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The United States and China

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The Renminbi and the Dollar: The State of the Reserve Currency Debate

On March 25, 2021, The People's Bank of China, the central bank in Beijing, proposed a set of international rules and suggestions on the role of government digital currencies. The rules, describing suggested protocols on privacy and monitoring, reflect the People's Bank of China's rapid development of a CBDC or central bank digital currency over the past year.[i] These CBDCs, supported by distributed ledger technologies like block-chain, allow for faster and more immediate direct payments. It limits the use of cash in illicit markets, allows the transfer of those in poorer countries to international destinations, and serves as a macroeconomic tool for immediate deployment of cash transfers and government policies. As the People's Bank of China announced its new, national digital currency, American media outlets and think tanks sparked alarm and concerns over the dollar's role as the world's dominant reserve currency. Josh Lipsky of the Atlantic Council think tank emphasized the challenge the Chinese CBDC could pose, arguing that its development "threatens the dollar over the long term" and escalates to a "national-security issue."[ii] Headlines across news outlets highlighted concern in the Biden administration over the People's Bank of China's technological development and the potential decline of the dollar's international role.

The dollar serves as the dominant international reserve currency and allows the United States several important and significant benefits. Global demand for the dollar and US Treasuries allows the American government, consumer, and businesses to receive lower interest rates, permitting larger government deficits and the ability to fund economic programs with more debt. The demand for the dollar is extremely high and international entities cooperate to ensure the dollar remains stable. America has lower exchange rate risk and greater buying power. In part because of the reserve currency status, the US government has the ability to implement effective tariffs or sanctions internationally.[iii] Considering the reliance of the United States on the special privileges conferred to it by the special status of its currency, the displacement of the dollar as the dominant currency would call into question the sustainability of its debt.[iv]

The recent media coverage of the issue reflects the stakes of the reserve currency status. Recent headlines in the wake of the digitization of the yuan imply an almost immediate and impending sense of change.[v] History tells us that reserve currencies always change over time. So what would a world look like where the US dollar loses its reserve currency status and the RMB becomes the dominant currency? US bonds would be a lot less valuable and international holdings of US bonds would turn to Chinese bonds. This would imply a different financial and international landscape. However, a review of economists' opinions calls into question the timeline of the reserve currency switch. Does China have a chance of overtaking the United States Dollar as a global reserve currency and what is the landscape of negotiations between the two countries on this question? The biggest threats from the Chinese Yuan to the supremacy of the US Dollar are both internal and external, namely the digitization of the yuan, China's increasing foreign investment from OBOR initiatives, and America's use of sanctions of government spending. However, it seems very unlikely and improbable that the Chinese Yuan will replace the US Dollar as a reserve currency in the foreseeable future.

Methods

In this paper, we evaluate the initiatives both China and the United States are taking with regards to the reserve currency status. Alongside literature reviews from economics and history research, we interviewed leading economists and politicians on the reserve currency debate today. For our research paper, we interviewed several economists from the Federal Reserve, from the IMF, the World Bank, the US Treasury, and the Goldman Sachs research teams. While our interviews primarily focus on American economists, we also spoke with or watched the presentations of Chinese economists connected to the People's Bank of China or Tsinghua's economic studies. We also conducted interviews with non-economists to find intersections between the broader understanding of this debate with expert opinions.

<u>Section One: A History of How the US Replaced the Sterling</u>

Prior to World War I, 60% of the world trade was invoiced, financed, and settled in pound sterling, even though the US economy was already the world's largest economy in the 1870s.[vi] The substitution of the pound by the dollar as the world's dominant international currency happened very rapidly in the span of a decade from 1914 – 1924.[vii] According to Eichengreen, Mehl and Chitu, two events caused this transition. First, the Federal Reserve Act of 1913 "allowed U.S. banks to deal in instruments of trade credit"[viii] Second, World War II disrupted Britain and British trade much more than the United and US trade.[ix]

With regards to the effect of the Federal Reserve Act of 1913, it is relevant to note that the role and mandate of the Federal Reserve has evolved over time. While the Federal Reserve's mandate today is to maintain maximum employment and stable prices, the Federal Reserve back then "played an active role in fostering the market for trade credit in dollars, in the expectation that this would lead to the use of the dollar in the invoicing and settlement of international trade" after it was allowed to deal in instruments of trade credit in 1913.[x]

According to the chief economist of the IMF Gita Gopinath and Professor Jeremy Stein, the preconditions for a currency to dominate will "depend on the strength of its financial and monetary institutions, the stability of its currency, and the liquidity of its markets [...] however historical efforts to globalize a currency have often started with an emphasis on the domain of international trade"[xi] From the historical example of the US dollar replacing the sterling, we first observe that the path to becoming the dominant global currency often begins with an effort to become the dominant currency in international trade invoicing. In the case of the United States, it involved giving the Federal Reserve the freedom to play an active role in incentivizing other countries to use the dollar in invoicing of international trade. The second observation is that when the shift in the global dominant currency occurs, it tends to happen very quickly.

