018. "Central Bank Swap Lines." *CESifo Working Paper No. 7124*. https://doi.org/10.2139/ssrn.3235226.

Baker, Colleen M. 2013. "The Federal Reserve's Use of International Swap Lines." *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2226708.

Barrett, Scott. 2007. *Why Cooperate?: The Incentive to Supply Global Public Goods*. Oxford, UK: Oxford University Press.

Board of Governors of the Federal Reserve System. 1994. "Meeting of the Federal Open Market Committee March 22, 1994." Washington D.C.: Federal Open Market Committee.

Board of Governors of the Federal Reserve System. 2001. "Federal Reserve Bulletin December 2021." *Federal Reserve Bulletin* 87 (12): 757–92.

Board of Governors of the Federal Reserve System. 2005. "The Federal Reserve System: Purposes & Functions." FRASER. Board of Governors of the Federal Reserve System. June 1, 2005. https://fraser.stlouisfed.org/title/4522.

Board of Governors of the Federal Reserve System. 2007. "Conference Call of the Federal Open Market Committee on December 6, 2007." Washington D.C.: Federal Open Market Committee .

Board of Governors of the Federal Reserve System. 2007. "Meeting of the Federal Open Market Committee on December 11, 2007." Washington D.C.: Federal Open Market Committee.

Board of Governors of the Federal Reserve System. 2008. "Meeting of the Federal Open Market Committee on October 28–29, 2008." Washington D.C.: Federal Open Market Committee.

Board of Governors of the Federal Reserve System. 2009. "Meeting of the Federal Open Market Committee on November 3–4, 2009." Washington D.C.: Federal Open Market Committee.

Board of Governors of the Federal Reserve System. 2011. "Conference Call of the Federal Open Market Committee on November 28, 2011." Washington D.C.: Federal Open Market Committee.

Board of Governors of the Federal Reserve System. 2021. "Minutes of the Federal Open Market Committee June 15–16, 2021." Washington D.C.: Federal Open Market Committee.

Borio, Claudio, and Gianni Toniolo. 2008. "One Hundred and Thirty Years of Central Bank Cooperation: A BIS Persprctive." Essay. In *Past and Future of Central Bank Cooperation*, 16–75. Cambridge, UK: Cambridge University Press.

Borio, Claudio, Gianni Toniolo, and Piet Clement, eds. 2008. *The Past and Future of Central Bank Cooperation*. Cambridge, UK: Cambridge University Press.

Bourgeon, Pauline, and Jérôme Sgard. 2019. "Liquidity Swaps between Central Banks, the IMF, and the Evolution of the International Financial Architecture." *The Oxford Handbook of Institutions of International Economic Governance and Market Regulation*. https://doi.org/10.1093/oxfordhb/9780190900571.013.2.

Broz, J. Lawrence. 2015. "The Politics of Rescuing the World's Financial System: The Federal Reserve as a Global Lender of Last Resort." *The Korean Journal of International Studies* 13 (2): 323–51. https://doi.org/10.14731/kjis.2015.08.13.2.323.

Brunnermeier, Markus K., and Martin Oehmke. 2013. "Bubbles, Financial Crises, and Systemic Risk." *Handbook of the Economics of Finance*, 1221–88. https://doi.org/10.1016/b978-0-44-459406-8.00018-4.

Caplan, Bryan Douglas. 2008. *The Myth of the Rational Voter Why Democracies Choose Bad Policies*. Princeton, NJ: Princeton University Press.

Chandra, Satish, and Rahul Bhonsle. 2015. "National Security: Concept, Measurement and Management." *Strategic Analysis* 39 (4): 337–59. https://doi.org/10.1080/09700161.2015.1047217.

Cohen, Benjamin J. 2013. "Currency and State Power." Essay. In *Back to Basics: State Power in a Contemporary World*, edited by Martha Finnemore and Judith L. Goldstein, 159–76. Oxford, UK: Oxford University Press.

Cohen, Benjamin J. 2014. *A Geografia Do Dinheiro*. São Paulo, SP: Editora Unesp.

Cohen, Benjamin J. 2017. "Renminbi Internationalization: A Conflict of Statecrafts." *Research Paper Chatam House*, March. https://doi.org/10.1142/9789814699051_others06.

Cooper, Richard N. 2008. “Almost a Century of Central Bank Cooperation.” Essay. In *The Past and Future of Central Bank Cooperation*, edited by Claudio Borio, Gianni Toniolo, and Piet Clement, 76–112. Cambridge, UK: Cambridge University Press.

DeRosa, David F. 2009. *Central Banking and Monetary Policy in Emerging-Markets Nations*. Charlottesville, VA: Research Foundation of CFA Institute.

Desai, Raj M., Andres Olofsgard, and Tarik M. Yousef. 2009. “The Logic of Authoritarian Bargains.” *Economics & Politics* 21 (1): 93–125. https://doi.org/10.1111/j.1468-0343.2008.00337.x.

Doshi, Rush. 2021. *The Long Game: China's Grand Strategy and the Displacement of American Order*. New York, NY: Oxford University Press.

