PERSPECTIVES ON CHINESE DIGITAL RMB STRATEGY

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Introduction

In mid-April amid the COVID-19 pandemic, an image (see Figure 1) of the first test trials of the digital RMB—China's ambitious digital currency—were leaked and widely disseminated around the world, generating widespread curiosity. The People's Bank of China (PBOC)—China's central bank and the entity responsible for the digital currency—is experimenting with paying salaries and granting subsidies to workers at state-owned banks in four pilot cities: Shenzhen, Chengdu, Suzhou, and Xiong'an, with a nationwide rollout potentially ready as early as mid-May. While a digital RMB has been under research since 2014, this expedited rollout is unexpected given the unusual *speed* and *timing* suggesting that China, typically known for taking a more gradualist approach, may be pushing for the digital currency to be released as soon as possible.

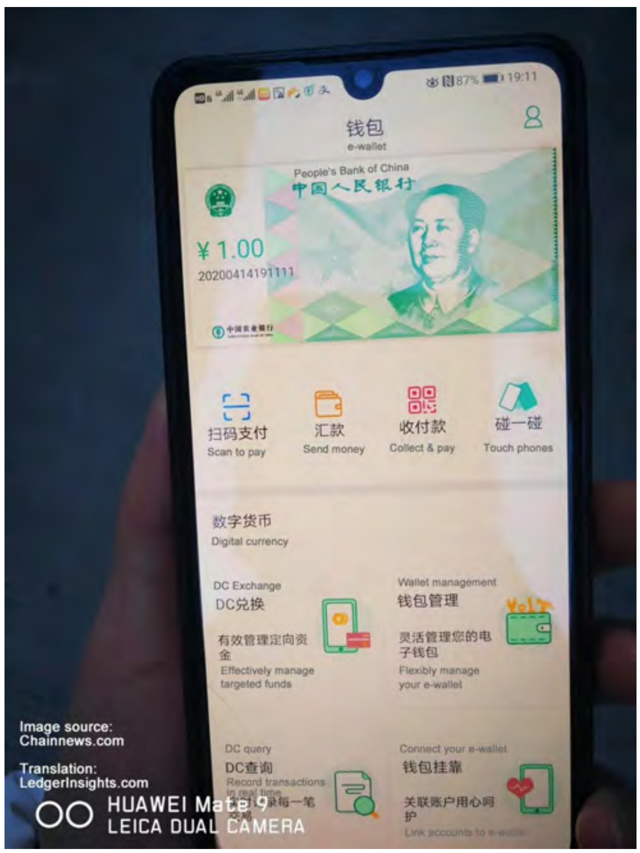

Figure 1: Leaked image with English translation[1]

[1] "China's Central Bank Hints at Launch Timing of Digital Renminbi Currency," Ledger Insights - enterprise blockchain, April 20, 2020, https://www.ledgerinsights.com/china-central-bank-digital-currency-cbdc-renminbi-timing/.

Why has China chosen this moment of economic and social turmoil to roll out such a complex and ambitious plan? This paper argues that China is seeking to expedite the development of the official DCEP (Digital Currency Electronic Payment) now in order to leverage the COVID-19 economic crisis as a part of an internationalization strategy to eventually replace the US dollar as the world's reserve currency. This paper will first provide a literature review on prevailing perspectives, second explore potential advantages of such a digital currency, third analyze the four drivers behind why China has deliberately chosen to launch the DCEP now, and fourth conclude with limitations. The paper uses publicly available quantitative financial and economic data, commentary from industry/academic experts, and news journalism from both China and the US.

Literature review

Due to the fast evolving nature of the topic and limited information available thus far, this literature review will serve to provide a brief background on digital RMB design elements and contextualize this paper within the larger debate around RMB internationalization.

The currency will be a centralized system (in contrast to most *decentralized* cryptocurrencies) where the PBOC would be empowered with controls over the currency, maintain visibility into transactions, etc. Not wanting to become a consumer-facing bank and maintain a degree of independence however, the DCEP is expected to resemble a two-tier structure where the PBOC issues the currency to seven institutions which include the "Big Four" state-owned banks of China, Alibaba (owns Ant Financial which maintains AliPay), WeChat (owns WeChat which maintains WeChat Pay), and UnionPay (China's state-run payment card network).[2] These institutions would then have the authority to circulate the currency amongst their customers. Cash is already fast becoming obsolete thanks to AliPay and WeChat Pay which together have more than 1.7 billion active accounts across China with a rich and complex online ecosystem of commercial infrastructure.[3] It was estimated that in 2018, mobile payments made up more than 80% of all payments in China, up from less than 20% just five years prior.[4] Other private Chinese

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[2] Miranda Wood, "China's Central Bank Digital Currency Will Be Issued to 7 Firms Inc. Alibaba, Tencent, Union Pay," Ledger Insights - enterprise blockchain, August 28, 2019, https://www.ledgerinsights.com/china-digital-currency-issued-instutions/.