Section Two: China is Setting Itself Up for Reserve Currency Status

China is setting itself up for reserve currency status through expansive maneuvers in the global marketplace. Through the One Belt One Road initiative, China aims to expand regional and international use of the Yuan as a currency for trade invoicing, infrastructure, and global commerce. Furthermore, China's recent push to digitize the Yuan and encourage use of virtual currency could potentially set the stage for the Yuan to become a preferred currency to rival the US Dollar as a reserve currency. Internationalization of the Chinese Yuan is nearly universally regarded as a necessary first step toward the Yuan's status as a reserve currency, and the combination of increasing foreign investment of OBOR trade and infrastructure initiatives and digitization of Chinese currency act as steps toward internationalization.

Brunnermeier, James, and Landau claim that digital currency will "unbundle" different functions of money: money as a store of value, medium of exchange, and unit of account. Because digital currencies must compete among each other for market share after traditional functions of money become unbundled, different digital money issuers will begin to bundle in "non-traditional" functions with digital currencies such as social networking and data gathering.[xii]

Furthermore, the authors argue that digitization of currencies can provide a path of internationalization of a given currency. The authors describe two methods by which existing currencies can become more international: by becoming a global store of value as a currency of reserve or by increasingly being used for international payments as a currency for exchange.[xiii] The pathway to becoming an international currency through digital networks is not an unreasonable one; the authors describe how Internet-based transactions are "particularly effective at opening new possibilities for trade and proliferating a medium of exchange beyond national borders" and conclude that "digitization may thus serve as a powerful vehicle to internationalize some currencies as media of exchange.[xiv] One way this can concretely play out is that merchants who receive trade invoices in some form of digital currency may be incentivized to continue to issue trade in the same digital currency in order to continue trade with the first party. This offers a potential method by which the Chinese Yuan can become a powerful international currency: using trade invoicing to encourage continued use of a digital currency.

It's worth noting the concept of a "digital currency area" or DCA. Within a DCA, the Chinese Yuan forms a unique medium of exchange that is endogenous to the digital network. Within systems like Alipay and WeChat Pay, the Chinese Yuan is used as the official fiat currency as a unit account and to back the payment instrument but that instrument cannot be used for transactions outside of the DCA.[xv] This is evidenced by the existence of multiple wallets and coextensive DCAs within the greater Chinese market, with barriers that limit interoperability among the different DCAs. This may present a mitigating factor to the expansion and uptake of the digital Yuan; reduced interoperability between a given form of digital currency and even another form backed by the same fiat currency may cause would-be adopters to choose other forms of currency like the US Dollar as a medium of exchange. Whether this substantially affects the US Dollar's and the Chinese Yuan's relative positions as reserve currencies is unclear.

Some authors take a rosy view on the prospects that the Chinese Yuan will become a reserve currency. Eswar and Ye point out that the prerequisite conditions for the Chinese Yuan's internationalization are sustained economic growth, capital account liberation, floating RMB exchange rates, development of domestic financial markets and structures, and robust macroeconomic policy by China.[xvi] As of 2013, China is promoting international use of the Yuan by encouraging trade settlement using the Yuan, easing restrictions on cross-border remittances, allowing the issuance of RMB-denominated "dim-sum" bonds in Hong Kong, permitting banks to set up offshore RMB deposit accounts, and setting up bilateral swap lines with other central banks in local currency.[xvii] While internationalization of the Yuan might be a crucial step on the path toward reserve currency status, Wu and Pan went a step further in conducting an empirical analysis of central bank data of reserves of eight major currencies.[xviii] The result of Wu's and Pan's analysis divides the upcoming RMB internationalization into 2 periods: an initial period of bubble elimination characterized by uncertain international macroeconomic and financial environments and a post-bubble period.[xix] The authors conclude that the two most important determinants for currency internationalization are network externalities and liberalization of capital controls by China.[xx]

Network externalities are a common theme across the literature. Network externalities exist when the value or utility of the Chinese Yuan increases due to an increase in the number of users. Currently, international currencies enjoy a high degree of network externality, and it seems that network externalities are a necessary but not sufficient route to achieving reserve currency status. China's One Belt One Road initiative, coupled with increasing trade invoicing in digital currency, serves to increase the scope of China's DCA and foster network externalities.

Successful internationalization of the RMB would offer China benefits that other countries with highly-internationalized currencies currently possess, such as lower borrowing costs and reduced exchange rate risk. Deeply internationalized currencies are, however, typically associated with open and liberalized economies. As mentioned in Wu and Pan, capital controls on the RMB work negatively against the internationalization of the Chinese Yuan and counteract any expanding currency efforts enacted by China. According to CSIS, "deeply internationalized currencies are … typically associated with open and liberalized economies."[xxi] How has China made recent steps to liberalize the economy and loosen capital controls to incentivize use of the digital Yuan?

According to Cheung and Herrala, China's capital controls have been a staple of the Chinese economy since the Communist Party took power in 1949.[xxii] Through the 80s, China underwent a series of reforms and relative liberalization from a closed, centrally-planned economy into the modern market-driven economy that we recognize today. The continuing capital controls, however, are not a shift away from continuing financial market reform but are a response to capital flight, hot money, and illicit capital flows.[xxiii] The authors argue that recent efforts in the early 2010s to encourage international use of the RMB are actually China's efforts to liberalize the Chinese financial system, citing the PBOC's 10-year plan to promote international usage of the Chinese Yuan and opening up the Chinese capital account.[xxiv] It seems then that China faces a chicken-and-egg problem: Chinese central planning is attempting to liberalize the economy through internationalization of the RMB, while the global economy and Chinese investors are hesitant to invest in the RMB without fewer restrictions on Chinese capital flows.

