POLITICAL ECONOMY RESEARCH INSTITUTE

PERI

University of Massachusetts Amherst

The Cross-Border Interbank Payment System:

A Case Study in Chinese Economic Leadership

Aidan Campbell

March 2023

WORKINGPAPER SERIES

Number 574

POLITICAL ECONOMY RESEARCH INSTITUTE

The Cross-Border Interbank Payment System: A Case Study in Chinese Economic Leadership

Aidan Campbell

Abstract

Investigations seeking to explain the rise of China rarely investigate the many new institutions founded to increase China's economic success and influence over global affairs. In the economic sector, some better-known projects include the Belt and Road Initiative, the Asian Infrastructure Investment Bank, and the New Development Bank. One of the newest and least understood institutions founded to promote international use of the RMB is the Cross-Border Interbank Payment System (CIPS). The purpose of this research is to examine the development, policies, and goals of CIPS in order to better understand the phenomenon of Chinese-lead international economic institutions. Novel evidence for CIPS's intention to adopt blockchain technology and provide services for currencies other than the RMB is presented. The conclusion to this research is that CIPS is presently too small to pose a threat to the existing SWIFT network or predominance of US dollar transactions in international trade. At the same time, CIPS evidences a patient and rational strategy designed to reform international norms and patterns of trade to China's advantage in the long term.

1. Introduction

China is building institutions that provide it with leadership roles on the international stage. Examples include the Shanghai Cooperation Organisation, coordinating security activities with other Eurasian countries, the New Development Bank, providing BRICS countries with an alternative to the IMF and World Bank, and the China Standards 2035 initiative, aimed at ensuring Chinese companies set international standards in industries such as nuclear power, transportation, and information technology.

One institution that has received relatively little attention in the English language is the Cross-Border Interbank Payment System, marginally better known as CIPS. While the current hegemon of international financial communications, the Society for Worldwide Inter-Bank Financial Telecommunication (SWIFT), accommodates all currencies but only handles communications, CIPS specializes in China's *renminbi* (RMB) and can directly process payments. In 2021, CIPS processed roughly 3 million transactions totaling 80 trillion RMB (about 12 trillion USD) on behalf of 1,341 participants, in comparison to SWIFT servicing 10,000 participants at a pace of 40 million messages a day. The importance of international payment institutions was recently highlighted when several Russian banks were removed from SWIFT in February 2022, an action which echoed the exclusion of Iran from SWIFT from 2012 to 2016.

This project seeks to examine the CIPS as a case study to shed light on the broader phenomenon of Chinese-led international institutions. CIPS will also be presented as a foil to the incumbent SWIFT network. Analyzing CIPS's development, policy, and goals should help parse outstanding questions about the extent of China's leadership role in future international economics.

2. Historical Narrative

This section summarizes the development of SWIFT and its use in sanctions before describing some changes to China's role in the global economy that led to the development of CIPS.

2.1 Development of SWIFT

Advances in communications technology have long impacted the banking industry. As the 19th century expansion of the telegraph made long-distance communication a matter of hours, rather than days, disparities in stock prices between markets began to disappear and clerks tasked with transmitting and recording messages appeared. (Scott 2009) By the end of the second World War, the Telex network of teleprinters had become dominant within the financial industry. Banks developed idiosyncratic ways of formatting and documenting messages. These early internal standards relied on multiple rounds of authentication and armies of typists. By the 1960s, executives wanted to increase the speed of messaging and decrease the costs incurred by employing clerks to translate between the in-house standards of partner banks. Citibank developed and promoted a proprietary standard that would have required users to pay fees, a scenario other banks deemed unacceptable. With the first wave of commercial computers arriving, banking leaders agreed to cooperate on a digital standard for interbank communications.

The Society for Worldwide Interbank Financial Telecommunication, known today as SWIFT, was founded in 1973 for this purpose. Organized as a member-owned cooperative legally established in Belgium, leading banks in Europe and North America made loans to finance the first few years of SWIFT and came together to establish the organization's protocols. Because members were moving from the Telex network and often wished to maintain their manual capabilities, the SWIFT messaging protocol intentionally imitated formatting methods popular with Telex users. Although the SWIFT protocols have been revised since its inception, SWIFT messages still use the methodology devised at the service's conception: each institution is assigned a specific code, specific strings of letters and numbers within a message define a field, and users fill out each field with defined codes that refer to institutions or other information. By charging banks per message and requiring an up-front payment to join, SWIFT was quickly able to repay its initial loans and is now financially self-sufficient.

Today, SWIFT handles nearly 40 million messages a day and has grown to include more than 11,000 institutions across more than 200 countries. In addition to maintaining and growing its core telecommunications service, SWIFT now accommodates certain non-banking financial institutions, conducts research, and hosts conferences for the financial industry. The initial ISO standards for financial messaging were based on SWIFT's protocols, and SWIFT remains influential in the propagation of the current standard for electronic financial communications, ISO 20022. The SWIFT Standards Team literally wrote the book on ISO20022. (The SWIFT Team 2022) However, SWIFT remains strictly a communications service. SWIFT does not process interbank transactions. Once banks use the network to understand the particulars of a transaction – such as payer, payee, currency amount and denomination – they turn to a variety of solutions to process the actual transaction.

2.2 SWIFT's Growing Role in Sanctions

SWIFT was built by Western banks at a time when those countries dominated world trade and the financial industry. The perception of SWIFT as a latent instrument of the West, particularly America, increased in 2006 when the CIA subpoenaed and won access to SWIFT's records on the grounds of anti-terrorism and because SWIFT's servers were located in Virginia. SWIFT was also leveraged by American power in 2012 to force Iranian financial institutions off the platform. American officials claimed this sanction targeted Iranian leadership while sparing the citizen population from the worst effects of traditional sanctions. However, it appears that this "SWIFT kick" severely damaged the Iranian economy, and lead to negative humanitarian outcomes similar to those the SWIFT-based sanctions were ostensibly intended to avoid. (Majd 2019)

Western powers used SWIFT as a channel of attack again in 2022 as retaliation for Russia's invasion of Ukraine. The EU, UK, US, and Canada agreed to remove specific Russian banks from SWIFT, although they notably declined to sanction state-owned Gazprombank. This action helped resurface global anxieties about the reliance of international finance on SWIFT. The Global Times, a Chinese state newspaper, opined in April that SWIFT is a "sanctions tool against economies that have different values or different views on global governance." Zhou Xiaochuan, who served as head of the People's Bank of China when CIPS was devised and launched, declared that "if SWIFT is widely used as a tool for sanctions, others will surely find other messaging conduits to continue doing trade." (Global Times Staff 2022)

Because SWIFT is a private cooperative company rather than an official governmental organ, the American government and European Union cannot technically order SWIFT officials to disconnect banks. However, SWIFT has repeatedly promised to obey European law because it is based in Brussels and therefore subject to EU law. (Swift 2022a) Thus, when the European Parliament issued an order against doing business with seven Russian financial institutions, SWIFT complied. SWIFT also complies with American demands when the American government threatens to sanction the company itself. (Eichengreen 2022) This tactic was used to cut off Iran in 2015 and to enforce data surveillance by the American intelligence apparatus in 2006. While SWIFT publicly voices a desire to remain politically neutral and promote global cooperation, it has repeatedly proved willing to acquiesce to sanctions and is unwilling to upset the dominant positions of the dollar and euro in international finance.