[3] Jonita Singh, "China Is Turning a Crisis into an Opportunity and Is One Step Closer to CBDC," *Wink Report* (blog), March 26, 2020, https://winkreport.com/china-is-turning-a-crisis-into-an-opportunity-and-is-one-step-closer-to-cbdc/.

[4] "An Elegy for Cash: The Technology We Might Never Replace," MIT Technology Review, accessed May 11, 2020, https://www.technologyreview.com/2020/01/03/131029/an-elegy-for-cash-the-technology-we-might-never-replace/.

companies including Huawei and China Merchants Bank have been part of the DCEP development effort "selected based on their rich blockchain and third-party payment experiences."[5]

Most technologists agree that central bank digital currencies (CBDC) are not an "if" but "when" with the two largest competing contenders being Facebook's Libra and China's DCEP. After news of Libra broke in 2019 (with a projected 2020 launch), China noticeably accelerated its efforts and Chinese banking officials have explicitly linked the development of Libra as a factor.[6] Although more than 20 countries are currently exploring a CBDC, the consensus of economists and technologists agree China will be the first major country to achieve implementation.[7] There is also near-unanimous consensus (at least from the West) that China's DCEP will "give the PBOC extraordinary power and visibility into the financial system, more than any central bank has today" some even calling it the "the death of financial privacy."[8] What financial experts disagree on is whether China has the intention and capacity to internationalize the RMB in the long-term against the US dollar. A recent survey of 200 institutional investors (100 headquartered in mainland China and 100 outside of it) found that 53% of investors believe the RMB will surpass the US dollar as the world's major reserve currency.[9] Optimism was clearly higher within China where 62% believed the RMB will surpass the US dollar compared to just 43% outside China.[10] Those that see potential in the RMB point to China's status as the world's largest trading nation, recent moves by the PBOC to test different mechanisms for financial liberalization, and the recent Belt and Road Initiative (BRI). Most see it as inevitable as China's economy grows to 2-3x the size of the American economy by 2050.[11] Those who have less faith point to the strong network effects which make the US dollar difficult to supplant, the unmatched liquidity and transparency of American financial markets, and an issue of trust in the Chinese government. Skeptics frequently argue that the RMB will "never be liquid enough across all asset classes to serve as a viable reserve currency" and that China equates financial liberalization with a partial loss of sovereign control.[12]

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[5] Singh, "China Is Turning a Crisis into an Opportunity and Is One Step Closer to CBDC."
[6] "An Elegy for Cash."
[7] "An Elegy for Cash."
[8] "An Elegy for Cash."
[9] Ansuya Harjani, "Yuan to Supersede Dollar as Top Reserve Currency: Survey," CNBC, February 27, 2014, https://www.cnbc.com/2014/02/26/yuan-to-supersede-dollar-as-top-reserve-currency-survey.html.
[10] Harjani.
[11] Amanda Macias Bursztynsky Jessica, "Elon Musk Says Chinese Economy Will Surpass US by 2 or 3 Times: 'The Foundation of War Is Economics,'" CNBC, February 28, 2020, https://www.cnbc.com/2020/02/28/musk-says-chinese-economy-will-surpass-the-us-by-two-or-three-times.html.
[12] Harjani, "Yuan to Supersede Dollar as Top Reserve Currency."

This paper's argument rests upon the underlying assumption that China *does* desire for its RMB to become the global reserve currency and replace the US dollar over the long-term and that it has the capability to do so for three reasons: a) China as a result of its more advanced economy higher on the value chain no longer benefits from currency manipulation as it did in the past, b) since 2008, the PBOC has been testing a number of methods in its gradualist approach in capital account liberalization, and c) the CCP clearly understands that adoption of CBDCs is inevitable with enormous benefits at stake for the country that can capitalize on the opportunity first, and thus feel competition from Libra 2.0's planned rollout in 2020.

First, the most important change in Chinese economic policy driving the desire for internationalization has occurred as a result of Xi Jinping's effort at upgrading the Chinese economy to become more service-oriented, consumer-driven, and more advanced on the value chain. What some refer to as a "third economic transition" was already underway before the US-China trade war and COVID-19, both events which have only accelerated this preexisting trend. As Chinese wages continue to rise, low to medium-end manufacturing will continue to move out of China and to Southeast Asia and eventually Africa (countries with lower wages) and thus the mercantilist behavior China previously engaged in of artificially setting the value of its currency to make its exports more competitive in the global marketplace is outdated.

Second, most financial analysts agree that the principal barrier for the RMB in becoming the global reserve currency is matching the US in "depth and transparency of financial markets" in addition to "predictability and credibility of monetary policy."[13] Since the 2008 global financial crisis, the PBOC has been experimenting with different ways to liberalize capital market restrictions "gradually, so as to avoid panic in the market."[14] Some of these methods include "connect" arrangements with Hong Kong remaining an intermediary to allow foreign investors to buy Chinese stocks and bonds, the launch of a yuan-denominated crude oil futures contract (March 2018), the creation of offshore RMB clearing hubs, bilateral currency swaps with more than 30 countries, and successfully lobbying for a spot in the IMF's Special Drawing Rights basket of reserve currencies (September

[13] "China's Currency Will Not Replace the US Dollar," Financial Times, accessed May 5, 2020, http://ftalphaville.ft.com/2018/09/19/1537329600000/China-s-currency-will-not-replace-the-US-dollar/.

