Under the Radar: Alternative Payment Systems and the National Security Impacts of Their Growth

BY

Emily Jin
Research Assistant
Energy, Economics, and Security Program
Center for a New American Security
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I. Introduction

Chairwoman Waters, Ranking Member McHenry, Subcommittee Chairman Himes, Subcommittee Ranking Member Barr, and the distinguished Members of the Subcommittee on National Security, International Development and Monetary Policy, thank you for the opportunity to testify before you on “Under the Radar: Alternative Payment Systems and the National Security Impacts of Their Growth.” It is an honor to share the panel with my fellow witnesses.1

My testimony will address China’s progress in building out alternative payment systems, the strategic implications of growth in China’s alternative payment systems, and recommendations for U.S. policymakers. The key conclusion of this testimony is:

At their current stages, China’s alternative payment systems are not threats to mainstream financial plumbing. However, these alternative payment systems are growing in technical sophistication and domestic adoption. China’s Cross-Border Interbank Payment System (CIPS) and the eCNY (electronic Chinese yuan, or digital yuan) are making strides. CIPS’ use is on an upward trajectory, and eCNY pilots are penetrating through all levels of Chinese society.

Under an ambitious People’s Republic of China (PRC) leadership that envisions more prominent roles for Chinese institutions in international finance, and with the right geopolitical winds, these systems could gain traction internationally and scale up accordingly. In such a scenario, Chinese alternative payment systems could eventually erode the effectiveness of U.S. and allied sanctions and challenge the institutions under the current financial order over the long run.

A summary of my recommended plans for action:

- Monitor the use, growth, and connectivity of these alternative payment rails with the rest of the world.
- Mandate U.S. government annual report on the use of the dollar in the context of global payment systems.
- Improve U.S. cross-border payments pipelines to make dollar transactions more efficient.
- Develop economic measures to restrict the advancement of alternative payment rails.
- Strengthen expertise in analyzing financial developments and statecraft.
- Draft a long-term strategy document (updated every two to four years) to signal the direction of U.S. financial statecraft and the administration’s thinking for the future of the dollar.
- Engage proactively in standard setting bodies for digital assets and financial rails.

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II. China’s Alternatives for a Multi-Polar Financial Order

HOW CIPS CAPTURED GLOBAL IMAGINATION

The Russian invasion of Ukraine upended the international community’s assumption about how economic interconnectedness brings geopolitical stability. Western sanctions on Russia in response to its invasion of Ukraine has called attention to the fundamental way international finance operates, and brought to the fore the otherwise under-studied pipes of the international financial system. While China has been developing its alternative payment systems for some time, Russia’s war in Ukraine has focused concern on the development of these alternative payment channels. The United State and allied countries leveraged their economic and financial power to exclude Russia from global financial pipes, via an unprecedented package of sanctions on the Central Bank of Russia and other major Russian banks, which cut Russia off from accessing assets denominated in currencies that add up to 95 percent of global foreign exchange reserves. This vacuum provided significant incentives for China to potentially come to the aid of Russia. Moreover, it created space for all other countries that are in the “messy middle” (not explicitly taking either Ukraine or Russia’s side), which are left having to decide whether to cooperate with the United States and some European and Indo-Pacific allies, abstain from action, or provide tacit endorsement or support to Russia.

The oft-mentioned analogy of payments systems being the plumbing of international finance is apt. To participate in global finance, financial institutions such as banks benefit from the Society for Worldwide Interbank Financial Telecommunications (SWIFT), which provides secure messaging to facilitate and ensure timely and cheap means of transferring value around the world. Message-facilitated communications and the actual movement of money and value are separate, and SWIFT only does the former. It has a robust membership of more than 11,000 participating institutions around the world in 200 countries, and is co-owned by over 2,000 banks and governed by a board of global financial executives. It is a crucial valve in the international financial ecosystem. Cross-border payments are usually conducted with the correspondent banking model, where transactions pass through multiple intermediary banks (with the payment communicated through SWIFT at each step) before reaching its final destination account. Along with the rapid globalization in the past few decades, the payments world had to adapt and adjust to the challenges in cross-border payments, which often entail currency conversions, and varied tax regimes, and processing fees. SWIFT, as the most prominent pipe in international payments, passed 42 million messages per day in between global financial institutions in 2021. To move value around the world without SWIFT would be challenging.

In addition to central bank sanctions, the United States and allies worked together to block Russia from a major part of global financial plumbing via sanctions applicable to the Belgium-based SWIFT. What happens when one part of

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5 Seth, “How the SWIFT Banking System Works.”