2.3 RMB Internationalization

Prior to 1994, firms inside China doing business with the outside world could not directly receive foreign currency. The People's Bank of China handled foreign exchange transactions on behalf of Chinese companies, collecting payments in foreign currency for exported goods and distributing RMB to Chinese exporters according to internally determined exchange rates. (Qu 2012) Since then, China's capital account has become convertible and successive Five-Year Plans have encouraged RMB internationalization. The most recent 14th Five Year Plan for 2020-2025 states that the government will "steadily and carefully promote the internationalization of the RMB" and "create new types of mutually beneficial cooperative relationships based on the free use of RMB." (CSET 2021)

After the 1997 Asian financial crisis, Thailand, Indonesia, and South Korea entered IMF programs. Many East and Southeast Asian countries believed the crisis could have been resolved more smoothly if the region had more power in the resolution process. China, Japan, and South Korea began meeting with ASEAN, a group of Southeast Asian nations, to form the ASEAN+3 group. These meetings resulted in promises to arrange international currency swaps. In 2000, the Chiang Mai Initiative was agreed to, further formalizing a mutual currency swap network. In 2010, the agreement became multilateral, consolidating the many bilateral deals that had been made into a single fund. (Sussangkarn 2011) However, Chiang Mai related swaps were consistently undersized. For example, the $2 billion made available to Thailand for withdrawal in 2010 would have been unlikely to stop a 1997-sized problem, which had resulted in a $17 billion deal between Thailand and the IMF.

By establishing the "Go Global" policy in 2001, China heralded the beginning of serious outward direct investment (ODI). From 2003 to 2009, as China's trade surplus grew, Chinese ODI exploded from $3 billion to $56 billion. While other Asian economies have included ODI as part of their industrial strategies, China relied more on its financial sector: Chinese ODI stood apart from its neighbors by backing 30% of ODI with loans, compared to 20% for South Korea and 15% for Japan. (Gallagher 2014)

There is evidence for a particular "China Model" of ODI. While there are many privately held companies engaged in foreign investment, more than 90% of ODI financing goes to large state-owned enterprises. Most of the remainder goes to companies with close ties to the government, such as Huawei and Geely. Almost two-thirds of ODI financing comes from the China Development Bank, with CEXIM and the Bank of China making up the remainder. This implies Chinese ODI is directed by political goals rather than market speculation. This does not mean the state-owned banks are given free reign or do not largely abide by market norms – Chinese banks are offering interest rates similar to those extended by the Japanese Export-Import Bank to privately held companies in Japan's growth stage. (Huang 2011)

The distribution of Chinese ODI is unusual, even when compared to the previous Asian Tigers. Like Japan and South Korea, China has strong investments in the primary sector, with 18% of ODI in industries such as mining or petroleum extraction. However, China has uniquely high investment in banking and finance, with half of its ODI in those categories. At the same time, these two sectors receive only 3% of ODI financing, implying that Chinese financial companies are retaining earnings to finance these investments. Investing in leading foreign financial institutions could be an effective way to learn best practices or strengthen Chinese financial practices and infrastructure for the future, a hypothesis suggested by the fact that Chinese ODI in finance is high in OECD countries but low elsewhere. ODI loans are most concentrated in manufacturing. While only 5% of total ODI, manufacturing captures two thirds of China's ODI financing. (Huang 2011) A proposed explanation for this is that while China does not want to undercut domestic manufacturing, strategic investments can help Chinese firms acquire new technologies and avoid tariffs.

China's large ODI is in part made possible by China's high savings rate and trade surplus, which also results in large reserves of U.S. dollars. By investing across the globe, China can lessen its exposure to American volatility. Indeed, China now finances nearly as much overseas development as the World Bank. (Gallagher 2014) Most of China's ODI (and debt forgiveness) has gone to Venezuela, Pakistan, Russia, Brazil, Angola, Ecuador, Argentina, Indonesia, Iran, and Turkmenistan. These investments have begun to take on serious political implications. By targeting those countries with large populations but relatively underdeveloped economies, the Belt and Road Initiative begins to resemble the Marshall and Dodge plans that supplied Europe and Japan with the dollars needed to buy American goods, thus strengthening the dollar's position in world finance. (Eichengreen 2013)

However, internationalization of the RMB must be considered within the landscape of the dollar's current hegemony. Daily RMB turnover of $285,030 million pales in comparison to the euro ($2,129,114 million) and is blown away still further by the dollar ($5,824,036 million). Even after declining from 80% at the turn of the century, dollars account for 59% of disclosed foreign reserves. (IMF 2022) Because countries are willing to export goods in exchange for dollars that are then used as reserves rather than traded onwards, the United States has been able to run a "risk free" trade deficit for decades. (Eichengreen 2013) Because of China's high volume of exports to the United States, Beijing has become one of the biggest secondary beneficiaries of this arrangement.