[14] June 01 and 2018 Author: Joshua Bateman, "Global Finance Magazine - One Belt, One Road, One Currency," Global Finance Magazine, accessed May 5, 2020, https://www.gfmag.com/magazine/june-2018/one-belt-one-road-one-currency.

2016).[15] Some Western analysts might misinterpret a deliberate gradualist approach with a lack of progress but China always adopts new policies incrementally.

Third, it's clear that China's development is driven, in part, by competition from their American competitor, Libra. With more than 2.6 billion users between Facebook, Instagram, and Whatsapp, Libra had the intent and no doubt the capacity to create a new global money and be the foundation for a "fresh universe of financial services."[16] Backed by a consortium of partners including PayPal, Mastercard, and Visa, Libra intended to create something like a global digital bank with users able to freely send digital currency (backed by a Dollar or Euro in a bank) to any of their contacts across all of Facebook's platforms.[17] Facebook, with most of their users in the developing world, also held vast potential for extending credit and investing for those 1.7 billion adults who still remain outside of the financial system.[18] [19] Plans to integrate WhatsApp, Instagram, and Facebook Messenger by "unifying their underlying technical architecture" by early 2020 also configured into this plan by allowing users to communicate (and eventually send payments) across platforms.[20] Just days after Facebook announced a 2.0 version after scathing regulatory criticism forced Facebook to make changes for a "watered down version," China quickly commenced with their pilot testing.[21]

The issue of RMB internationalization remains controversial though with many arguing that market forces will never be the principal actor in determining the RMB's value, opening up the capital account would require a complete overhaul of the country's financial system, and that supplanting the US dollar is extremely difficult due to the inherent network effects involved. What critics miss in disputing China's intention though is that until *very recently* i.e. this COVID-19 crisis, liberalization would have been *disadvantageous* for economic growth as China historically relied on exports to fuel its growth. Foreign countries doing business with China almost exclusively desire payment in USD and considering China has consistently maintained a surplus of over $3 trillion worth of US

[15] Kelly Olsen, "Trade War or Not, Experts Say China's Yuan Is Poised to Become a Global Heavyweight," CNBC, December 3, 2018, https://www.cnbc.com/2018/12/03/experts-say-chinas-yuan-is-poised-to-become-a-global-heavyweight.html.
[16] Mike Isaac, "Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger," *The New York Times*, January 25, 2019, sec. Technology, https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html.
[17] Nathaniel Popper and Mike Isaac, "How Libra, Facebook's Cryptocurrency, Would Work for You," *The New York Times*, June 18, 2019, sec. Technology, https://www.nytimes.com/2019/06/18/technology/how-libra-would-work-for-you.html.
[18] Popper and Isaac.
[19] Tatiana Koffman, "How China Will Take Over The World," Forbes, accessed May 5, 2020, https://www.forbes.com/sites/tatianakoffman/2019/12/17/how-china-will-take-over-the-world/.
[20] Isaac, "Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger."
[21] "China's Bitcoin-like Cryptocurrency Enters Race Days after Facebook's Libra Fails to Fly," *The Financial Express* (blog), May 2, 2020, https://www.financialexpress.com/industry/banking-finance/china-cryptocurrency-bitcoin-dollar-digital-currency-dcep-bank-virtual-currency-facebook-libra/1946221/.

in FX reserves (as of March 2020), China was more than willing to continue using the USD in cross-border trade.[22] Currency composition of world FX reserves indeed confirms that as of 2019Q4, 61% of reserves were in USD while only 2% was held in RMB—if China were to have used RMB, global FX share would have naturally increased proportionally as China's economy has grown—but it hasn't. China deliberately chose to keep its currency a fraction of the world's global reserves and quietly build a wildly successful economy working within the current system, tweaking it to its advantage. In order to become a reserve currency, China needs to create a huge body of yuan circulating outside the country. Now the world's largest trading nation (overtaking the US in 2013), China will only continue to grow to 2-3 times the size of the American economy according to most experts.[23] [24] Already 128/190 countries trade more with China than they do with the United States—a feat only accomplished as recently as 2018 (see figure 2).[25]