Drezner, Daniel D. 2014. “Bucks for the Bang? Assessing the Economic Returns to Military Primacy.” Essay. In *A Dangerous World?: Threat Perception and U.S. National Security*, edited by Christopher A. Preble, John Mueller, and Jon Meyers, 195–207. Washington, DC: Cato Institute.

Duran, Camila V. 2017. “O Prestamista Internacional De Última Instância Para Países Emergentes: Um Contrato De Swap Cambial.” *Revista Tempo Do Mundo* 3 (1): 95–130.

Eichengreen, Barry J. 2013. *Exorbitant Privilege: The Rise and Fall of the Dollar*. Oxford, UK: Oxford University Press.

Eichengreen, Barry, and Masahiro Kawai. 2015. *Renminbi Internationalization: Achievements, Prospects and Challenges*. Washington, DC: Brookings Institution.

Eichengreen, Barry. 1987. *Hegemonic Stability Theories of the International Monetary System*. Washington, DC: Brookings Institution.

Eichengreen, Barry. 2005. “Sterling's Past, Dollar's Future: Historical Perspectives on Reserve Currency Competition.” *NBER Working Paper*. https://doi.org/10.3386/w11336.

Escribà-Folch, Abel. 2013. “Repression, Political Threats, and Survival under Autocracy.” *International Political Science Review* 34 (5): 543–60. https://doi.org/10.1177/0192512113488259.

Fels, Enrico. 2014. “Power Shift? Power in International Relations and the Allegiance of Middle Powers.” Essay. In *Power in the 21st Century: International Security and International Political Economy in a Changing World*, edited by Enrico Fels, Jan-Frederik Kremer, and Katharina Kronenberg, 3–28. Berlin, Germany: Springer.

Freeman, John R., and Dennia P. Quinn. 2012. “The Economic Origins of Democracy Reconsidered.” *American Political Science Review* 106 (1): 58–80. https://doi.org/10.1017/s0003055411000505.

Gallagher, Kevin P. 2016. *The China Triangle: Latin America's China Boom and the Fate of the Washington Consensus*. Oxford, UK: Oxford University Press.

Goldberg, Linda S., Craig Kennedy, and Jason Miu. 2011. "Central Bank Dollar Swap Lines and Overseas Dollar Funding Costs." *FRBNY Economic Policy Review*.

Holmes, Kim R. 2015. "What Is National Security?" Washington, DC: Heritage Foundation.

IMF. n.d. "Currency Composition of Official Foreign Exchange (COFER)." IMF Data. Accessed March 21, 2022. https://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4.

Kindleberger, Charles P. 1986. "International Public Goods Without International Government." *The American Economic Review* 76 (1): 1–13. https://doi.org/10.7551/mitpress/1977.003.0025.

Kindleberger, Charles P., and Robert Z. Aliber. 2011. *Manias, Panics and Crashes: A History of Financial Crises*. 6th ed. New York, NY: Palgrave Macmillan.

Kissinger, Henry. 2012. *On China*. Toronto, Ontario: Penguin Canada.

Lai, Edwin L. C. 2021. *One Currency, Two Markets: China's Attempt to Internationalize the Renminbi*. Cambridge, UK: Cambridge University Press.

Leeds, Brett Ashley. 1999. "Domestic Political Institutions, Credible Commitments, and International Cooperation." *American Journal of Political Science* 43 (4): 979. https://doi.org/10.2307/2991814.

Lin, Zhitao, Wenjie Zhan, and Yin-Wong Cheung. 2016. "China's Bilateral Currency Swap Lines." *China & World Economy* 24 (6): 19–42. https://doi.org/10.1111/cwe.12179.

Lusinyan, Lusine, Shushanik Hakobyan, Andrea Gamba, Yiqun Wu, Neil Meads, Gareth Anderson, Alina Iancu, Ethan Boswell, and Mr.Sakai Ando. 2020. *Reserve Currencies in an Evolving International Monetary System*. Washington, DC: International Monetary Fund.

Markwat, Thijs, Erik Kole, and Dick van Dijk. 2009. "Contagion as a Domino Effect in Global Stock Markets." *Journal of Banking & Finance* 33 (11): 1996–2012. https://doi.org/10.1016/j.jbankfin.2009.05.008.

Mayes, David G., Pierre L. Siklos, and Jan-Egbert Sturm. 2019. *The Oxford Handbook of the Economics of Central Banking*. New York, NY: Oxford University Press.

McBride, James, and Anshu Siripurapu. 2021. "The National Debt Dilemma." Council on Foreign Relations. 2021. https://www.cfr.org/backgrounder/national-debt-dilemma.

Mearsheimer, John J. 1994. “The False Promise of International Institutions.” *International Security* 19 (3): 5–49. https://doi.org/10.2307/2539078.

Mehrling, Perry. 2011. *The New Lombard Street: How the Fed Became the Dealer of Last Resort*. Princeton, NJ: Princeton University Press.

Mehrling, Perry. 2021. “Where's My Swap Line.” *GEGI Working Paper 053*, October.