Therefore, it would be unwise for Chinese officials to intentionally destabilize the dollar. Slow and steady improvements to RMB infrastructure will be more successful at raising the profile of Chinese banks. A sudden sell off of its dollar reserves would cost China by causing depreciation that threatens the value of its reserves and discourage America's continued importation of Chinese products. Initiatives such as currency swaps and ODI guard against of dollar volatility and inflation. Attempts to build alternative institutions and expand the use of the RMB, such as CIPS, have begun. Hong Kong banks, and later companies, were the first allowed to issue bonds denominated in RMB – so-called "dim sum bonds." Now RMB bonds are traded worldwide, and the RMB is the third most common reserve currency. (IMF 2022)

Commentators typically claim that if the RMB is to become a global currency — or one part of a multipolar financial world — China needs to increase RMB liquidity and liberalize its financial institutions. Steps have been made in both directions, such as increasing RMB bond volume and relaxing rules regarding foreign investment into China. Other typical reform requests include: a freely floating RMB, democracy, and an independent judiciary. (Amstad 2020) These arguments remind one of similar claims that ascension to the WTO would result in China's liberalization. These changes appear unlikely, not only because the RMB has achieved much progress without these reforms, but because these recommendations often assume the goal of the RMB becoming a direct competitor or replacement for the USD, an outcome that would not benefit China when considering its current export regime and holdings of US debt.

2.4 Building CIPS

While work on CIPS officially began in 2012, Chinese academics had already pointed out flaws with the existing paradigm for cross-border payments and recommended establishing an institution to handle international payments to benefit China. Writing in 2010, Hu Bo lays out several issues with the then-contemporary paradigm of international RMB payments. Hu describes the correspondent banking and clearing house models as too slow and complicated. Creating a dedicated payment infrastructure would shorten payment chains, thus saving time and money. Complicated payment chains are also difficult for the PBC to monitor. America's 2006 surveillance of SWIFT is cited as a security risk, as is the potential for expanding China's domestic payment systems internationally, as this would make encryption devices available to foreign inspection. Hu also recommends learning from international experience, such as America's CHIPS network. Notably, Hu encourages the full adoption of international standards. This suggests SWIFT management is considered more problematic than the ISO standards, even with the latter being developed in large part by SWIFT. At the same time, Hu implies China will seek to shape future international standards, claiming that "in the process of promoting financial 'going out,' China has changed from passively accepting 'international rules' to actively participating in the formulation of rules and expanding China's discourse power." (Hu 2010)

Under the leadership of Zhou Xiaochuan, the People's Bank of China began constructing the Cross-Border Interbank Payment System in early 2012. Li Yue, director of the PBC's Payment and Settlement Department and secretary of the corresponding party committee, was appointed the CIPS company's founding Chairwoman, and oversaw CIPS's official launch in 2015. Known as CIPS Phase I, the institution was initially operated according to "Interim Business Rules for RMB Cross-Border Payment System." International leaders such as Citibank, BNP Paribas, and Deutsche Bank joined major Chinese banks to become the first group of direct participants. (Answers to Reporter's Questions 2015) Phase II launched in 2018, alongside the release of "Renminbi Cross-border Payment System Business Rules" (2018). Phase II brought longer service hours, began the offering of timed net settlement in addition to real time gross settlement, and saw the Shanghai Clearing Company and Central Clearing Company join, further integrating CIPS with China's financial infrastructure. (Yang 2019) CIPS is presently concerned with developing hardware and software products to improve customer ease-of-use and recently expanded services to cover the Hong Kong dollar. (CIPS President Xu Zaiyue 2022) The most recent governing document for CIPS is the 2018 "RMB Cross-Border Payment System Business Operation Guidelines".[1]

While growing, CIPS is still dwarfed by SWIFT. SWIFT has over 10,000 users sending a total of more than 40 million messages a day. (Swift 2022b) In comparison, CIPS presently has 1,342 users. A small minority are direct participants. Direct participants have accounts directly with CIPS and can handle transactions on behalf of indirect participants. Some direct participants are institutions considered financial infrastructure, such as clearing houses, UnionPay, and the Hong Kong Monetary Authority. A comprehensive listing of indirect participants is presently unavailable, but CIPS claims to serve 1,266 indirect participants and that a total of "2,100 banks and corporate users have engaged CIPS standard transceiver and CISD terminal products." Through the first six months of 2022, CIPS processed 1.85 million transactions worth RMB 45 trillion in total, representing growth of 18.7% in volume and 23.4% in value compared to the first half of 2021. (Wu 2022)

3. The Cross-Border Interbank Payment System

This section presents the official reasoning behind CIPS's creation before moving on to describe how CIPS manages its participants and the movement of funds. CIPS's potential for expansion into foreign currencies and use of novel technologies is also summarized.

3.1 Goals of CIPS

This subsection is intended to catalogue the various claims academics, CIPS officials, and policymakers have made about the reasons for CIPS's creation and its relationship to other initiatives. Evaluating the likelihood CIPS will succeed on these terms is not intended at this time. Many of the individuals quoted below work directly for the Chinese government and belong to the ruling Communist Party. As such, they may have incentives to exaggerate their contribution to

[1] A translation of this document can be found by contacting the author at aidancampbel@umass.edu.

political projects such as the Belt and Road Initiative and "Go Out," which are broad and often vague.

CIPS is typically described as being created to help existing RMB use or promote further RMB internationalization. In September 2022, CIPS President Xu Zaiyue described CIPS as "building bridges and paving the way" for RMB internationalization. (Ma 2022) He went on to elaborate that by formulating and providing "payment and clearing rules and standards to provide RMB users around the world with fast, convenient and efficient fund clearing services," CIPS encourages RMB internationalization.

Progress towards RMB internationalization and capital account convertibility are the largest international finance goals described in China's 13th (2016-2020) and 14th (2021-2025) five-year plans. Speaking in 2015, then-Chairwoman Li Yue said that the establishment of CIPS began in 2012 "in order to meet the demand for cross-border use of RMB, further integrate the existing RMB cross-border payment and settlement channels and resources, and improve the efficiency of RMB cross-border payment and settlement." (Li Yue 2015)

The creation of CIPS as a means of supporting the RMB is sometimes portrayed as China exercising a country's sovereign right to control its own currency. The forementioned Hu Bo argues that "cross-border financial service infrastructure is an extension of a country's sovereignty in the international arena." (Hu 2010) CIPS President Xu Zaiyue appears to agree, telling a reporter that "the construction of the RMB cross-border payment clearing system is a natural part of China's monetary sovereignty." (Ma 2022) From this perspective, the expulsion of a country or its currency from SWIFT might constitute an infringement of the target country's monetary rights, justifying or necessitating the construction of alternative international financial infrastructure.