Thus, it seems that the digital revolution in Chinese currency, coupled with increasing investment in foreign development and trade through OBOR offers a solution to this problem. Internationalization of the currency by expanding the Chinese Yuan DCAs reduces competition among other currencies, while trade invoicing encourages network externalities. Theoretically, capital outflows of the Chinese Yuan are decreased as digital wallets with Chinese Yuan-backed digital currencies gain usage in developing economies and the Sinosphere in general. While it seems unlikely that the PBOC or Chinese central planning would explicitly state their goal to replace the US Dollar as a global reserve currency, it appears very likely that internationalization of the RMB is a first step toward greater competitiveness of the Chinese Yuan.

Section Three: The US is Undermining its Reserve Currency Status in the Long-Run

As China has established practices that promote the internationalization of the RMB, the United States has enacted measures which could eventually jeopardize the dollar's reserve currency status over the long-run. While most economists agree that the dollar does not face any immediate threats of losing reserve currency status, the American and Chinese economists we interviewed suggested that America's overdependence on international sanctions, the overlooked reliance of the Asia-Pacific in ensuring global demand for treasuries and dollars, and the increasing rhetoric suggesting unlimited government spending without costs could eventually undermine the dollar's global role in a distant future.

Sanctions Alienate America's Allies and Adversaries

America's increasing use of sanctions in global negotiations provides an incentive for other countries to eventually seek transactions in different currencies. As an international issuer of dollars, the United States can prevent the transactions of individuals and institutions in international markets. When the United States implements sanctions, it freezes the account of any individual or institution and bars the over 21,000 global banks in the world's financial system from transacting with them.[xxv] Through the SWIFT system, a messaging network for commercial bank money transfers, the United States government can monitor international transactions and penalize those who break American sanctions. These sanctions, increasingly criticized as "dollar weaponization," provide a political incentive for countries to eventually seek an overturn of the dollar hegemony. Previous sanctions have significantly impacted the economic conditions of other countries and their leading officials. American sanctions levied against North Korea and Iran for their growing nuclear programs devastated their economic growth. More recently, the United States implemented sanctions against the coup in Myanmar and blocked the financial assets from military officials to pass through the banking system. In response to the Hong Kong political conflict, the United States levied sanctions against over 250 top Chinese officials. Carrie Lam, one of the CCP's senior officials in Hong Kong, reportedly hoarded stockpiles of cash in her home in case banks refused to service her.[xxvi] The rapid increase of sanction-use in the 21st century introduces long-term risks to America's financial diplomacy.

Several economists we spoke with emphasized how the growing use of American sanctions alienates America's standing in the global stage. Mu Changchun, the Director-General of the Digital Currency Institute of the People's Bank of China, repeatedly noted how the virtual

RMB was designed to protect China's "monetary sovereignty" and limit these global sanctions and weaponization of the dollar in recent forum conversations.[xxvii] In our conversation with financier and economist Fred Hu, he argued that the US government harms the prestige and credibility of it by overabusing the reserve currency status.[xxviii] The "weaponization" to punish actions American disapproves of, Hu argues, even alienates America's own allies. In 2015, Deutsche Bank faced a 258 million dollar fine for continuing to enact business in US sanctioned countries like Iran and Syria. Hu noted how the French bank BNP Paribas faced a fine of over 7 billion euros, how the UK bank HSBC faced 1.9 billion in fines, and how the Switzerland bank Credit Suisse faced 536 million in fines for violating American sanctions. In particular, Hu noted how France's President Hollande was forced to personally implore President Obama to drop the 7 billion fine on BNP Paribas in 2014.[xxix] These sanctions, Hu suggested, undermines the dollar's status and could incentivize allies and adversaries to eventually seek alternatives in the long-run.

Credited as a "cure-all" in foreign policy incentives, sanctions serve as an immediate and effective tool for the United States but deteriorates its international standing. The Treasury's "Specially Designated Nationals and Blocked Persons List" of sanctioned corporations and individuals lists entities from every country in the world. In 2019, the United States implemented 7,967 active sanctions ranging from drug cartel leaders to the entire Islamic Revolutionary Guard Corps. Nations like Iran, North Korea, Syria, Venezuela, and Cuba have all faced severe economic consequences in response to American sanctions. Sanctions allow America to avoid military action while nudging or coercing foreign entities. During nuclear proliferation talks, the threat of sanctions led North Koreans to negotiate with President Trump and led the Iranians to discuss with the Obama administration. Elizabeth Rosenberg, former Treasury Department official, credits 2010 as a turning point. “This is a policy instrument of choice,” Rosenberg says of recent sanction usage, “It feels really muscular.”[xxx] Between 2019 and 2014, the number of American sanctions increased by 132 percent.[xxxi] Despite the harms that sanctions pose and their reliance on the dollar’s hegemony as the dominant reserve currency, America increasingly employs sanctions in foreign policy actions.