7 The United States, the United Kingdom, Japan, and other countries have supported the disconnection of certain other Russian financial firms from SWIFT including the larger State-owned banks, read more at “Statement by Press Secretary Jen Psaki on Japan’s Announcement to Hold Russia Accountable,” February 27, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/27/statement-by-press-secretary-jen-psaki-on-japans-announcement-to-hold-russia-accountable/. One thing to note is this action excluded Gazprombank, which was intended to leave room for energy-related transactions and payments, read more at Philip Blenkinsop, “EU Bars 7 Russian Banks from SWIFT, but Spares Those in Energy,” Reuters, March 2, 2022, https://www.reuters.com/business/finance/eu-excludes-seven-russian-banks-swift-official-journal-2022-03-02/. Euro- and dollar-denominated payments would continue to allow for transactions involving Russia’s most lucrative exports, but still faced restrictions on setting up correspondent banking accounts and required additional steps to conduct the transactions. Read more at Robert Greene, “How Sanctions on Russia Will Alter Global Payments Flows,” Carnegie Endowment for International Peace, March 4, 2022, https://carnegieendowment.org/2022/03/04/how-sanctions-on-russia-will-alter-global-payments-flows-pub-86575.
the international financial plumbing is unavailable to a country’s financial institutions? Economic and financial actors like businesses and banks naturally look to alternative financial systems and see whether those could fill the gap. As a result, attention turned to China’s CIPS.7 CIPS is China’s international-facing RMB clearing and settlement system (clearing entails movement of funds from institution A to institution B, and settlement is the finalization of moved funds). Observers have wondered whether CIPS and other Chinese channels could provide a replacement for SWIFT not just for trade with China, but also for transactions with other countries that do not involve China.8 Moreover, the Russia sanctions created a strategic incentive for China to strengthen its alternative payment systems for its own sake. Chinese scholars and policymakers alike are cognizant that China, given its intentions with regards to Taiwan, may one day be cut off from global financial plumbing.9 A group of Chinese academics and practitioners argued in an August 2022 article that China needs to hedge the risk of financial sanctions by promoting RMB-denominated finance and enhancing China’s role in the SWIFT network.10 The former governor of the PBOC (2002-2018) remarked in 2022 that CIPS cannot easily replace SWIFT given it is mainly an RMB clearing and settlement institution as opposed to a messaging system. However, as this group argues, the impact of SWIFT sanctions may “necessitate any target economy to prop up their alternative payment rails.”11

Congressional action is commensurate with public concern. Senators Marco Rubio (R-FL), Rick Scott (R-FL), and Todd Young (R-IN) have introduced legislation related to China’s CIPS, namely the Crippling Unhinged Russian Belligerence and Chinese Involvement in Putin’s Schemes (CURB CIPS) Act.12 The proposed legislation would “freeze or terminate any U.S.-based accounts connected to Chinese financial institutions – or block the U.S.-based property of such institutions – that engage in transactions with a Russian financial institution using either CIPS or SPFS.”13 Another related proposed legislation by Representative Hill (R-Ark.)—Special Drawing Rights Oversight Act—would introduce congressional oversight on the executive branch (via the Department of the Treasury) in approving Special Drawing Rights (SDR) funding for the International Monetary Fund.14 SDRs are international reserve assets that supplement official reserves of IMF member countries, and are based on a basket of five currencies (the U.S. dollar, the euro, the Chinese RMB, the Japanese yen, and the British pound sterling).15 The intention behind this proposed legislation is to prevent Russia from converting their share of the SDRs to Chinese renminbi (RMB) by exchanging its SDRs with China for RMB reserves. Mirroring congressional concerns, H.R. McMaster, national

11 Yanting Mai, “唱反调：周小川指人民币 CIPS 难以取代 SWIFT 促勿令国际支付系统作冷战 [Zhou Xiaochuan Says It’s Difficult to Replace SWIFT with RMB CIPS, Urge Not to Make International Payment System a Cold War],” Radio France Internationale (RFI), April 18, 2022, https://web.archive.org/web/20220919004954/https://www.rfi.fr/fr/cn/%E4%B8%AD%E5%9B%BD/20220418-%E5%94%B1%E5%8D%8B%E5%83-%E5%91%A8%E5%9B%F8%E5%9B%BD/3D%E5%8C%87%E4%BA%BA%E6%80%9A%E5%9B%81-cips-%E5%94%A8%E5%9B%A5%E5%88%9E%E4%BB%A3-swift-%E4%BF%83%E5%BB%BF%E4%BB%A4%E5%9B%BD&E9%99%85%E6%94%AF%E4%BB%98%E7%B3%B8%E7%B9%9F%E4%BD%9C%E5%86%87%E6%88%88.
security advisor under President Donald Trump, remarked at a Hoover Institution event that “to get at Russia, there are elements of our policies that have to touch China.”

CIPS: AN ALTERNATIVE SYSTEM

The Cross-Border Interbank Payments Systems (CIPS) was conceived as a project in 2012, launched into development in 2015, and connected the Mainland and Hong Kong stock markets to become a major RMB cross-border settlement channel in 2017. It is based in Shanghai, with ownership stakes by state-owned banks, exchanges, and Western banks, and falls under the supervision of China’s central bank, the People’s Bank of China (PBOC). According to a presentation deck by the PBOC’s Payment and Settlement Division Research Office, prior to CIPS, RMB cross-border transactions were, prior to CIPS, conducted in three ways — via correspondent banks, via clearing banks, and via non-resident accounts (accounts opened by an institution legally incorporated and registered overseas, such as Hong Kong). Under the correspondent bank model, an offshore bank signs an agreement with a commercial Chinese bank that offers international settlement services, which allows the offshore bank to open an RMB account with the Chinese bank and access the Chinese domestic payment system. An illustrative example would be JP Morgan opening a correspondent account at the Bank of China, which then allows JP Morgan clients with business in China to take the U.S. dollar in their JP Morgan account and transfer it into RMB, then to an exporter’s Chinese bank account. The clearing bank model differs in that it provides participating offshore banks with RMB through accounts held at the offshore RMB clearing banks. The non-resident accounts (NRA) model offers foreign companies the opportunity to open bank accounts in China. The PBOC explicitly stated CIPS was created principally to meet increasing demands and streamline the processes of cross-border RMB settlement.