CIPS is also frequently related to "Going Out," an initiative to encourage outward foreign investment and the expansion of Chinese brands into foreign markets. This buzzword developed in the early 2000s but is still in use today. Officials frequently referenced "going out" around the beginning of CIPS's operation. (Lao 2015) The China Payment Systems Development Report for 2015, the year CIPS was launched, described CIPS as an "artery" of China's cross-border RMB payment arrangement and an important step for implementing the "going out" strategy. Li Keqiang, then the second highest ranking politician in China, described the establishment of CIPS as supporting offshore RMB markets and promoting the larger "going global" strategy. (Li Keqiang 2015) Related uses include academic Hu Bo describing a cross-border RMB payment system as benefiting "RMB going out" and Chairwoman Li Yue promising to promote the going out of CIPS's standards. (Li Yue 2019)

CIPS's relationship with the Belt and Road Initiative (BRI) is slightly different. While RMB internationalization and "Going Out" are viewed as long-term challenges CIPS can help solve, the BRI is portrayed as a driver of RMB internationalization that increases the immediate need for financial services. By encouraging RMB use for BRI investments as well as for trade between China and countries along the route, CIPS has been able to expand its business. (Yang 2019) Li Yue notes that "smooth trading" is one of the "Five Links" of the BRI and that by providing automated and real-time payments, CIPS can contribute to the smooth trading expected by countries receiving BRI investment. Zhou Xiaochuan, who served as Governor of the People's Bank of China when CIPS was conceived, has also highlighted the "strategic importance of CIPS in serving the internationalization of the RMB and the construction of [the BRI]." (Li Yue 2019)

3.2 Function of CIPS

This subsection is based on the content of guidelines found in the official 2018 document entitled "RMB Cross-Border Payment System Business Operation Guidelines" (人民币跨境支付系统业务操作指引).

CIPS is an acronym for "Cross-Border Interbank Payment System." While early official English-language content pronounced the term as rhyming with "seeps," commentators and officials have since pronounced CIPS as rhyming with "dips." There are three major entities that are commonly referred to as CIPS: the CIPS controlling agency, CIPS Co. Ltd., the software and services provided by this company that allow interbank payments to occur, and the network of direct and indirect participants that use these products.

CIPS Co. Ltd. is a Shanghai-based company formed by the People's Bank of China for the purpose of administering and improving its RMB payment system. Similar to the SWIFT cooperative's ownership by SWIFT member banks, CIPS Co. Ltd. is technically owned in part by direct participants. However, CIPS is best viewed as a governmental agency, since most direct participants are state-owned banks, employment postings explicitly prefer candidates who are CCP members, and because high-level officials have held simultaneous posts in regulatory bodies, such as founding Chairwoman Li Yue, who was also Director of the PBC's payments department.

CIPS protocols are based on SWIFT messages and the recent ISO20022 standard for financial messaging, which is itself based on SWIFT messages. ISO20022 is a broad agreement within the financial industry on how to label and format messages, and what information certain kinds of messages should contain. Such a standard allows companies to develop software that can harmonize idiosyncratic in-house standards with the larger financial information ecosystem. In the case of CIPS, ISO20022 is used to define a wide variety of message type, such as payments, requests for refunds, instructions to alter the priority of other messages in a queue, and so on. By selecting a message type and filling out the relevant fields, a user creates a CIPS message that can be read and acted upon by the suite of software developed by the CIPS company. CIPS messaging builds on the basic ISO20022 framework by accepting messages written in English or Chinese. CIPS also assigns participants unique CIPS codes or account numbers, based on existing domestic business identification codes whenever possible.

Notably, CIPS can and does process payments. In contrast, SWIFT acts only as a messenger. CIPS software products are also capable of taking SWIFT messages as inputs. As a result, banks can create SWIFT messages in the manner they are accustomed to, but instead submit the messages to CIPS and have the instruction processed automatically. A bank performing a payment service on behalf of a client would not have to wait for the payee's bank to confirm the transaction and the two banks would not need to make use of a separate payment channel.

CIPS manages two types of participants: direct participants and indirect participants. Companies must apply to become direct or indirect participants, and applicants are classified as bank-type institutions or financial market infrastructure-type institutions "according to prudential management needs." All approved participants receive a CIPS account number that allows for the institution to be referred to by CIPS messages, but only direct participants open accounts with CIPS. In order for an indirect participant to move funds via CIPS, it must enter a relationship with one or more direct participants.

In regards to moving funds between participants, CIPS is effectively a correspondent bank. Direct participants pre-fund their accounts at CIPS and then credit and debit other direct participants according to their needs as well as the needs of associated indirect participants. These intra-CIPS transactions can proceed smoothly and easily due to the standardized protocols and specialized software created by CIPS that allows for transactions to be processed from start to finish solely by computers.

Funds can also exit the immediate CIPS network via the CIPS Co. Ltd.'s account with the High-Value Payment System (HVPS), China's domestic payments system used by companies of all types. At the beginning of each business day, CIPS direct participants are required to inject a minimum amount into CIPS's account with HVPS. Direct participants then manipulate this pool by sending messages on the CIPS platform. At 5:00 PM Beijing time, CIPS stops accepting new messages to the queue and reconciles CIPS's account with HVPS. During this end-of-day processing stage, the funds remaining in CIPS's account at HVPS is returned to direct participants.

3.3 Growth and Future of CIPS

Unfortunately, despite being launched with the goal of Chinese-English bilingual capacities, much of what CIPS officials say about new initiatives and the future of CIPS is unavailable in English. In recent interviews, CIPS leaders mostly promise to expand their clientele, develop new products and services, and launch new initiatives to "improve the RMB environment." (Ma 2022) While the international banks that are involved with CIPS certainly have the capacity to keep abreast with Chinese-language news and company missives, the relative lack of English-language communication from the CIPS company might create difficulties in accurately presenting CIPS to the Anglophone world.

The possibility of a Chinese cross-border Central Bank Digital Currency remains under debate among English-language academics. Some cite China's claim that its pilot programs are merely for retail use and the lagging development of other major countries' CBDC programs, which would result in little to no need for CIPS to adopt a CBDC or develop distributed ledger capabilities, as there is currently nobody to exchange CBDCs with. (Chorzempa 2021) Others point out that at the level of international finance, traditional currencies and CBDCs would function almost identically. (Eichengreen 2022) Within China, some academics are arguing that cross-border RMB services should be entirely based on an e-RMB. (Wang 2022) The debate within CIPS itself may already be over, as current CIPS President Xu Zaiyue said in June that the operating agency will "explore the practical application of blockchain technology in the field of cross-border payment." This suggests the CIPS will attempt to integrate China's CBDC efforts.