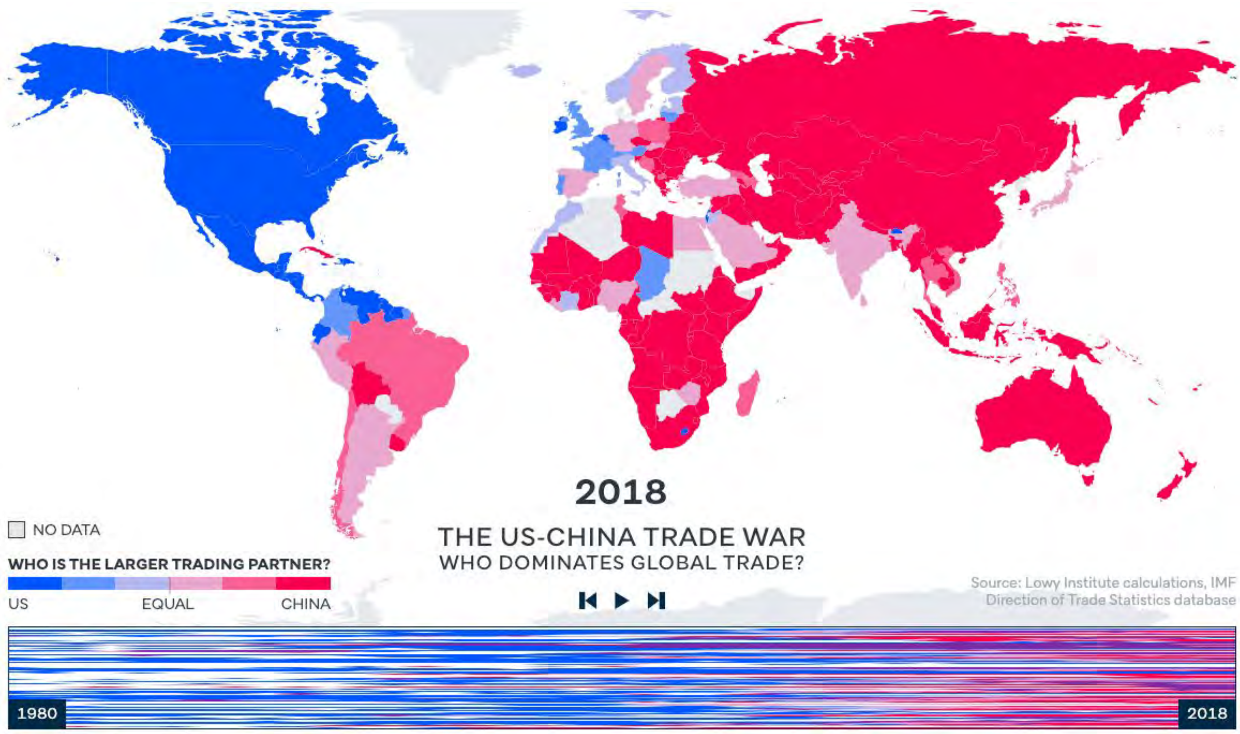

Figure 2: Top trading partner (2018)[26]

[22] "China Foreign Exchange Reserves | 1980-2020 Data | 2021-2022 Forecast | Calendar," accessed May 5, 2020, https://tradingeconomics.com/china/foreign-exchange-reserves.
[23] "China Surpasses US as World's Largest Trading Nation | Business | The Guardian," accessed May 6, 2020, https://www.theguardian.com/business/2014/jan/10/china-surpasses-us-world-largest-trading-nation.
[24] Bursztynsky, "Elon Musk Says Chinese Economy Will Surpass US by 2 or 3 Times."
[25] "How China Overtook the U.S. as the World's Major Trading Partner," accessed May 6, 2020, https://www.visualcapitalist.com/china-u-s-worlds-trading-partner/.
[26] "How China Overtook the U.S. as the World's Major Trading Partner."

Before 2000, the US dominated with more than 80% of countries trading more with the US than China.[27] Thus this switch has been swift, rapid, and recent. Part of this recent change can be attributed to the Belt and Road Initiative (BRI), a megaproject that begins to make more sense from a currency internationalization perspective.

With the underlying assumption established, this paper will now focus on the area which has thus far been missing from the literature—the link between the digital RMB, RMB internationalization, and the timing of the COVID-19 economic crisis.

Analysis

Advantages of the digital RMB

A centrally-backed digital RMB holds enormous benefits for China that will transform society and enable the government to solve tremendously difficult problems that will arise in its economic development. Perhaps the most direct advantage are the almost god-like powers it will grant the governor of the PBOC with respect to economic and financial decision-making. If the entire nation were to be cashless, on several screens at the PBOC headquarters in Beijing, the central bank governor would theoretically be able to view, in real-time, the transactions, savings, growth rates, and other financial statistics of 1.4 billion people. Monetary and fiscal policy would have zero lag-time (traditionally 7-8 months before results show up) as injecting stimulus money, raising or lowering interest rates, or sending welfare subsidies would all have an instantaneous effect that could be monitored and adjusted accordingly at the mere click of a button. With such centralized big data, modelling and prediction with the assistance of AI would enable economists and policymakers to accurately simulate a wide range of policies to an incredibly microscopic level of detail. One for example could precisely predict how a change to the internal immigration system would affect the relative labor markets of cities, develop the most effective trade war strategy given available resources, and calculate the exact amount of investment needed when, where, and in which industries. A CBDC would turn the entire nation into an extremely advanced version of "The Sims" and the possibilities for domestic economic policymaking are endless. Another benefit of the digital RMB would be the associated advantages that come with visibility. Officials could more easily identify and punish financial crime (tax evasion, illegal capital flight, money laundering), the financing of illicit activities like drug trafficking and terrorism, curb shadow banking, etc. Theoretically, individuals or companies could be sanctioned just by having their ability to