Without the dollar’s global reserve currency status, America’s foreign policy toolkit would be notably limited. Benn Steil, director of international economics on the Council of Foreign Relations, credits the overuse of sanctions as “by far the biggest” threat to the dominance of the dollar. He creates an analogy with antibiotics: “Antibiotics can be very powerful against certain types of bacteria, but as you know, if you overuse them on a population, strains of the bacteria develop that are resistant… and that’s exactly what we’re seeing [with sanctions and the dollar] right now.[xxxii]” The harms of the current dynamic continuing were demonstrated in a 2019 War Game simulation hosted by the Harvard IOP. Leading American policy makers such as Larry Summers, Ash Carter, and Eric Rosenbach responded to a simulated game where they needed to craft a response to North Korea’s nuclear development funded with digital yuan. Several participants, given the digital yuan’s power to undermine American sanctions and transact secretly without the Treasury’s interference, determined that it would be more threatening than a warhead.[xxxiii]

As America’s usage of sanctions increased in the 2010s and under President Trump, other countries have enacted measures suggesting an increased appetite for alternative financing options. When President Trump exited the Joint Comprehensive Plan of Action nuclear deal in May and refused to lift international sanctions against Iran, 2018, European allies continued to remain in the agreement despite potential American surveillance and pushback. Speeches by economic leaders in China and Russia increasingly highlight the use of the term "monetary sovereignty," arguing a political and moral right to control over their own financial systems. The Asian Infrastructure Investment Bank, the Eurasian Economic Union, and the New Development Bank established by Brazil, Russia, India, China, and South Africa (BRICS) alongside the establishment of the digital yuan provide an option for international entities to enact financial transactions without America's surveillance. While these developments do not signify immediate threats, they imply long-run threats to the dollar's hegemony stemming from overuse of sanctions.[xxxiv]

Unrecognized Threats

Beyond the use of sanctions, economists suggest that countries in Asia serve as one of the primary holders of dollars and US Treasuries today and America's waning influence in the Asia-Pacific could eventually lead to a tipping point. In 2017, President Trump pulled out of the Trans-Pacific Partnership, diminishing America's economic support in Southeast Asian countries. In 2020, the world's largest trade deal signed fifteen countries in the Asia-Pacific and centered on China. As countries in Southeast Asia and the Asia-Pacific enact more trade with China, the incentive to hold American dollars may diminish. In a forthcoming paper, Kenneth Rogoff, the former chief economist of the IMF, finds that a significant amount of dollar holdings stem from countries connected to the 2020 China-led trade deal. In our interview with Professor Rogoff, he emphasized how the lack of knowledge and monitoring of preference for dollars in Southeast Asia could cause the United States to underestimate threats to the dollar hegemony.[xxxv]

Interviews we conducted with a randomized set of American, non-economists citizens supports the viewpoint that unrecognized threats could eventually damage the dollar's role in the future. In conversations with non-economists, we found that some did not recognize that the dollar served as a dominant reserve currency and most did not understand the significant benefits it provided.[xxxvi] What French Finance Minister Valery Giscard d'Estaing once called an "exorbitant privilege" of the United States remains unobserved domestically. In an opinion piece, Kenneth Rogoff suggests that challenges this contrast proposes. An uninformed electorate alongside an unrecognized threat, Professor Rogoff suggests, can pose potential challenges in the future: "Given that the US has been aggressively using deficit financing to combat the economic ravages of COVID-19, the sustainability of its debt might be called into question."[xxxvii] While Professor Rogoff argues that the loss of reserve currency status does not serve as an immediate threat for the dollar, he suggests that there are "striking parallels" between Asia's alignment with the dollar today and Europe's alignment in the 1960s prior to the collapse of the Bretton Woods system of fixed exchange rates. While the collapse at that time led to the emergence and creation of the Euro and the Nixon shock of the devaluation of the USD, Professor Rogoff suggests that the parallels with these two situations could threaten the dollar.

While the economists we interviewed highlighted that the dollar would serve as a stable dominant reserve currency in the foreseeable future, the greatest challenges to it would stem from domestic challenges. In our interviews, we asked economists whether they could imagine a situation forty years from now with regards to the dollar's role as a reserve currency. In each case, economists agreed that it could likely lose its global standing, but the far future is impossible to predict. Professor Stein noted his concern that democracy and the challenges unearthed from our recent elections could suggest underlying domestic issues which would serve as deeper threats. Professor Rogoff noted that the unchecked rise in government spending and the lack of consensus among economists on a tipping point for government spending to GDP would potentially cause challenges with fiscal debt. Theoretical models in the economics literature also supports the idea that the greatest threats to the dollar hegemony stem from domestic issues.[xxxviii] Farhi and Maggiori (2019) build a theoretical framework that highlights the risks of a run on the dollar. They demonstrate that the emergence of China's role in international markets will erode America's financial privileges from the dollar by destabilizing the fiscal spending campaigns and creating a "new Trifflin dilemma: reduce [America] debt or risk a confidence crisis."[xxxix] In the face of a fiscal crisis, Farhi and Maggiori argue that the introduction of China's rising role in financial markets could exacerbate America's debt. Ultimately, the growing, unrecognized threats suggest that long-term trends in government spending and holdings of dollars in the Asia-Pacific could eventually undermine the dollar hegemony.

Section Four: Reasons Why the Dollar Will Maintain Reserve Currency Status

The Path Dependence of Becoming a Dominant Currency

While China's GDP could one day surpass that of the United States, having the largest GDP in the world does not automatically lead to dominant currency status. Indeed, in the economics literature, becoming the dominant currency depends not just on the fundamental characteristics of a country's economy, but also on the historical context.