Given the CIPS company's motto of "Wherever there is RMB, there is CIPS service," it is surprising that company documents imply that CIPS may develop services for currencies other than the RMB. The "Renminbi Cross-border Payment System Business Rules" (2018) that governed the launch of CIPS Phase II added that CIPS should provide "simultaneous settlement of RMB to foreign currencies (PvP)". Performing this service would result in the CIPS company handling — and therefore likely keeping in reserve — foreign currencies. However, English language researchers appear convinced that CIPS is dedicated solely to RMB service. (Jin 2022) This may make the quiet launch of Hong Kong dollar service appear troubling. While the English side of CIPS's website makes no reference to the development and the English-language media appears to have missed the news, CIPS began offering payment and settlement services denominated in HKD as of September 2021. (Xu 2022) Given Hong Kong's political status, incorporating the HKD (or the Macanese Pataca) onto a platform designed to support Chinese international payments is reasonable. However, there are no apparent technical differences between onboarding the Hong Kong dollar and providing CIPS services to other sovereign currencies, such as the ruble or rupee, indicating CIPS has the capacity to add currencies other than those under the purview of the PBC or Hong Kong Monetary Authority. Such a decision could have serious geopolitical implications. Interaction with foreign currencies may be unavoidable for any institution that seeks to promote one specific currency, but such a decision would expose CIPS to potential sanctions from any country whose currency CIPS provides services for.

4. Chinese Leadership of Economic Institutions

While CIPS currently confronts the norms enforced by Western-dominated institutions such as SWIFT, it also represents the stated goal of Chinese politicians to revise international standards to China's advantage. This section illustrates how Chinese-led institutions must meet challenges and expectations similar to those faced by other international economic institutions.

4.1 Constraints and Incentives on International Actors

Countries tend to follow and promote norms that align with their goals while protesting or attempting to reform international norms viewed as inhibitory or injurious. In the past, China has rationally conformed with international financial norms it views as promoting China's domestic policies, and opposed norms perceived as constraints. (Bo 2012) For example, China in the mid-1990s was happy to increase its current account convertibility, and later join the WTO, because of "domestic economic decentralization and corresponding institutional adjustments." In other words, as China opened up and became a leading exporter, accepting payments in currencies other than RMB and agreeing to general principles of free trade was in China's best interest. On the other hand, China has opposed international norms such as the Bilateral Supervision policies adopted by the IMF in 2007. Bilateral Supervision refers to member countries ensuring currencies move in ways that are, in the view of the IMF, in the best interest of the issuing country and the global economy at large. Chinese officials viewed this set of norms as favoring floating currency regimes and potentially biased. While left unsaid, the implied concern was that these norms would be used to criticize and interfere with China's fixed rate regime. Given that China believed its exchange rate regime was the policy that best suited its development, opposition to norms that disincentivized this choice was entirely rational.

While countries that build international institutions may have a large impact on the norms and practices of those institutions, they must still accommodate and compromise with participating countries. (Ikenberry 2017) China has already experienced this in its construction of the Asian Infrastructure Investment Bank. Because the AIIB was designed in concordance with prevailing norms, other countries could trust that the new bank would behave predictably and responsibly. Once established, the AIIB invested in relatively small and low-risk projects, allowing itself to learn best practices and increase the confidence of its investors. Establishing new institutions and immediately wielding them to loudly promote a controversial geopolitical agenda would make it difficult for Chinese institutions to maintain foreign cooperation.

China is also aware that other states view it as a free rider on the international stage, and that developing countries expect leaders of international organizations to provide public goods. (Kong 2014) While not without its pain points, SWIFT is popular in large part because it is competent and useful. For CIPS to succeed, it needs to provide quality services and meet the needs of its participants. This explains why CIPS Chairwoman Li Yue promised her team would work hard to "win the trust of the majority of participants with high-quality operation services" (Li Yue 2019).

4.2 China and International Standards

Standards allow producers and consumers of related goods to ensure their products will be compatible with one another. The prevalence of standards on the international level can have meaningful effects on where consumers decide to import from. For example, as a developing country builds its rail system, choosing between different gauges will restrict later purchasing decisions to engines and cars designed in accordance with that standard gauge. As a result, countries that develop novel technologies or become influential in the International Organization for Standardization (ISO) can reap large economic benefits by ensuring standards develop in ways beneficial to domestic producers.

Chinese leaders are well aware of this phenomenon and seek to increase China's power at the standard setting level. To this end, the past two Five-Year Plans have encouraged "taking an active role in establishing international standards" and "pushing Chinese products, services, technologies, brands, and standards to go global." A dedicated standard-setting agenda, "China Standards 2035", was outlined in 2018. (de La Bruyere 2020) In the opinion of China's Standardization Administration, "First-class companies do standards. Second tier companies do technology. Third-tier companies do products." As companies innovate and engineer better products in novel fields, later developments become path-dependent, and the parameters set by early entrepreneurs become accepted industry wide.

In this regard, CIPS may seek to mirror the development of SWIFT. SWIFT was born out of a need to decrease transaction costs and avoid proprietary standards, later becoming extremely influential in determining standards. (Scott 2009) Given China's stated desire to set standards, it may be surprising that CIPS has been an enthusiastic adopter of the ISO20022 standard and even accommodates legacy SWIFT messages. However, this is entirely rational when considering the current prevalence of ISO standards. CIPS leaders' repeated statements about standards implies they are patient and willing to influence financial messaging norms gradually, rather than in a publicly confrontational manner. ISO20022 also lacks a direct financial or security risk to Chinese firms or government agencies in the way privileging certain cutting-edge medicines or computer hardware does. Since the ISO20022 standards are an agreement on how to format specific content for specific message types, the privacy of CIPS messages depends far more on the hardware used by participating banks and the trustworthiness of China's monitoring agencies.

While innovations in the field of financial communication are not as exciting as the standards for nuclear energy, satellites, or new energy vehicles prioritized by official documents, the CIPS company's work is closely linked to the important fields of telecommunications and data security. CIPS clearly intendeds to become a "first-class company/" At the launch of CIPS in 2015, Chairwoman Li Yue announced that the company would "actively promote the docking with international standardization strategies, and promote the "going out" of CIPS standards." (Li Yue 2019) This pledge was repeated in June 2022 by Xu Zaiyue, who promised to reporters that CIPS would continue to improve standardization. (CIPS President Xu Zaiyue 2022)

5. Conclusion

CIPS is a small but competent and growing platform. However, given CIPS's current focus on the RMB and the present SWIFT- and USD-based paradigm for international payments, China remains heavily reliant on SWIFT. China's criticism of SWIFT and fear of Western sanctions is reasonable. To the small extent that international trade is settled in RMB, CIPS provides a useful alternative. Having this alternative means of processing payments decreases the effectiveness of SWIFT-based sanctions, possibly decreasing the chance that such sanctions are attempted at all. If CIPS continues to grow and provide quality services for RMB payments, China and its trade partners will lessen their dependance on SWIFT. This exit option may increase China's leverage in intra-SWIFT debates.