China’s banking system implements two payment systems — the China National Advanced Payment System (CNAPS), which facilitates domestic RMB clearing and settlement, and the Cross-Border Interbank Payment System (CIPS), which facilitates cross-border RMB clearing and settlement. CIPS is connected with other domestic Chinese interbank payment systems, including the High-Value Payment System (HVPS, which is a real-time gross settlement system for large volume transactions), the Bulk Electronic Payment System (BEPS), the Cheque Image System (CIS), the Internet Banking Payment System (BIPS) and the China Domestic Foreign Currency Payment System (CDFCPS). For the purposes of this hearing, CIPS should be the focus as it is the gateway for majority of foreign financial institutions and companies that want access to streamlined to international clearing and settlement of the RMB. It works by facilitating payment orders between correspondent accounts of financial institutions. Foreign financial institutions are generally indirect participants with CIPS, while Chinese financial institutions and some foreign bank’s Chinese branches are direct participants. The difference between indirect and direct participation is direct participation allows institutions to directly send and receive messages through CIPS, whereas indirect participation allows institutions to use correspondent accounts with foreign banks to send messages to CIPS, which then forwards the messages to the recipient bank. Foreign banks rely on their correspondent banks in China to settle RMB transactions, which differs with the domestic payment system where the clearing bank model facilitates payment orders between correspondent accounts of financial institutions.

17 “人民币跨境支付系统(CIPS) 主要功能及业务管理 [RMB Cross-Border Payment System (CIPS) Main Functions and Business Management],” Research and Planning Office of the Payment and Settlement Division – People’s Bank of China, July 2018, https://web.archive.org/web/20220405135004/https://res.cocolian.cn/pbc/%E4%BA%BA%E6%B0%91%E5%B8%81%E8%B7%A8%E5%A2%83%E6%94%AF%E4%BB%8B%E7%BB%BB%E7%BB%9C%CIPS%E4%B8%8A%E5%8A%A1%E7%AE%80%86%E5%B8%B6%E5%BA%A6%E4%BB%BB%E7%BB%AD 201807.pdf, 3.
participation require institutions to send messages with direct participating banks via SWIFT (a parallel with the traditional correspondent banking model). As of now, foreign financial institutions (with the exception of some of their Chinese branches) are only indirect participants of China’s CIPS. This is likely due to the fact that direct participation in CIPS would erode the PBOC’s control over offshore usage of the RMB.

Instead of drawing similarities between China’s CIPS and SWIFT, it is more apt to liken China’s CIPS to the Clearing House Interbank Payments System (CHIPS), which is the largest private sector USD clearing system in the world. CIPS and SWIFT have different mechanics and were created in different contexts. Technically, CIPS clears and settles RMB transactions, whereas SWIFT is a secured messaging protocol that lets banks “talk” to one another, facilitating but not concluding the transactions. Contextually, CIPS was created to improve the efficiency of RMB transactions, whereas SWIFT was created by institutions from the U.S., the European Union, and G7 countries to enhance global financial messaging. To say the two are peers would be misleading, given that CIPS relies on SWIFT to conduct a majority of its international settlements (see below for a scenario of CIPS and SWIFT usage). The only way CIPS is similar to SWIFT is in its networking capability. For SWIFT, it connects global financial institutions to each other, whereas CIPS connects mostly domestic Chinese payment systems with one another.

<table>
<thead>
<tr>
<th>What It Does</th>
<th>SWIFT</th>
<th>CIPS</th>
<th>SPFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launched in 1977 to ensure secure messaging between global financial institutions. It facilitates movement of funds, but does not move funds itself.</td>
<td>Established in 2015 to clear and settle onshore and offshore RMB transactions. It moves funds by using SWIFT-enabled messaging.</td>
<td>Established by the Bank of Russia in 2014. It facilitates movement of funds within Russia.</td>
<td></td>
</tr>
<tr>
<td>Why It Was Created</td>
<td>To standardize interbank communications, which improves efficiency and lowers the costs of transactions.</td>
<td>To increase the efficiency and lower the costs of RMB transactions.</td>
<td>To ensure transactions take place without the need to go through SWIFT.</td>
</tr>
<tr>
<td>Participants</td>
<td>11,000+ participating institutions in 200 countries.</td>
<td>1,341 participating institutions in 103 countries.</td>
<td>400+ participating institutions.</td>
</tr>
<tr>
<td>Volume of Trade Processed</td>
<td>$140 trillion annually</td>
<td>$12.68 trillion in 2021</td>
<td>$1.73 billion in 2020</td>
</tr>
</tbody>
</table>

Author’s Table, originally published in Lawfare on April 5, 2022, with additional details.