[27] "How China Overtook the U.S. as the World's Major Trading Partner."

transact taken away. The digital RMB also is a building block of an automated, high-tech economy of the future with the currency potentially seamlessly integrating with IOT, automated supply chains, smart cities, smart ports, the social credit system, and the extensive surveillance network. The CDBC holds enormous promise in lowering transaction costs, stimulating demand, and even automating parts of the economy by ending banks' centuries-long intermediary role in the monetary system (this will be critical for reasons explained later). For example, companies might automate a transaction so that if digital sensors were to detect a need for more goods, automatic digital payments would be sent to a supplier who would then proceed to move the goods to their final destination with minimal to no human supervision.[28] By removing intermediaries and by automating business by way of this "digital lockbox" which no longer requires banks to hedge exchange rate risk, millions of autonomous processes, systems, and supply chains will directly exchange information, goods, and money.[29] Finally, the digital RMB is a creative way to ensure financial stability by backing WeChat Pay and AliPay accounts with real assets. The Chinese Communist Party (CCP) likely fears the inevitable social chaos should one of these private payment platforms fail and thus by co-opting these companies as partner institutions, the government is able to piggyback off of their already widespread success both domestically in China and globally.

Timing of the digital RMB

The Belt and Road Initiative (BRI) and the Digital Silk Road

The BRI was announced in 2013 as Xi Jinping's signature foreign policy initiative and promises 70+ countries across Asia, Europe, and Africa $1-8 trillion worth of investment in infrastructure projects of every kind (some dispute the $8 trillion figure).[30] China has been drawing upon its massive stock of USD to finance its BRI projects, but even China without an infinite supply of US treasuries lacks the capacity to meets its projected goals and with an imposed limit which some refer to as a "dollar constraint," China at some point will be forced to begin using RMB to finance the BRI.[31] If the RMB was the global currency, the Chinese government could theoretically print RMB as it saw fit, but BRI is tethered to something it does not directly control. Having only spent $340 billion to date, China recognizes that it isn't just more desirable, but *necessary* to use the Chinese RMB as the main

[28] Business Reporting Desk, "Why the U.S. Shouldn't Let China Dominate the Digital Currency Race - Belt & Road News," April 9, 2020, http://2020/04/09/why-the-u-s-shouldnt-let-china-dominate-the-digital-currency-race/.
[29] Desk.
[30] "How Big Is China's Belt and Road?," accessed May 6, 2020, https://www.csis.org/analysis/how-big-chinas-belt-and-road.
[31] "The Belt and Road's Dollar Problem," Financial Times, accessed May 5, 2020, http://ftalphaville.ft.com/2018/12/18/1545130791000/The-Belt-and-Road-s-dollar-problem/.

investment vehicle currency at some point.[32] Even if estimates of total BRI spend were to peak low at $1 trillion USD instead of $8t, this doesn't account for the enormous projected rise in China's global trade and rapid business expansion of Chinese banks and business interactions. Simultaneously in light of the recent virus, China also recognizes that its stock of USD reserves will begin to decrease faster than it had previously realized as a result of potential decoupling of the American and Chinese economies from COVID-19 backlash. Some may question why the BRI in the past 8 years hasn't seen the proliferation of RMB use and there are three reasons: a) China's international partners don't *want* to accept RMB yet if USD is still an option, b) China's supply of US treasuries provides them with a valuable "nuclear option" to sell in its trade war with the US should tensions reach that level, and c) China's international partners just simply wouldn't trust China initially as a business partner until some tangible progress has been made already. This logic around the currency of the BRI isn't enough provided the entire initiative is meant to take place over decades while the COVID-19 crisis is immediate. Thus in a similar manner to 2008, China sees international lending as another avenue through which to quickly promote internationalization, leading to the second part of the argument.

Foreign lending

With the global economy ravaged by the effects of COVID-19 shutdown and with China's reputation on the line, China recognizes that it needs to compensate the world. China intends to extend credit, loan relief, financial assistance, and possibly loan forgiveness to foreign governments around the world. With nearly half of the world's countries considering bailouts from the IMF, China wants to capitalize on the situation before Western multilateral institutions do; if 2008 is any indication, China shouldn't face much competition (see Figure 3).[33] China adopted a similar strategy during and after the 2008 global financial crisis in which it bought all kinds of indebted strategic assets and distressed companies such as ports, technology companies, critical infrastructure, and real estate (see Figure 4).

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[32] "How Big Is China's Belt and Road?"

[33] Josh Zumbrun and David Harrison, "IMF, World Bank Face Deluge of Aid Requests From Developing World," *Wall Street Journal*, April 9, 2020, sec. World, https://www.wsj.com/articles/imf-world-bank-face-deluge-of-aid-requests-from-developing-world-11586424609.