However, CIPS is not merely a play to gain more control over SWIFT reform. As of 2022, the project is a decade old and its current leaders are outlining potential expansions to accommodate digital RMB and currencies other than the RMB. CIPS appears to be part of a patient strategy to increase RMB usage in the middle term, thereby increasing global trade with China, and to influence standards in the long term. The adoption of ISO20022 began only in November 2022, so the international standard-setting role CIPS leadership consistently aspires to may not be achieved for some time. The potential addition of blockchain technology or digital currencies to CIPS is an interesting area of potential further inquiry, especially because China's leading position in researching and piloting central bank digital currencies means it is likely to set standards in this area. (Auer 2021)

These trends point to CIPS becoming a compliment to SWIFT, not a competitor. Any narrative that describes CIPS and SWIFT as being in direct competition would first require CIPS to completely and publicly abandon its specialization in China's sovereign currencies. Additionally, CIPS's intention to promote the use of the RMB is not equivalent to a plan to unseat the American dollar. As the most widely used currency issued by a developing nation, the RMB is well situated to become the cornerstone of new institutional networks. (Ramaswamy 2022) However, having the RMB become too popular too quickly would be detrimental to China's interest as long as it holds large quantities of US debt and dollar reserves.

CIPS's network of direct and indirect participants should shorten payment chains, increasing speed and transparency. This helps remedy some of the largest pain points that currently exist in correspondent banking. (Wandhöfer 2018) This increased efficiency is plainly beneficial and should be welcomed by banks already operating in China. However, because participants interface with CIPS via GUIs and data reports produced by the controlling company, individual bankers may not understand the payment chain or underlying software enough to safely respond to unexpected events. Similarly, CIPS's automated data collection is unable to notice novel problems and will still rely on human supervision. While CIPS's centralization of the payment process should make it easier to scrutinize data and thus predict future incidents or explain past mistakes, it cannot prevent previously unseen risks from arising. The prevalence of straight-through, fully automated payment processing may result in an unscrupulous programmer becoming responsible for the next financial scandal, instead of the freewheeling, Nick Leeson-style rogue banker of yesteryear.

Foreign observers will likely remain wary of CIPS. Suspicions over China's track record in surveillance and mistrust of its officially reported data will probably extend to CIPS. CIPS may also be criticized as hypocritical – now that China has developed an international payment infrastructure it is plain to see that previous complaints regarding SWIFT as a tool of sanctions were founded on the fear of being sanctioned, rather than an idealistic desire for neutrality within the international financial arena. Similarly, CIPS's willingness to accommodate ISO20022 and SWIFT messages underscore the fact that China is not currently opposed to the standards of SWIFT, but rather the present administration of SWIFT.

With the sanctioning of Russian banks in early 2022, China is not alone in its desire to move away from SWIFT. Other countries, such as Brazil, India, and Russia are likely to establish copycat platforms and continue developing their existing payments infrastructure. Further research could investigate how CIPS's policies will influence other international payment platforms, such as Russia's SPFS or the privately-owned OPEN, which was recently granted approval by the Reserve Bank of India to investigate blockchain-based solutions. (BW Online Bureau 2022) The well-known close relationship between Chinese banking institutions and the government could also be better researched by those economists interested in network studies – Li Yue's simultaneous position at CIPS and the People's Bank of China and her successor Shi Wenchao's history as the chief of UnionPay offers an interesting starting point.

China publicly celebrates the coming of what it describes as a multipolar world. How much power specific countries will have in this paradigm is unclear, and it is worth attempting to ascertain the benefits and risks multipolarity poses to China. In the context of all the other institutions China has spearheaded, such as the Belt and Road Initiative, Shanghai Cooperation Organisation, and Asian Infrastructure Investment Bank, CIPS is unlikely to be the decisive factor in determining the extent or efficacy of China's future influence in global affairs.

Instead, CIPS is a prime example of a thoughtful and patient attempt at reforming international norms to China's advantage. China rationally seeks to avoid SWIFT-based sanctions, and developing alternative payment channels nips this risk in the bud. By providing quality transaction-processing services, CIPS appears on track to promote its goal of RMB internationalization. While unlikely to catch the popularity of SWIFT or the USD anytime soon, the establishment of CIPS will increase RMB use by lessening the cost of doing business with China.

References

"An Update to Our Message for the Swift Community." Swift, March 20, 2022. https://www.swift.com/news-events/news/message-swift-community.

"Swift Fin Traffic & Figures." Swift, 2022. https://www.swift.com/about-us/discover-swift/fin-traffic-figures.

Amstad, M., Sun, G., Xiong, W., Guo, K., Qi, F., Jiang, N., & Zhao, Y. (2020). RMB Internationalization: Past, Present, and Prospect. In The Handbook of China's financial system (pp. 229–251). essay, Princeton University Press.

Arslanalp, S., & Simpson-Bell, C. (2021, May 5). US dollar share of global foreign exchange reserves drops to 25-year low. IMF Blog. Retrieved July 2022, from https://blogs.imf.org/2021/05/05/us-dollar-share-of-global-foreign-exchange-reserves-drops-to-25-year-low/

Auer, Raphael, Philipp Haene, and Henry Holden. 2021. "Multi-CBDC Arrangements and the Future of Cross- Border Payments." https://www.bis.org/publ/bppdf/bispap115.pdf.

Bo, Qu. 2012. Review of Dynamic Engagement: China's Participation in International Monetary Institutions. In China, the European Union and the Restructuring of Global Governance, 183–198. Edward Elgar. https://www.elgaronline.com/view/edcoll/9781781004265/9781781004265.00003.xml.

BW Online Bureau. "Open's Cross-Border Payments Product Gets Nod from RBI." BW Businessworld, July 21, 2022. https://www.businessworld.in/article/Open-s-Cross-Border-Payments-Product-Gets-Nod-From-RBI/21-07-2022-438074/.