The United States and the European Union is an example of how the size of a region's GDP does not automatically lead to dominant currency status once we take into consideration history. Indeed, consider the following thought experiment. Assume the United States and European Union are identical on a set of fundamental dimensions like GDP, unemployment, share in international trade, etc. And imagine starting at the beginning of time with a blank slate where every person and business in the world holds no foreign currency and is indifferent to which currency it prefers. Would the euro or the US dollar emerge as the dominant currency in the world? According to Gopinath and Stein's, their theoretical model "is unable to speak to which currency that will be [the dominant one]".[xl] In other words, the outcome is indeterminate because literally, either currency has an equal chance of becoming the dominant currency.

However, the role of history is important. Consider the fact that the eurozone was only formed in 1999. Prior to the formation of the European Union, there were several medium-sized European economies in relation to the United States, which was the largest economy in the world in terms of GDP. At the time, Germany's GDP was half of the GDP of the United States. After the formation of the EU and the establishment of a unified currency, the EU's GDP came very close to the GDP of the United States.[xli] A natural question to have asked in 1999 is the following: now that European Union's GDP is on par with the United States, will the euro eventually displace the US dollar in the long-term?

In economics, this question translates to: will the world shift from the current equilibrium where the US dollar dominates to a new equilibrium where the euro is the dominant currency? The short answer is no. According to Gopinath and Stein, "even if the European economy grows to the point where it catches up with— or even somewhat surpasses—the United States, this may not be enough to dislodge the now-entrenched dollar from its dominant currency perch".[xlii] According to the dynamic equilibrium selection process in their theoretical model, the European economy would have to get substantially larger than the United States such that the dominance of the euro is the unique equilibrium outcome.[xliii]

Applied to China vis-a-vis the United States, Gopinath and Stein's theoretical model suggests that even if China fundamentals were equally as good as the United States, the renminbi prospects of becoming the globally dominant currency are "likely to be handicapped by history, which we would argue can play an important role in selecting the equilibrium in a setting like that of our model."[xliv]

The Entrenchment of the US Dollar in financial systems all over the world

Studying the use of the US dollar in the financial systems in other countries can provide some intuition for the predictions of Gopinath and Stein's theoretical model. In an interview with Professor Stein, he provided a concrete example to illustrate how the dominance of the US dollar is self-reinforcing. Consider Turkey. Only 6% of its imports come from the US, yet 60% of its imports are priced in dollars. This leads Turkish households to want to hold US dollars in their bank accounts at their domestic Turkish banks. Now that the domestic banks are flush US dollars, they will want to lend in dollars. Companies who take out a new loan end up receiving US dollars, which they then deposit at their domestic bank, and the cycle restarts. Thus, in the short run, it is very hard for any one individual or bank to deviate from the dominance of the US dollar in the financial system. Once again, when the equilibrium does ultimately begin to shift away from the dominance of the US dollar, it will shift very quickly as seen in the historical example of the US dollar displacing the sterling in the span of a decade.

Central Banks and Reserve Currencies

Reserve currencies are the currencies held by central banks. One of the roles of central banks is to maintain the financial stability of the commercial banking system in their country. The composition of reserve currencies held by a central bank is driven by which currencies are held by the domestic commercial banks because the central bank needs to be ready to provide liquidity to a bank facing an extreme situation such as a bank run.[xlv] For instance, if all 50% of all deposits in the Turkish banking system are in US dollars, and for some reason, every Turkish citizen decided to withdraw all the US dollars from their accoun on the same day, the Turkish banks would run out of US dollars. In such a scenario, the Turkish central bank would respond to this emergency by acting as a lender of last resort and injecting US dollars into the Turkish banking system. However, to be able to do this, the Turkish bank would need to have US dollars in its reserves, hence where the term reserve currency comes from.

Given the current and long-standing fact that most international trade is invoiced in dollars, the domestic banks in the majority of countries in the world hold a lot of their customer's deposits in US dollars. The central bank's "asset mix is to some extent a mirror of the commercial banks' liability structure, and both are ultimately shaped by—and feed back on—the invoicing decisions made by exporters in other countries".[xlvi] Thus, the central banks end up holding a lot of US dollars as reserves because their domestic banks are holding a lot of US dollar denominated deposits; and this all comes back to the US dollar being the dominant currency used in trade invoicing, which induces consumers and businesses to hold US dollars.

Thus, the implication is that if you are a country trying to make your currency the dominant currency, you can not simply remove capital control or make a policy change and expect central banks to hold your currency as reserve. To become the dominant currency, you have to win over and convince all the consumers and businesses in the entire world to switch their deposits from US dollars over to your currency, which is a huge challenge that takes time.

Lack of investor trust in China's financial system and institutions

Once again, the importance of building trust in a country's financial institutions, central bank and commitment to stable inflation are preconditions for the making of a dominant currency. As stated in Gopinath and Stein's "Banking, Trade, and the Making of a Dominant Currency", the dominance of a currency depends critically on the "strength of its financial and monetary institutions, the stability of its currency, and the liquidity of its markets."[xlvii]

With regards to the strength of its financial institutions. a macroeconomist at Goldman Sachs and economist Fred Hu both argue that the strength of its financial institutions in China is lacking. With regards to stability of its currency and its monetary institutions, China's capital controls are a major headwind to the renminbi's path to an international currency with global reserve status. Though in our conversation with Professor Jeremy Stein, he pointed out that China is currently doing what the US used to do in the 1920s: giving preferential financing to trade invoiced in the renminbi.