**How Transactions Work through SWIFT.** In the scenario where user A wants to send funds to user B across borders, if their banks are in the SWIFT network, their banks can communicate with one another via SWIFT codes to complete the transaction. If one of their banks are not in the SWIFT network, then the transaction will need to go through correspondent (intermediary) banks in the SWIFT network, which increases the time and cost of the transaction.

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27 Author added this SPFS column for comparison, though the thrust of this testimony focuses on CIPS, not SPFS.
29 This $12.68 trillion processed in 2021 was a 75 percent increase from the year before. This number was sourced from Jiefang Daily, the newspaper of the People’s Liberation Army, so this statistic should be understood in the context of state propaganda.
In comparison, CIPS is different from SWIFT as it is an RMB clearing and settling institution that more often than not utilizes SWIFT to facilitate RMB transactions with the rest of the world:

- A & B’s banks = no relationship → Intermediary banks → B
  - A → A’s Bank
- A & B’s banks = yes relationship, go through SWIFT → B

**CIPS** as an RMB clearing and settling house
Plugs into SWIFT and uses its messaging to connect with global finance

Notably, CIPS processed around 80 trillion yuan ($12.68 trillion) in 2021, a 75 percent increase from a year ago, according to state-backed newspaper Jiefang Daily. As of end-January 2022, CIPS said about 1,280 financial institutions in 103 countries and regions have connected to the system. This $12.68 trillion in processed volume in 2021 still pales in comparison to the $140 trillion processed annually via SWIFT. **In the near term, this trend is not changing.** The United States occupies a preponderant role within international finance, as it makes up 59 percent of foreign exchange reserves, and more than 80 percent of foreign exchange transactions occur against the U.S. dollar. The attractiveness of the American economic and financial environment, underwritten by a political economic system founded on rule of law, translates to currency attractiveness. These structural advantages are not changing anytime soon.

Nevertheless, policymakers should be wary of the strategic implications behind a strengthened CIPS. If more foreign banks decide to participate in CIPS, it could elevate the attractiveness of the institution to more banks and quickly expand market share. Even though a majority of CIPS’ transactions require SWIFT to facilitate the messaging, there seems to be mechanisms within the CIPS that allow for RMB clearing and settlement without SWIFT. According to the same deck from the PBOC Payments and Settlement Department, the CIPS system has the following structure:

![Diagram](Author recreation from p. 22 of PBOC’s 2018 Presentation on CIPS. In some cases, CIPS can operate through its own special channels without going through SWIFT.)

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CIPS seems to mandate direct participating financial institutions’ involvement for RMB clearing and settlement that do not go through SWIFT messaging.

The PBOC likely has plans to enhance the functionality of CIPS so that it will eventually rely on SWIFT less. Out of the basic principles behind CIPS, the PBOC specifies that CIPS functionality will be conducive to isolating legal risks in cross-border payment settlement and creating a fair competitive environment. Given the “neutrality” critique on SWIFT especially among waves of financial sanctions on Russia, this seems deliberate on China’s part to create a payment system that espouses principles of fairness. The PBOC has intentions to normalize the use of RMB clearing and settlement via CIPS from its 2018 presentation (see below). The orange dashed lines indicate CIPS are transacting with financial institutions in North and South American jurisdictions via SWIFT. The yellow solid lines likely indicate China aims to circumvent SWIFT messaging and settle RMB transactions directly with financial institutions in these regions. How the PRC intends to achieve just that is unclear, but the intention is apparent.

![Image](image_url)

*Figure: Pg. 22 of the PBOC’s 2018 Presentation on CIPS.*

**ECNY: AN ALTERNATIVE RAIL**

How do central bank digital currencies (CBDC) factor into the alternative payment system calculus? China has been expanding pilots to integrate its eCNY into its economic infrastructure.34 In a previous Center for a New American Security report, the authors concluded that the PRC is first and foremost preoccupied with getting the domestic

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33. *人民幣跨境支付系統(CIPS)主要功能及業務管理 [RMB Cross-Border Payment System (CIPS) Main Functions and Business Management],* Research and Planning Office of the Payment and Settlement Division – People’s Bank of China, 8.

application of eCNY right.\textsuperscript{35} In state planning documents such as the July 2021 PBOC white paper on China’s progress in developing its central bank digital currency, the PBOC wants to facilitate the use and adoption of eCNY domestically to better inform Chinese policymakers on the Chinese economy and citizenry.\textsuperscript{36} The domestic surveillance implications are concerning, and these concerns could extend to cross border scenarios down the line. That are various potential cross-border applications of the eCNY. Over the short to medium term, PBOC is conducting a cross-border CBDC-to-CBDC proof of concept through the Bank for International Settlements’ (BIS) project, the mCBDC (multi-CBDC) bridge.\textsuperscript{37} Over the long term, China is looking to advance global CBDC standards.