"China, Singapore sign 150-billion yuan currency swap deal." (2010, July 24). Information Company. https://link.gale.com/apps/doc/A232458655/ITOF?u=mlin_w_umassamh&sid=ebsco&xid=1f92a08c

"China, Thailand Sign Currency Swap Agreement." (2001, December 7). Retrieved July 2022, from http://en.people.cn/200112/06/eng20011206_86099.shtml

Chorzempa, Martin. 2021. "China, the United States, and Central Bank Digital Currencies: How Important Is It to Be First?" China Economic Journal, January 1–14. https://doi.org/10.1080/17538963.2020.1870278.

Compilation and Translation Bureau, Central Committee of the Communist Party of China. 2016. "The 13th Five-Year Plan for Economic and Social Development of the People's Republic of China." https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf

CSET. 2021 "Outline of the People's Republic of China 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035" Ben Murphy, ed. Etcetera Language Group, Inc. trans. https://cset.georgetown.edu/wp-content/uploads/t0284_14th_Five_Year_Plan_EN.pdf.

Currency composition of official foreign exchange reserve - IMF Data. (2022, June 30). Retrieved July 2022, from https://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4

de La Bruyère, Emily, and Nathan Picarsic. "China Standards 2035." Horizon Advisory, April 2020. https://www.horizonadvisory.org/china-standards-2035-first-report.

de Meijer, Carlo R. W., and Janet Ming. 2015. "Towards an International Payments System in China: An Overview of Progress and Remaining Challenges." Journal of Payments Strategy & Systems 9 (2): 172–79. https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,sso&db=bth&AN=103611219&site=eds-live&scope=site.

Eichengreen, B. J. (2013). Exorbitant privilege: The rise and fall of the dollar. Oxford University Press.

Eichengreen, Barry. (2003) What to Do with the Chiang Mai Initiative. Asian Economic Papers 2003; 2 (1): 1–49. doi: https://doi.org/10.1162/153535103322022878

Eichengreen, Barry. 2022. "CSIS BRIEFS Sanctions, SWIFT, and China's Cross-Border Interbank Payments System." https://www.jstor.org/stable/pdf/resrep41418.pdf?acceptTC=true&coverpage=false&addFooter=false.

Gallagher, K.P. and Irwin, A. (2014), Exporting National Champions: China's Outward Foreign Direct Investment Finance in Comparative Perspective. China & World Economy, 22: 1-21. https://doi.org/10.1111/cwe.12089

Global Times Staff. 2022. "SWIFT Not Irreplaceable, but Substitution Requires Considerable Preparation: Former PBC Chief." https://www.globaltimes.cn/page/202204/1259475.shtml.

Huang, Y. and Wang, B. (2011), Chinese Outward Direct Investment: Is There a China Model?. China & World Economy, 19: 1-21. https://doi.org/10.1111/j.1749-124X.2011.01254.x

Ikenberry, G. John, and Darren Lim. 2017. "China's Emerging Institutional Statecraft." https://www.brookings.edu/wp-content/uploads/2017/04/chinas-emerging-institutional-statecraft.pdf.

Izenman, Kayla, Samantha Hoffman, John Garnaut, Matthew Johnson, Alexandra Pascoe, Fergus Ryan, and Elise Thomas. "DC/EP's Potential Internationalisation and the Global Economy." The Flipside of China's Central Bank Digital Currency. Australian Strategic Policy Institute, 2020. http://www.jstor.org/stable/resrep26895.11.

Jin, Emily. "Why China's CIPS Matters (and Not for the Reasons You Think)." Lawfare, April 5, 2022. https://www.lawfareblog.com/why-chinas-cips-matters-and-not-reasons-you-think.

Kong Qingjiang, "China in the WTO and beyond: China's Approach to International Institutions," Tulane Law Review 88, no. 5 (May 2014): 959-982

Kuo, Mercy A., and Emily Jin. "China's CIPS: A Potential Alternative in Global Financial Order." The Diplomat, April 25, 2022. https://thediplomat.com/2022/04/chinas-cips-a-potential-alternative-in-global-financial-order/.

Li Keqiang. 2015. "A New Blueprint for Global Growth." http://english.www.gov.cn/premier/news/2015/09/11/content_281475187661153.htm.

Majd, Mariam, "Dimensions of US Global Financial Power: Essays on Financial Sanctions, Global Imbalances, and Sovereign Default" (2019). Doctoral Dissertations. 1793. https://doi.org/10.7275/15235513 https://scholarworks.umass.edu/dissertations_2/1793

Monetary and Economic Department. (2009, December 8). BIS Triennial Central Bank Survey 2019. Bank for International Settlements.

Payment and Settlement Department of the People's Bank of China. 2016. "China Payment System Development Report 2015." http://www.pbc.gov.cn/eportal/fileDir/english/resource/cms/2018/11/2018111217142019322.pdf

Ramaswamy, S. (2022), The Threat of Financial Sanctions: What Safeguards Can Central Banks Build? China & World Economy, 30: 23-41. https://doi-org.silk.library.umass.edu/10.1111/cwe.12417

Schachtschneider, Jonas, CIPS – China's Cross-Border Interbank Payment System and Its Role Within the RMB Internationalization Process (October 23, 2019). dx.doi.org/10.2139/ssrn.4096107.

Scott, Susan V., and Markos Zachariadis. 2012. "Origins and Development of SWIFT, 1973–2009." Business History 54 (3): 462–82. https://doi.org/10.1080/00076791.2011.638502.

Sussangkarn, C. (2011), Chiang Mai Initiative Multilateralization: Origin, Development, and Outlook. Asian Economic Policy Review, 6: 203-220. https://doi.org/10.1111/j.1748-3131.2011.01196.x.

The SWIFT Standards Team. ISO20022 For Dummies®, SWIFT 6th Limited Edition. Hoboken, NJ: John Wiley & Sons, Inc., 2022.

USBC. "China in International Standards Setting - USCBC Recommendations for Constructive Participation." The US-China Business Council, February 2020. https://www.uschina.org/file/china-international-standards-setting-uscbc-recommendations-constructive-participation.

Walker, D., Henry, A., & Gonzalez, G. (2021). The Spread of Central Bank Currency Swaps Since the Financial Crisis. Council on Foreign Relations. Retrieved July 2022, from https://www.cfr.org/central-bank-currency-swapssince-financial-crisis/#!/.

Wandhöfer, Ruth, and Barbara Casu. 2018. "The Future of Correspondent Banking Cross Border Payments." https://swiftinstitute.org/wp-content/uploads/2018/10/SIWP-2017-001-The-Future-of-Correspondent-Banking_FINAL.pdf.