Path to Global Reserve Currency Status

Thinking about the possible trajectories for the renminbi, Ito and Kawai (2016) take a more historical approach. They look at the US dollar, the Deutsche Mark and the Japanese Yen from the 1970s to the 1990s and find four main factors affecting the percentage of trade invoiced in those three currencies: degree of economic trade ties with major currency countries, degree of financial development and openness, large presence in international trade, and high levels of GDP per capita.[xlviii]

In the context of China, this economics paper reiterates the beliefs and arguments made by our interviewees. It suggests that China's growing GDP/capita and large presence in global trade are positive factors for the renminbi, but unless China can relax its capital controls and build deeper, more liquid financial markets, the renminbi will have trouble becoming the main currency used in global trade invoicing.

The Threat of the Digitization of RMB to the Dominance of the US Dollar Contextualized

Let us consider the path that a currency takes to dominate. According to chief economist Gita Gopinatha and Professor Jeremy Stein, "experience suggests that the logical sequencing of steps in internationalizing a currency is: first, encouraging its use in invoicing and settling trade; second, encouraging its use in private financial transactions; third encouraging its use by central banks and governments as a form in which to hold private reserves."[xlix] Even though China's share in international trade is steadily growing, it is still far from the share of international trade held by the United States. [l]Considering that the first step for China is still incomplete and that the digitization of the renminbi fits into the second step, the digitization of China's renminbi is not immediately relevant to the renminbi's potential rise as a dominant currency in the short and medium-term.

Short and Medium Term Outlook on the Dominance of the US Dollar

Until China removes its capital controls, builds trust in its financial and monetary institutions and strengthens the liquidity and depth of its financial markets, the renminbi does not pose a threat to the dominance of the US dollar in the medium term. Indeed, Gopinath and Stein believe that "in the medium term, the self-reinforcing mechanisms in [their economic] model might lead one to predict that the dollar's dominance would continue largely undisturbed, and that the renminbi would have a hard time gaining much traction in international banking and finance".[li]

Conclusion

As competitors and cooperators in global commerce and financial markets, the US and China face unclear paths moving forward. While the two countries share many converging interests on global issues like climate change and innovation, the role of the dominant reserve currency implies a non-cooperative, competitive structure where only one currency receives notable economic and political privileges. In the modern era, denominating the majority of trade in one currency allows for the greatest efficiency, preventing a multi-polar equilibrium by which two currencies could equally share status in global financial markets. Given the winner-takes-all game theory structure the current situation implies, does conflict have to be inevitable?

History suggests that, despite the potential pitfalls and challenges of the current situation, cooperation can be possible albeit limited. For example, in 2008, China refused Moscow's attempts to encourage the country to dump its large holdings of US Treasury bills. However, the increasingly polarized rhetoric on economic issues limits the ability of the United States and China from working together in financial markets. In 2015, President Trump promised during his presidential campaign to label China a currency manipulator and to bring trade cases against China in the World Trade Organization.[lii] The past 5 years have also seen escalating trade tensions between the US and China; although currency hegemony and reserve currency status are not pressing, short-term concerns for either the Federal Reserve or the PBOC, it seems that at some point within the next 15 to 20 years that the RMB may become a significant international currency at the very least. Digital currencies seem poised to be a contentious region, as in 2019, Mark Zuckerberg testified that before the U.S. House Financial Services Committee on a line of inquiry into Facebook's own digital coin Libra that "While we debate these issues, the rest of the world isn't waiting. China is moving quickly to launch similar ideas in the upcoming months."[liii]

How can the US and China avoid an expensive and damaging currency war, especially one with massive ramifications in cybersecurity, data privacy, and economic stability?

Raghuveera and Ji offer a vision of mutual learning between the US and China on digital currencies. While China has far surpassed all other nations in the extent of its rollout and adoption of digital currency, the authors critique the lack of open design for China's digital currency exchange program (DCEP) and point to a "more open design, inspired by the US's approach to innovation"[liv] as necessary for testing, inclusion, and innovation. Meanwhile, the US should not solely rely on private sector digital currencies like Facebook Libra--responsibility for development of the digital US Dollar should fall under the purview of the US Federal Reserve.

While the best possible future actions of the United States and China on questions related to reserve and digital currencies remain unclear, an open acknowledgement of strategic competition and cooperation allows for the greatest progress.