While these efforts are still in nascent stages, they point to a roadmap where China seeks an alternative cross-border system buttressed along CBDC rails, and where China is a major influencer of how those rails are constructed and managed. Also, an alternative stem for CBDC for international value transfer is not the desire of U.S. adversaries alone seeking ways along around US sanctions.\textsuperscript{38} U.S. allies are exploring and piloting CBDCs.\textsuperscript{39} The former Bank of England governor Mark Carney called in 2019 for a digital alternative to the U.S. dollar, specifically taking the form of a digital currency supported by an international coalition of central banks.\textsuperscript{40} In fact, the Bank for International Settlements—whose membership includes 63 central banks—produced a report earlier this year that envisions sovereign digital currencies as the future of global banking.\textsuperscript{41} One thing to note is the mCBDC bridge is not facilitating eCNY transactions (which are mostly retail at the current stage), but is modeling a wholesale CBDC system involving payments between global banks. While this is a separate stream of CBDC piloting, it fits into China’s overall push to build alternative financial rails for retail and institutional RMB transactions.

The PBOC is conducting tests for non-PRC mainland use of the eCNY. Hong Kong Monetary Authority (Hong Kong’s central bank) Vice President Li Dazhi announced that the eCNY cross-border pilot technical test has entered its second stage, which entails streamlining payments through eCNY wallets.\textsuperscript{42} Hong Kong is the first cross-border eCNY pilot to conduct technical tests in cooperation with the PBOC’s Digital Currency Research Institute. Li explicitly stated that the hope is for “multiple digital renminbi operators and local banks” to “participate in the test so that Hong Kong residents can use the digital renminbi on the mainland in the future.” Besides areas like Hong Kong, China is also projecting its designs for countries in its regional backyard. Most recently at the Shanghai Cooperation Organization September gathering, General Secretary Xi mentioned China will be developing cross-border payment and settlement systems (in local currencies) for Central Asian countries.\textsuperscript{43} While he did not explicitly mention the eCNY, it is safe to assume the PRC leadership would eventually want the eCNY to be adopted in Central Asia if not the rest of the region.

All indications point to the likelihood that U.S. and other foreign multinational corporations will be compelled to accept eCNY payments for retail transactions in China. McDonalds integrated the eCNY payments option into their


\textsuperscript{37} Bank for International Settlements, “Multiple CBDC (mCBDC) Bridge,” \url{https://www.bis.org/about/bish/topics/cbdc/mcbdc_bridge.htm}.


\textsuperscript{39} Bank for International Settlements, “BIS Innovation Hub Work on Central Bank Digital Currency (CBDC),” \url{https://www.bis.org/about/bish/topics/cbdc.htm}.


\textsuperscript{41} “The BIS Presents a Vision for the Future Monetary System,” June 21, 2022, \url{https://www.bis.org/press/p220621.htm}.

\textsuperscript{42} -香港離岸快測試數字人民幣充值，範圍和規模放大[Hong Kong FPS Tests Digital RMB Recharge, Expanding Scope and Scale], MPaypass, September 13, 2022, \url{https://web.archive.org/save/https://www.mpapaypass.com.cn/news/202209/13100349.html}.

\textsuperscript{43} “Full Text of Xi’s Speech at SCO Samarkand Summit,” Xinhua, September 16, 2022, \url{https://english.news.cn/20220916/9a25ddd0a86848a09ef0f2a2e499a52d/c.html}. 
applications and restaurant locations. Businesses will likely need to choose whether to honor their profitability by facilitating eCNY transactions, or bow out of a significant part of the Chinese market by abstaining from eCNY.

The eCNY seems to be running on a different architecture than CIPS. International banks have been applying to be integrated as part of the eCNY clearing system (such as HSBC). It would only make sense that the PRC would want more foreign participating financial institutions in its eCNY infrastructure to facilitate usage of its digital sovereign currency. Eventually, the PBOC might want to explore interoperable connections between CIPS and the eCNY systems.

What are Beijing’s intentions for implementing the eCNY? A useful heuristic is the concept of legibility, which measures the extent to which one can make sense of complex realities with simplifying metrics. A state’s ability to parse the activities and behavior of its populace is a prerequisite to the state leveraging its populace as a resource to accrue national power. Through the eCNY, the PRC intends to collect as much data on its populace as possible. If it successfully leverages collected information to promote economic growth and enact tighter social control, the People’s Republic of China would become the People’s Republic of Digital Legibility. The PRC also wants to streamline international payments with the eCNY. While almost everyone is connected to the United States and its dollar infrastructure, not everyone is connected to each other. This tends to lead to inefficient payment processes. With CBDCs and initiatives like mCBDC bridge, central banks and other financial institutions may connect with one another and not need to go through U.S. dollar anymore as the vehicle currency.

CONDITIONS FOR CHINESE ALTERNATIVES TO GAIN TRACTION

However, for Chinese alternative payments systems such as CIPS and eCNY to gain traction, the RMB would need to become a reliable medium of exchange and store of value. Currently, the RMB is not considered a safe asset, as its state control political and economic model does not lend to investor confidence. Immense privileges and responsibilities stem from issuing and overseeing a major currency. The United States provides the world’s deepest capital market due to the tradability and convertibility of its desirable currency. The United States’ open accounts are burdened with imbalances imported from the rest of the world. The social and economic burden of maintaining a major global currency is currently unthinkably large for the PRC. The PRC cannot afford to have an appreciating RMB, which would be detrimental to its export-reliant economic model. It also cannot afford an unrestricted capital account inside of Mainland China and increasingly in the offshore RMB market in Hong Kong given fear of capital flight and instability.