Wang, Laiyue, Junwen Shen, Yingjie Wu, and Aletunhan Abdzeyimu. 2022. "Financial Innovation in the Field of RMB Internationalization." Frontiers in Business, Economics and Management 3 (2): 17–20. https://doi.org/10.54097/fbem.v3i2.248.

"CIPS zong Xu Zaiyue: Yunyong jinrong keji genghao jianshe Renminbi kuajing zhifu xitong CIPS 总裁许再越：运用金融科技更好建设人民币跨境支付系统 [CIPS President Xu Zaiyue: Use Financial Technology to Better Build the RMB Cross-Border Payments System]." Sohu, June 1, 2022. https://www.sohu.com/a/553024825_674079.

"Yin ban fa 〔2015〕210 hao《Renminbi kuajing zhifu xitong yewu zanxing guize》（quan wen）银办发〔2015〕210 号《人民币跨境支付系统业务暂行规则》（全文）[Bank Law (2015) #210, Interim Rules on RMB Cross-Border Payment System Business (Complete Text)]." 郑州威驰外资企业服务中心, December 23, 2015. https://www.waizi.org.cn/law/7285.html.

"Zhongguo Renmin Yinhang guanyu yinfa《Renminbi kuajing zhifu xitong yewu guize》de tongzhi 中国人民银行关于印发《人民币跨境支付系统业务规则》的通知 [People's Bank of China Publication of Circular on RMB Cross-Border Payment System Business Rules]." 结汇云, March 23, 2018. http://www.jiehuiyun.com/know/content.php?id=365.

21st Century Economic Report 21 世纪经济报道. (2021, May 18). "Kuajing Renminbi yewu qingsuan zai tianxin gongju CIPS biaozhun shoufaqi qiyeban mianshi 跨境人民币业务清算再添新工具 CIPS 标准收发器企业版面世 [New Cross-Border RMB Business Settlement Tool Released: CIPS Standard Receiver Enterprise Edition]." Tencent News. Retrieved October 31, 2022, from https://new.qq.com/omn/20210518/20210518A0EKWX00.html.

Hu, Bo 胡波. 2010. “Guanyu jianli woguo tongyi kuajing zhifu xitong de shexiang 关于建立我国统一跨境支付系统的设想 [Ideas on the Establishment of a Unified Cross-Border Payment System in China].” Jinrong huiji 金融会计 2010 (2): 19–23. http://caod.oriprobe.com/articles/21554517/caod_88892010029.htm.

Lao, Jiadi 劳佳迪. 2015. “Renminbi kuajing zhifu xitong shangxian: zhongzi da yinhang waimao qiye zui shouyi 人民币跨境支付系统上线：中资大银行外贸企业最受益 [RMB Cross-Border Payment System Goes Online: Big Chinese Banks' Foreign Trade Enterprises Benefit Most].” Renminwang 人民网. October 20, 2015. http://finance.people.com.cn/n/2015/1020/c1004-27716620.html.

Li, Yue 励跃. 2019. “Renminbi kuajing zhifu xitong jianzhi de xia yi bu——geng hao zhuli Zhongguo jinrongye dui wai kaifang he Renminbi guijihua jincheng 人民币跨境支付系统建设的下一步——更好助力中国金融业对外开放和人民币国际化进程 [The Next Step in the Construction of the RMB Cross-Border Payment System - Better Support the Process of Opening Up China's Financial Sector to the Outside and the Internationalization of the RMB].” Dangdai jinrongjia 当代金融家 2019 (6). https://mall.cnki.net/magazine/article/DJRJ201906010.htm.

Ma, Zheng 马静. “Fuwuhui Shijian: Duihua kuajing qingsuan gongsizong Xu Zaiyue: CIPS wei Renminbi guijihua ‘jiaqiaopulu’ 服贸会时间: 对话跨境清算公司总裁许再越：CIPS 为人民币国际化‘架桥铺路’ [Time for the Service Convention: A Conversation with Xu Zaiyue, President of Cross-Border Clearing Corporation: CIPS 'Builds Bridges and Paves the Way' for RMB Internationalization]” Xinlangwang 新浪网, September 5, 2022. https://t.cj.sina.com.cn/articles/view/5993531560/1653e08a8020018ebl.

People’s Bank of China 中国人民银行. “Renminbi kuajing zhifu xitong (yi qi) da jizhe wen 人民币跨境支付系统（一期）答记者问 [RMB Cross-border Payment System (Phase I) Answers to Journalist’s Questions].” 2015. October 8, 2015. http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/2960456/index.html.

People's Bank of China, Ministry of Finance, Ministry of Commerce, General Administration of Customs, State Taxation Administration 中国人民银行财政部 商务部 海关总署 国家税务总局. “Kuajing maoyi renminbi jiesuan shidian guanli banfa (Renmin Yinhang gonggao 〔2009〕di 10 hao 跨境贸易人民币结算试点管理办法（人民银行公告〔2009〕第 10 号）[Measures for the Administration of the Pilot Cross-border Trade Settlement in RMB (People’s Bank of China Announcement [2009] No. 10)].” 2009 http://www.gov.cn/zwgk/2009-07/02/content_1355475.htm.

Wu, Xiangyang 邬向阳. (2022, September 26). “Wu Xiangyang: Chixu tisheng Renminbi kuajing zhifu bianlihua shuiping 邬向阳：持续提升人民币跨境支付便利化水平 [Wu Xiangyang:

Continue to Enhance the Convenience of RMB Cross-Border Payments].” Xinlangwang 新浪网. Retrieved October 31, 2022, from https://finance.sina.com.cn/money/bank/yhpl/2022-09-26/doc-imqqsmrp0505974.shtml.

Xu, Zaiyue 许再越. “Xinchun heci 新春贺词 [Lunar New Year’s Congratulations].” Cross-Border Interbank Payment System, January 31, 2022. https://www.cips.com.cn/cips/zxzx/gsxw/56121/index.html.

Yang Xihan 杨茜涵. 2019. “’Yidaiyilu’ Beijing xia de Renminbi kuajing zhifu xitong fazhan yanjiu 一带一路’背景下的人民币跨境支付系统发展研究 [Study on the Development of RMB Cross-border Payment System in the Context of ‘One Belt, One Road’].” Shidai jinrong 时代金融 2019 (10). https://www.fx361.com/page/2019/0722/5341101.shtml.