Appendix: Charts

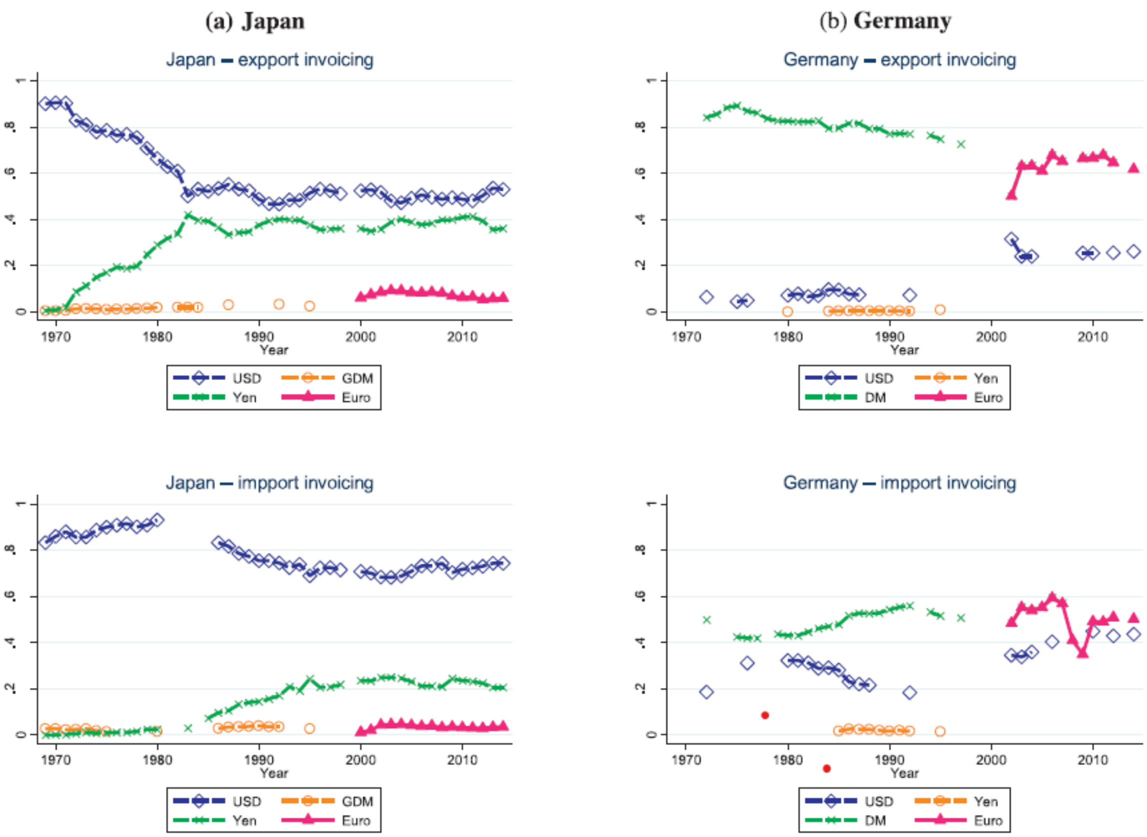
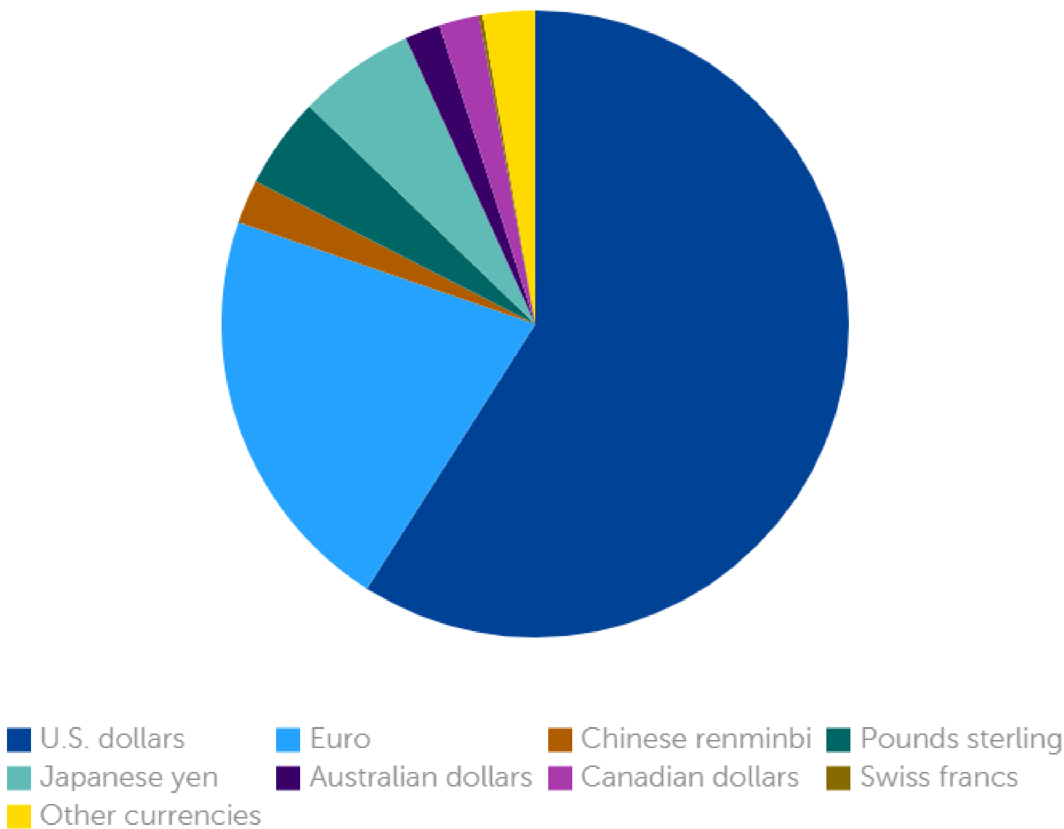
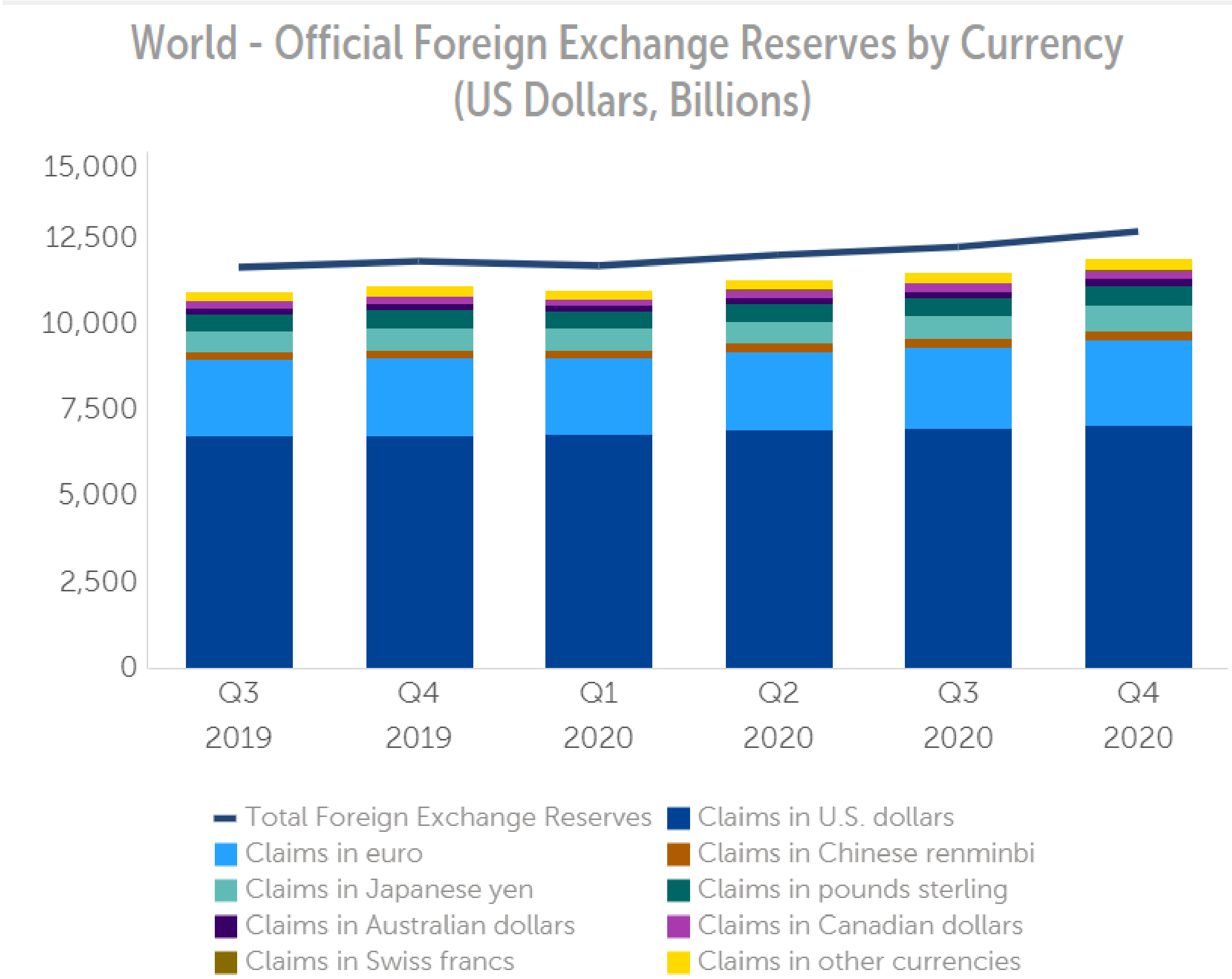