Moreover, China needs to stay plugged into mainstream financial plumbing offered by SWIFT. CIPS itself relies on SWIFT in transacting in RMB with the rest of the world. China relies on the U.S. dollar to conduct trade. Even though the RMB is technically the fifth most used currency in international payments, it lags the U.S. dollar, the Euro, the Japanese Yen, and the British Pound Sterling at 2 percent of international payments. Similarly, it hovers around 2 percent in its share of global foreign exchange reserves held in RMB-denominated assets. While China is developing CIPS and other alternative financial institutions, it also wants to reap the benefit of participation in the Western-led

financial order. In fact, China does not want to be excluded from the international financial system. A researcher at the Chinese Academy of Social Sciences posited in his article that China should strive to become “too connected (with international finance) to fail,” which is a nod to the benefits of participation in a dollar-dominant financial order.50

But over the long term, foreign participation in CIPS might be an indicator of China’s growing financial power. It may alter long-term trends of global payment flows, especially if CIPS technically gains and refines SWIFT-like capability down the line, which is potentially achievable given SWIFT’s joint venture with the PBOC’s digital currency research institute and clearing center in 2021.51 The PBOC has set up bilateral swaps with BRICS countries since 2013, which are agreements where participating central banks agree on using their own currencies to settle bilateral trade. This is a non-negligible foundation for a non-dollar dominant future. 52 If eCNY developers are successful at implementing the “programmability” (smart contract capability within the digital currency) of the digital currency, the PRC may be more willing to open up partially its capital account, which could lead to partial political economic liberalization and increased attractiveness of the RMB.53

China has very clear ambitions in leading in international finance in the future, as specified in the Financial Standardization Five Year Plan (2021-2025) released in February 2022, where it espoused aspirations to create and shape standards in global finance.54 Major Chinese government agencies with financial mandates would be implementing this plan, including the People’s Bank of China, the State Administration for Market Regulation, China Banking and Insurance Regulatory Commission, and China Securities Regulatory Commission. This whole-of-Chinese-bureaucracy effort clearly signals China’s ambition to shape international finance in the future.

50 Qiyuan Xu of the Institute of World Economics and Politics at the Chinese Academy of Social Sciences discusses in his July 2021 (check date) article that while the likelihood of the United States influencing SWIFT to sanction Hong Kong and the Mainland is small, the likelihood of SWIFT sanctions being imposed on individual financial institutions inside of China or Hong Kong are increasing. He said to respond to this possibility, China should try to ensure its institutions are “too connected to fail (太关联而不能倒),” which the author take to be an indication that some experts inside China are advocating for China to be more interwoven into the international financial system.


III. The Global Financial Order is Still Uni-Polar

YES, DE-DOLLARIZATION IS AFOOT IN CHINA AND RUSSIA

There are certainly economic and financial forces at play in China-Russia relations that point to clear intentions to reduce their reliance on the U.S. dollar. For example, Russia signed 38 agreements with China in 2014, some of which established a three-year currency swap deal with 130 billion yuan. Since 2019, Beijing and Moscow have replaced the dollar with their own currencies to settle bilateral trades. Russia’s exports denomination in dollar was reduced from 80 percent in 2013 to less than half as of March 2022. In 2022, China’s exports to the United States shrank for the first time in the last two years while shipments to Russia surged, likely due to Chinese brands filling the void of Western brands that departed Russia.

Both China and Russia have been de-dollarizing for some time on their own. China has reduced its holdings of U.S. dollar reserves from 79 percent of its total foreign exchange reserves in 1995 to 59 percent in 2016. It has set up offshore RMB trading locations in Hong Kong, Singapore, and Europe to denominate trades in RMB. That, combined with China’s efforts to incorporating foreign exchange and RMB in cross-border financing point to aspirations in de-dollarization.

Similar trends have been carried out in Russia with more intensity and urgency. Russia has been de-dollarizing since 2014. It has reduced its own holdings of the dollar (Russian Central Bank’s stockpile) from 40 percent in 2017 in to 16 percent in 2021. In July 2021, the Russian finance minister announced plans to remove dollar-denominated assets from Russia’s sovereign wealth fund, which was a third of the $186 billion fund. It has also developed payment processing capabilities to reduce reliance on dollar-centered payments infrastructure. The Mir cards were created precisely to respond to U.S.-led global payment processing ecosystem denying services to Russian banks under U.S. sanctions after Russia’s first invasion of Ukraine in 2014. After Visa, Mastercard, and China’s UnionPay backed out of Russia in May 2022, Mir cards increased their adoption among both domestic and international audiences, though the international user base is limited to a couple of countries and territories within Russian sphere of influence and control.