Miller, Terry, Anthony B. Kim, and James R. Roberts. 2021. “2021 Index of Economic Freedom.” Washington, D.C.: Heritage Foundation.

Moody, Chris. 2012. “Ron Paul's ‘Audit the Fed' Bill Passes the House.” ABC News. July 25, 2012. https://abcnews.go.com/Politics/OTUS/ron-pauls-audit-fed-bill-passes-house/story?id=16855319.

Murau, Steffen, Fabian Pape, and Tobias Pforr. 2021. “The Hierarchy of the Offshore US-Dollar System: On Swap Lines, the FIMA Repo Facility and Special Drawing Rights.” *GEGI Study*, February.

Norrlof, Carla. 2010. *America's Global Advantage: US Hegemony and International Cooperation*. Cambridge, UK: Cambridge University Press.

Nozahie, Naglaa. 2017. “The Treatment of Currency Swaps Between Central Banks: Egypt Experience.” Paris, France: Thirtieth Meeting of the IMF Committee on Balance of Payments Statistics.

Oatley, Thomas H. 2015. *A Political Economy of American Hegemony: Military Buildups, Booms, and Busts*. Cambridge, UK: Cambridge University Press.

Obstfeld, Maurice, and Alan M. Taylor. 2017. “International Monetary Relations: Taking Finance Seriously.” *Journal of Economic Perspectives* 31 (3): 3–28. https://doi.org/10.1257/jep.31.3.3.

Ocampo, José Antonio. 2017. *Resetting the International Monetary (Non)System*. Oxford, UK: Oxford University Press.

Paul, Rand. 2021. “Dr. Rand Paul Reintroduces ‘Audit the Fed’ 2021.” Dr. Rand Paul Reintroduces "Audit the Fed" 2021 | Senator Rand Paul. March 3, 2021. https://www.paul.senate.gov/news/dr-rand-paul-reintroduces-%E2%80%9Caudit-fed%E2%80%9D-2021.

Paul, Ron. 2012. “Opening Statement of Subcommittee Chairman Ron Paul.” Washington: U.S. House Committee on Financial Services.

PBOC. 2009. “China Monetary Policy Report Quarter One, 2009.” Beijing, China: Monetary Policy Analysis Group of the People’s Bank of China.

PBOC. 2017. “Build An Investment and Financing Cooperation System for Belt and Road Initiative Through Consultation and Collaboration.” Pbc.gov.cn. September 19, 2017. http://www.pbc.gov.cn/en/3688110/3688175/3707897/index.html.

PBOC. 2021. “2021 RMB Internationalization Report.” Beijing, China: The People's Bank of China.

Perry, Alexander R. 2020. “The Federal Reserve's Questionable Legal Basis for Foreign Central Bank Liquidity Swaps.” *Columbia Law Review* 120 (3): 729–67.

Pina, Gonçalo. 2015. “The Recent Growth of International Reserves in Developing Economies: A Monetary Perspective.” *Journal of International Money and Finance* 58: 172–90. https://doi.org/10.1016/j.jimonfin.2015.08.009.

Prisching, Manfred. 1995. “The Limited Rationality of Democracy: Schumpeter as the Founder of Irrational Choice Theory.” *Critical Review* 9 (3): 301–24. https://doi.org/10.1080/08913819508443385.

Sahasrabuddhe, Aditi. 2019. “Drawing the Line: The Politics of Federal Currency Swaps in the Global Financial Crisis.” *Review of International Political Economy* 26 (3): 461–89. https://doi.org/10.1080/09692290.2019.1572639.

Somin, Ilya. 2010. “Deliberative Democracy and Political Ignorance.” *Critical Review* 22 (2-3): 253–79. https://doi.org/10.1080/08913811.2010.508635.

Stone, Mark R., W. Christopher Walker, and Yosuke Yasui. 2009. “From Lombard Street to Avenida Paulista: Foreign Exchange Liquidity Easing in Brazil in Response to the Global Shock of 2008-09.” *IMF Working Papers* 09 (259). https://doi.org/10.5089/9781451874051.001.

Triffin, Robert. 1979. *Gold and the Dollar Crisis: Yesterday and Tomorrow*. Princeton, NJ: International Finance Section, Dept. of Economics, Princeton University.

Viotti, Paul R. 2014. *The Dollar and National Security: The Monetary Component of Hard Power*. Stanford, CA: Stanford University Press.

Williams, John H. 1934. “The World's Monetary Dilemma: Internal versus External Monetary Stability.” *Proceedings of the Academy of Political Science* 16 (1): 62. https://doi.org/10.2307/1172395.

Wu, Friedrich, and Koh De Wei. 2014. “From Financial Assets to Financial Statecraft: The Case of China and Emerging Economies of Africa and Latin America.” *Journal of Contemporary China* 23 (89): 781–803. https://doi.org/10.1080/10670564.2014.882533.

Xiaochuan, Zhou. 2009. “Zhou Xiaochuan: Reform the International Monetary System.” Basel, Switzerland: BIS Review 41/2009.