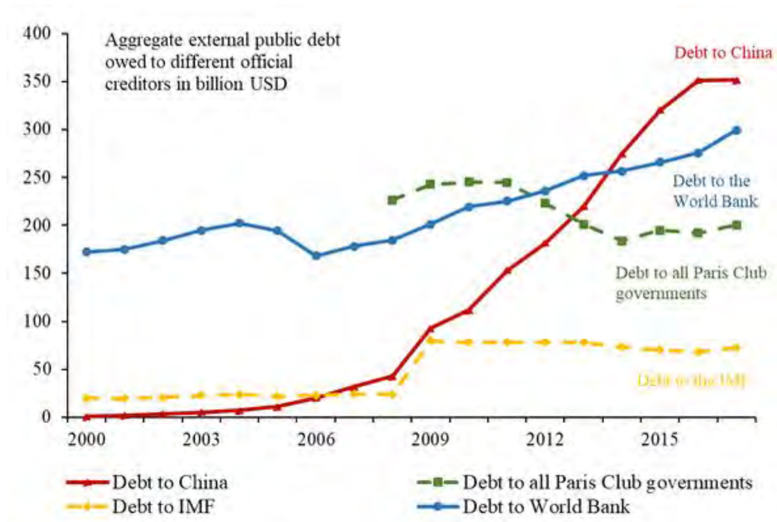

Figure 3[34]

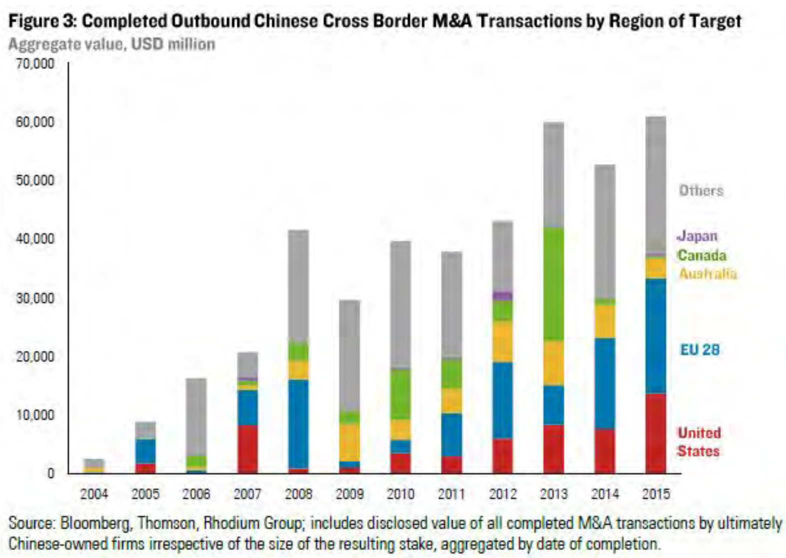

Figure 4[35]

Desperate for quick cash, foreign governments were more than willing to allow China to buy stakes and equity at lower prices desperate to restart their economies. Recognizing again that the world will be in demand for quick, fast cash to get economies back up and running, China has displayed an impressive recovery in quickly containing the virus so that it could rapidly restart its economy ahead of the rest of the world. Equipped with both domestic stability

[34] Sebastian Horn, Carmen Reinhart, and Christoph Trebesch, "China's Overseas Lending and the Looming Developing Country Debt Crisis," *VoxEU.Org* (blog), May 4, 2020, https://voxeu.org/article/china-s-overseas-lending-and-looming-developing-country-debt-crisis.

[35] "Figure 2. Completed Outbound Chinese Cross Border M&A Transactions By...," ResearchGate, accessed May 6, 2020, https://www.researchgate.net/figure/Completed-Outbound-Chinese-Cross-Border-M-A-Transactions-by-Region-of-Target-annual_fig2_315497771.

and sufficient liquidity, this ability of China to remain "recession-proof" during times of global economic downturn as one McKinsey partner put it, is a unique advantage of its hybrid model of state capitalism.[36] Beijing understands that there will be heightened skepticism after 2008 and especially with its reputation in danger from the disputed origins of COVID-19, it knows foreign partners (at least the more well-off countries) can afford to block these types of acquisitions as Europe has done.[37] But 2020 is different from 2008 in one important way—China may use the opportunity to promote one of the most rudimentary advantages of contactless digital payment: physical cash and coins are inferior from the perspective that they easily spread disease. A former president of the Bank of China recently argued that the PBOC should speed the release of its planned digital currency in light of the pandemic for this exact reason.[38] The exchange of tangible currency is really the *only* ultimately necessary human-to-human transaction in society now, but while China might be the undisputed world leader in digital payment services (WeChat Pay and AliPay), these services aren't widely available to those outside of China—at least not yet. This leads to the third part of the argument.