The System for Transfer of Financial Messages (SPFS) was created also to address U.S. threat of removing key Russian banks from the SWIFT network. Unlike CIPS, SPFS is more of a direct SWIFT substitute given messaging capability. The use of Mir and SPFS is generally constrained to domestic Russian audiences and in countries that are under Russia’s geopolitical influence, but are still notable and therefore must be monitored.

BUT DOLLAR IS STILL KING, FOR NOW

Notwithstanding some progress in de-dollarizing separately and jointly, China and Russia are unlikely to meaningfully build a global de-dollarized coalition and erode the power of United States. The dollar is still the most appealing currency in the world. One of the most commonly used metrics is the percentage of dollar holdings in foreign

reserves by all central banks. As of 2022, 59 percent of central banks reserves are held in dollars.\textsuperscript{64} Though the percentage has declined gradually in the last two decades, the U.S. dollar dwarfs the next currencies in line (21 percent in Euro, six percent in the Japanese Yen, five percent in GBP, and ten percent in other currencies, which includes the RMB). The political economy that underpins the European community is too fragmented, which makes most value holders look to the incumbently dominant U.S. dollar for store of value given its general political (rule of law) and economic attractiveness (open capital account, deep capital markets, independent central bank). China itself is one of the most substantial holders of dollar-denominated assets, as 50 to 60 percent of its foreign exchange reserves are dollar-denominated.\textsuperscript{65}

**Figure:** Currency Composition of Global Foreign Exchange Reserves, 1999-2021 (Source: \textsuperscript{66}IMF)

Compared to the U.S. dollar, China’s RMB is not traded freely in foreign exchange markets and the inconvertibility makes it unappealing to hold. The Ruble likewise is not widely used, and even in the case of Russia’s main export (energy), most transactions are denominated in U.S. dollars. Though Russia intends to shift its energy exports to be denominated in Rubles or other currencies, the main trend would still be dollar-dominated denomination for the immediate future.\textsuperscript{67} Most economic actors and institutions would not be switching from dollars to RMB or other currencies overnight. Even when the Euro was released, there was an initial dip in the proportion of dollar-based exchanges, though this rate returned to pre-Euro release equilibrium within a few years.\textsuperscript{68} The Global Financial Crisis, an event that should have hurt the dollar’s prospects, in fact made the dollar even more of a global safe haven.\textsuperscript{69} In the short to medium-term, the dollar’s position in the world is unshakable.

\textsuperscript{64} Serkan Arslana, Barry Eichengreen, Chima Simpson-Bell, “Dollar Domination and the Rise of Nontraditional Reserve Currencies,” IMF Blog, \texttt{https://blogs.imf.org/2022/06/01/dollar-dominance-and-the-rise-of-nontraditional-reserve-currencies}; For those thinking that the 59 percent central banks reserves being held in U.S. dollar is on a declining trend in the last few years, look to the absolute U.S. dollar holdings. Brad Setser from the Council on Foreign Relations rightly pointed out that there are other metrics that correlate with a currency’s attractiveness—absolute holdings of dollar reserves being one of them. Even though dollar’s share of global reserves fell in recent years, total reserve holdings rose from five percent of global GDP to 15 percent of global GDP. This means the absolute amount of USD holdings actually increased, even though as a share of global reserves it decreased, Twitter, August 29, 2022, \texttt{https://twitter.com/Brad_Setser/status/1564320134101180416}.

\textsuperscript{65} Nelson, Sutter, “De-Dollarization Efforts in China and Russia,” Congressional Research Service.


\textsuperscript{68} Prasad, “Has the Dollar Lost Ground as the Dominant International Currency?” 1.
IV. What’s Next?

THE BASE CASE VS. ALTERNATIVE CASE FOR FUTURE GLOBAL FINANCIAL ORDER

The base case of the future of financial statecraft would still be the status quo. This would be a continuation of the U.S. dollar serving as the world’s reserve currency, and the associated financial infrastructure maintaining the USD’s penetration and influence. Barring drastic shift in U.S. financial policy, the United States would continue to be the absorber of last resort and accumulate global savings. As long as the U.S. dollar is the pre-eminence currency, and the United States maintains its unique economic and financial advantages, alternative payment systems like CIPS, eCNY, and CPFS would not be able to mount meaningful challenges. It would be difficult for countries like China and Russia to provide a credible currency alternative to the U.S. dollar. Though, it is a little more likely that China could get more financial institutions to start using CIPS for RMB clearing and settling, and utilize CIPS to help countries like Russia by transacting in RMB. There is a possibility that enough alternative financial rails could coalesce into a critical mass that provides escape valves for sanctioned regimes. Sanctioned entities may be able to trade on alternative payment systems, even though they may be penalized by G7 economies. The level of these transactions might not meaningfully evading the power of U.S. economic and financial sanctions; nevertheless, this base case scenario still requires attention.