Fig. 1. Shares of major currencies used for trade invoicing in Japan and Germany.

World - Allocated Reserves by Currency for 2020Q4




World - Official Foreign Exchange Reserves by Currency
(US Dollars, Billions)
15,000
12,500
10,000
7,500
5,000
2,500
0
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Total Foreign Exchange Reserves
Claims in U.S. dollars
Claims in euro
Claims in Chinese renminbi
Claims in Japanese yen
Claims in pounds sterling
Claims in Australian dollars
Claims in Canadian dollars
Claims in Swiss francs
Claims in other currencies

World (US Dollars, Billions)

	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
Total Foreign Exchange Reserves	11,826.50	11,704.37	12,012.09	12,246.34	12,700.76
Allocated Reserves	11,076.26	10,956.50	11,266.53	11,472.02	11,870.90
Claims in U.S. dollars	6,725.91	6,770.19	6,902.38	6,939.44	7,005.84
Claims in euro	2,279.47	2,197.41	2,272.44	2,354.94	2,521.79
Claims in Chinese renminbi	214.46	220.33	233.68	245.55	267.52
Claims in Japanese yen	652.00	653.01	649.75	674.09	715.83
Claims in pounds sterling	513.52	486.04	504.36	519.80	557.19
Claims in Australian dollars	187.88	170.01	190.34	199.06	216.11
Claims in Canadian dollars	205.99	195.27	215.47	230.51	245.77
Claims in Swiss francs	16.56	15.59	17.22	19.30	20.74
Claims in other currencies	280.46	248.65	280.91	289.33	320.11
Unallocated Reserves	750.24	747.87	745.56	774.32	829.85

Ordering of the currencies follows SDR basket weights (SDR currencies) and alphabetical order (non-SDR currencies).

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