A Chinese fintech empire

In recent years, Ant Financial and Tencent, the custodians which have pioneered digital payment in China have gone on an aggressive M&A spree across mostly Asia, but increasingly now the rest of the world, wholly acquiring or buying stakes in foreign digital payment platforms creating an "overseas payment empire."[39] As of February 2019, AliPay now maintains an active presence in 54 countries and regions while WeChat Pay has coverage of 17 currencies in 49 countries and regions.[40] Substantial acquisitions/stakes include Paytm (India), Kakao Pay (Korea), Lazada (Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam), Telenor (Pakistan), bKash (Bangladesh), Akulaku (Indonesia), WorldFirst (UK), Nubank (Brazil), Line (Japan), Go-Jek (Indonesia), and many more.[41] While cross-border payments with the original apps are slower to grow, mobile transactions on these native, local platforms are exploding, especially in the developing world. Because Tencent and Alibaba are two of seven

[36] "Is China Recession Proof? | McKinsey," accessed May 6, 2020, https://www.mckinsey.com/featured-insights/china/is-china-recession-proof.
[37] Annabelle Timsit, "Europe Is Worried about Chinese Corporate Takeovers Tied to Covid-19," Quartz, accessed May 6, 2020, https://qz.com/1843832/europe-fears-chinese-corporate-takeovers-tied-to-covid-19/.
[38] "No, Coronavirus Is Not a Good Argument for Quitting Cash," MIT Technology Review, accessed May 6, 2020, https://www.technologyreview.com/2020/03/12/905341/coronavirus-contaminated-cash-quarantine/.
[39] Tingyi Chen, "The Cross-Border Payment War of WeChat Pay and Alipay," *WalktheChat* (blog), February 25, 2019, https://walkthechat.com/the-cross-border-payment-war-of-wechat-pay-and-alipay/.
[40] Chen.
[41] Chen.

trusted vendors in the deployment of the digital RMB, it could be the case that in the future, China could collaborate with central banks around the world (most likely the developing world) to create an entirely new global financial architecture outside of SWIFT and the US Federal Reserve system. By acquiring or integrating local digital payment companies around the world in addition to promoting the adoption of Tencent and Alibaba's original payment platforms, these two Chinese internet giants can easily augment the internationalization of the digital RMB in the future. This new global digital payment system would "become the mechanism by which the Chinese yuan can be used in everyday transactions all around the world" in an exclusively digital financial ecosystem.[42] Some challenges exist in creating an entirely new system outside of the existing architecture though: countries can block acquisitions on grounds of national security as have the US (Moneygram) for example; WorldFirst in the UK had to cease US operations in order to continue with Ant Financial's takeover.[43] Getting wide enough adoption at mass level also might be difficult given the initial high switching costs. But in the long-term, unless the US digitizes its current architecture, it is inevitable that a digital global architecture will be the next stage in international monetary economics. This strategy will most likely unfold in parallel with the digital silk road linked to BRI, proliferating first in the developing world where mobile payments are already leapfrogging brick-and-mortar financial services. Thus far, the aforementioned logic has explored potential internationalization digital RMB strategy as it relates to COVID-19, but the dynamics of *domestic* adoption play a far greater role in the success of the project.

Domestic stimulus

To offset the impacts of COVID-19 domestically, China is gearing up for a massive stimulus package on "new infrastructure," (新基础设施) similar to their 2008 stimulus. This time, however, there are several key differences potentially linked to the development of the digital RMB. First, in 2008, China's domestic stimulus spending was on "hard infrastructure"—high speed rail, train stations, metro systems, airports, etc.—the biggest infrastructure spending program the world had ever seen at around 4 trillion RMB.[44] Since 2008, China's economy has tripled in size and has become substantially more complex and diverse requiring a different kind of stimulus: "China now has a much more highly educated labor force with less enthusiasm for manual labor and the service

[42] "China's Digital Currency Takes Shape; Will It Challenge Dollar? | Voice of America - English," accessed May 5, 2020, https://www.voanews.com/economy-business/chinas-digital-currency-takes-shape-will-it-challenge-dollar.
[43] Chen.
[44] "Why China's COVID-19 Stimulus Will Look Different Than in the Past," China Briefing News, April 6, 2020, https://www.china-briefing.com/news/chinas-stimulus-measures-after-covid-19-different-from-2008-financial-crisis/.