Policy considerations also should not stop at the base case. If the PRC leadership makes painful political and economic reforms down the line and actually liberalizes its capital account, the Chinese political economic model could become more attractive, and the RMB might just become a more appealing store of value. This could mean the Chinese and other alternative payment systems and financial rails could over time garner critical mass in adoption. In the event that the PRC thoroughly reforms its political and economic system, it would have had years to fine-tune and perfect its payment systems and financial rails. CIPS and other financial mechanisms and digital innovations could embolden the PRC to contend with mainstream financial plumbing. Foreign financial institutions and firms may be compelled to adopt CIPS clearing and settlement, as they likely would not want to miss out on participating in China’s market and alternative systems. In that case, maybe, the PRC and other countries could get to a position of strength to challenge the United States in the global financial order.

In either the base case or the alternative case for future global financial order, there are immediate actions the United States should take.

RECOMMENDED PLANS OF ACTION

Now is the right time to ask some fundamental questions about the role of the U.S. dollar. Does the United States have the political and economic whereabouts to continue to absorb the world’s savings? If yes, how should the United States maintain the political and economic institutions that underwrite the dollar’s strength? If not, then is the United States willing to make room for a multi-polar financial order? The competition over payment systems may seem like it is about technical offerings, but it really is an outgrowth of a systems-level competition between different political economic leaderships. The United States can best position itself as the center of gravity of the global financial order by:

- Monitoring the use, growth, and connectivity of these alternative payment rails with the rest of the world. Though the United States enjoys a prominent position in the global financial system, there is more uncertainty in the outlook for global financial order as policymakers extend their time horizon. There are a couple of factors that policymakers should be monitoring—extent of cross-border trade usage of major currencies (including the USD and RMB), and the quantity and quality of alternative payment arrangements.

between adversarial countries (e.g. China, Russia, Iran). At one point, adversarial regimes may just accumulate enough escape valves to partially alleviate the brunt of financial sanctions in the long term. While the United States government need not be overly alarmed about the strength of the U.S.-led financial order, the Treasury Department and other relevant agencies should keep a watchful eye on these developments.

- **Mandating U.S. government annual report on the use of the dollar in the context of global payment systems.** This could either be a new standalone report, or an additional chapter in the report on Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States, which is a semiannual assessment that determines whether trading partners manipulated its currency exchange rate with the U.S. dollar. This additional report or chapter should focus on major currencies’ positions in global payment systems, which could also track the growth of alternative payment systems and financial rails. It should monitor China’s CIPS and Russia’s SFPS, but also aggregate all bilateral currency swaps in the world that could work to erode the United States’ financial power.

- **Improving U.S. cross-border payments pipelines to make dollar transactions more efficient.** The United States needs to run faster by refining its own payment systems and financial rails. Global cross border transactions are at around $29 trillion now, but could be projected to grow at around $39 trillion by 2022. The United States government and private sector stakeholders should work together to make cross-border payments easier and less costly over time.

- **Developing economic measures to restrict the advancement of alternative payment rails.** There should be pre-determined policy triggers in the event where a financial institution connects to CIPS directly for activities that would help sanctioned entities evade sanctions. Only in cases with reasonable doubt that there are sanctions evasion efforts afoot, should the Treasury department consider levying secondary sanctions on entities that elected to connect directly to the CIPS network. The Department of the Treasury should study the impact of such secondary sanctions prior to levying such tools, given the high likelihood of unintended secondary effects from such measures.

- **Strengthening expertise in analyzing financial developments and statecraft.** Financial statecraft is economic statecraft directed at influencing capital flows. The U.S. government should support institutions and individuals engaged in conducting research on America’s and China’s financial participation in the world and their respective financial statecraft. For example, the Department of the Treasury, the Federal Reserve Board of Governors, and the Federal Reserve banks should designate cadres of analysts on conducting annual assessments of currency flows in global payment systems.

- **Drafting a long-term strategy document (updated every two to four years) to signal the direction of U.S. financial statecraft and the administration’s thinking for the future of the dollar.** The United States government needs a forest-level strategy on managing digital assets and emerging payment systems and rails, which would be crucial to the United States maintaining prominence in international finance. The Treasury report on “The Future of Money and Payments” released in September 2022 pursuant to Executive Order 14067 was a great start, though its discussion of the role of dollar was in the context of payment systems, not on the pros and cons of the dollar maintaining its dominant position.

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Engaging proactively in standard setting bodies for digital assets and financial rails. According to the recently released Comprehensive Framework for Responsible Development of Digital Assets, the United States government is considering policy objectives for a U.S. CBDC system. While it is unclear the United States would be pursuing a digital dollar, the government should be tracking and consistently assessing the impact of licit and illicit digital assets on the strength and integrity of the U.S. financial system. Irrespective of whether the United States plans to create its own CBDC, it should be participating in standard-setting discussion around sovereign national digital currencies. The U.S. government must exchange with other countries and within organizations such as the BIS to ensure China’s digital legibility model does not prevail over the U.S.’ and select allies and partners’ preference for digital privacy.

As an analyst observing U.S.-China economic, technological, and ideological competition, I am cautiously optimistic that the U.S. government is assessing the developmental trajectories of China’s and other countries’ alternative payment systems. Policy actions including but not limited to those listed above would be necessary to respond to either the base case or the alternative case scenario for future global financial order.

It is an honor to address the Subcommittee on this critical subject. Thank you again for the opportunity.