sector has become more important."[45] Perhaps most critically though, the majority of this "hard infrastructure" has been built already. The BRI was designed in part to export this overcapacity in construction to outside China's borders to continue building. The domestic stimulus has been described by Chinese officials as financing for "new infrastructure" consisting of next generation digital infrastructure including 5G networks, big data centers, charging grids for new energy vehicles, etc.[46] Estimated to be around 2.8 trillion RMB, this package is noticeably smaller than in 2008, but the digital RMB is expected to integrate seamlessly with this digital upgrade of infrastructure, especially in "smart cities" and within the IOT framework described earlier which has the potential to automate parts of the economy. As China's economy has become more complex too, the digital RMB is expected to play a key role in how China will distribute cash directly to its citizens to spur consumer demand (a higher proportion of the economy than it was in 2008). As one digital financial advisory director remarked: "if there is any chance that China may consider lowering its interest rate to negative territory as a last resort and targeting such a policy on commercial loans and borrowings, a circulating digital currency instead of M0 will be able to achieve it."[47] Interestingly, as the world has been passing their own rescue packages—the US at $2 trillion, Japan with $1 trillion, and Europe in the works—China has noticeably been far more restrained in rolling out their domestic stimulus than in 2008.[48] Justin Yifu Lin, China's most influential economic adviser called for China to introduce "vouchers nationwide that must be spent quickly or become worthless."[49] Considering the complexity of such a domestic lending program, it makes technological sense to push for a digital RMB to make this ambitious and complicated cash transfer program possible. While before, large Chinese government bailouts focused on channeling liquidity through state-owned banks and into largely state-owned enterprises (SOEs) responsible for the infrastructure built in 2008, 2020 much more directly involves the citizenry and their individual consumer demand as China's economy has recently become more and more consumer-demand driven (like the US). The new stimulus is also more complex due to the high-tech nature of the infrastructure build compared to 2008 when it was mainly low-tech basic infrastructure carried out by SOEs.[50] The 2020 stimulus will involve more private technology companies and startups and thus, China's

[45] Keith Bradsher, "While the World Spends on Coronavirus Bailouts, China Holds Back," *The New York Times*, April 9, 2020, sec. Business, https://www.nytimes.com/2020/04/09/business/economy/coronavirus-china-economy-stimulus.html.
[46] "Why China's COVID-19 Stimulus Will Look Different Than in the Past."
[47] Singh, "China Is Turning a Crisis into an Opportunity and Is One Step Closer to CBDC."
[48] Bradsher, "While the World Spends on Coronavirus Bailouts, China Holds Back."
[49] Bradsher.
[50] "Why China's COVID-19 Stimulus Will Look Different Than in the Past."

economic recovery plan might leverage the digital RMB in allowing private companies to accept and even bid for subsidies. China may also be holding back on its stimulus in order to flood liquidity into the financial system to lower the possibility of risky debt accumulation. By many accounts, China is still recovering from its last stimulus, making China one of the world's most indebted economies in less than a decade—most of it trapped further down at the level of local governments and in the balance sheets of SOEs.[51] While the digital RMB won't eliminate bad debt, it would be the most powerful tool in monitoring *how* the money will flow through the economy and if/when follow-up measures are needed. The risk of bubbles popping from overbuilding and extreme speculation (such as in real estate) has been a major risk for the Chinese government and the appointment of experienced banking and finance professionals to key leadership posts at the most recent 2017 Party Congress have indicated that Xi Jinping intends for China to exercise greater fiscal responsibility as its increasingly more advanced economy can no longer rely on cheap credit and investment to fuel growth.[52] [53] [54]

Conclusion

The digital RMB regardless of whether it becomes internationalized or remains domestic will have profound implications for the future of money. Most of the potential benefits associated with the digital RMB actually have less to do with it becoming the global reserve currency and more with the advanced tools it provides the government in how it can better manage the economy. China's approach to the DCEP provides lessons therefore for the entire world to follow, namely taking the best of both worlds from both centralized and decentralized models. So while this paper laid out an argument for how China might turn this unprecedented global crisis into a once-in-a-century opportunity, there are also serious limitations to be considered, chief among them, the fact that updates of the DCEP are changing every week if not every day. The theories and analysis provided in this paper are bound to change quickly as more information is released. Another cautionary limitation of this analysis deals more abstractly with Chinese strategy: in some situations, Western analysts and "overseas China watchers" tend to overinterpret Chinese actions in retrospect and attribute more than necessary. There is a tendency to overlink

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[51] Bradsher, "While the World Spends on Coronavirus Bailouts, China Holds Back."
[52] Ryan, "China's Growing Real Estate Bubble," Text, Mises Institute, October 23, 2019, https://mises.org/wire/chinas-growing-real-estate-bubble.
[53] "Coronavirus May Be The Catalyst That Will Pop China's Massive Property Bubble (NYSEARCA:FXI) | Seeking Alpha," accessed May 6, 2020, https://seekingalpha.com/article/4319517-coronavirus-may-be-catalyst-will-pop-chinas-massive-property-bubble.
[54] "Xi Installs Finance Experts to Manage Economic Risks - Taipei Times," December 28, 2019, https://www.taipeitimes.com/News/biz/archives/2019/12/28/2003728291.

disparate actions and overemphasize politics. So while certain quotes like this one from the Chinese Ministry of Commerce in 2014 certainly seem damming: “RMB will replace USD in the next 15 years,” Chinese strategists most likely don’t pre-orchestrate a master plan drawn up in Zhongnanhai, but rather creatively adapt to crisis and excel at mid-course adjustment. What is undisputed though, is that China will become the first major country to deploy a central bank digital currency, and one can only speculate about the implications and intentions of such a historic event.

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