CHINA'S CENTRAL BANK DIGITAL CURRENCY

IMPLICATIONS FOR ASEAN

Policy Report
December 2020

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TABLE OF CONTENTS

Executive Summary

The surge in online shopping during the pandemic has been accompanied by an equivalent growth in digital payments, including the use of new digital currencies that lie beyond the purview of central banks. This has raised concerns about the control of money supply and execution of monetary policy. Central banks responded with pilot studies of their own digital currencies (CBDCs). Among those at the forefront of these efforts is the People's Bank of China, with the stated objective of internationalisation of the yuan. What will a digital yuan entail domestically for China, and what concerns and opportunities could it create for ASEAN?

Introduction

Ever since the Bank of England first issued permanent currency in 1695, central banks have a mandate for issuing currency as part of their charter. While central banks issue cash, commercial banks create deposits. Together they constitute the bulk of money supply in the economy. Money is a public good. It provides a unit of account, a store of value, and it functions as a medium of exchange for the sale of goods and services. The management of money entrusts central banks with responsibility for monetary and financial stability and to promote broad access to safe and efficient payments systems. The central bank also settles interbank payments. In the event of a banking crisis, central banks are the lenders of last resort.

Role of Technology

Rapid technological innovation has permeated all aspects of our lives, transforming our understanding of what constitutes money supply and who controls it. Beyond the domain of central banks, a new cohort of agents, including private sector players such as social media companies (Facebook),e-commerce firms (Alibaba, Tencent), and peer-to-peer networks issuing cryptocurrencies such as Bitcoin and Ethereum, are actively engaged in creating digital currencies that lie beyond the control of central banks.

The COVID-19 pandemic accelerated the speed at which the definition of money is being transformed by private digital currencies, as people shift to online shopping and payments through contactless cards using digital currencies, or through smartphones. Restrictions on mobility, the closure of stores, and concerns about the virus being transmitted through currency notes triggered a switch to digital currencies and a massive migration to online shopping and e-commerce. Commercially provided, fast, and convenient digital payments have grown enormously in volume and diversity, as an alternative to cash in diverse jurisdictions such as Sweden, China, Canada, and Estonia.

Central banks conduct monetary policy either by changing the interest rate at which they lend to commercial banks, or by buying and selling government bonds that will increase or soak up the volume of money circulating in the economy. The introduction of digital currencies and the growing use of digital payments has raised concerns about fiat[1] currency being challenged by private digital currencies. Since they are beyond the control of central banks, the widespread use of private digital currencies can potentially complicate the central bank's monetary management endeavours posing challenges for financial stability. Libra (renamed Diem on 1 December 2020), a stable coin[2] to be issued by Facebook, with a client base of over 2.7 billion users, could pose serious threats to central banks's monetary management in the future. Diem is just one of several thousand cryptocurrencies, including stable coins, issued across the world in recent years.

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[1] A fiat currency acquires value because it is issued by the government and universally accepted.

[2] Stable coins are digital currencies with value that is based on an underlying asset such as a currency or a commodity; Bitcoins are not backed by real assets – their value is determined by trade.

The growing risk of cyberattacks disrupting the payment systems, concerns about losing out on first-mover advantages, and overseas digital currencies potentially displacing domestic currencies, have all underpinned the urgency for countries to evaluate the feasibility of issuing digital currencies through their central banks (CBDC). Unlike cryptocurrencies whose value changes with trading, a CBDC is a digital currency that exists on a centralised platform under the purview of the central bank. It is denominated in the local currency and has a stable value, allowing the central bank to exercise control over money supply and avoid the destabilising consequences of privately issued digital currencies. The growth in cashless transactions and of digital currencies resulted in a number of studies seeking to enhance our understanding of CBDCs. Over the past few months, the International Monetary Fund (IMF), the Bank for International Settlements (BIS), the Federal Reserve, and several leading central banks and think tanks have published reports studying the risks and benefits of issuing CBDCs.

According to the BIS, 80 per cent of central banks across the world are researching or conducting pilot studies on CBDCs. At the forefront of these efforts are Sweden's Riksbank and the People's Bank of China (PBOC). The Riksbank is in the late stages of issuing e-Kronas. The PBOC has conducted preliminary tests across cities in China. The Chinese government and the PBOC consider the internationalisation of the yuan an important economic objective reflecting the growing strength of its economy. This view was reinforced in the 14th five-year plan and is deemed integral to the idea of the "dual circulation" economy. Efforts to internationalise the yuan are likely to focus first on China's largest and most proximate trading partners — the ASEAN states, raising concerns about ASEAN entities being possibly constrained in the choice of currencies used for trading and holding reserves.

The PBOC's CBDC

In April 2020, the PBOC became one of the first major central banks to embark upon a trial run of its Digital Currency/Electronic Payment (DCEP) in four cities, with plans to expand the tests to major metropolises. The project was fast-tracked in response to the COVID-19 pandemic. Unlike many other CBDCs under consideration, whose use will be confined to wholesale transactions between financial institutions and the central bank, the DCEP will be a retail digital currency issued through banks and payment service providers to individual digital wallets approved by the PBOC. It will allow users to transact online or offline without bank accounts, making it a powerful instrument for financial inclusion.

Structured as a replacement for cash, the DCEP is a centralised, government-issued, universally accessible digital fiat currency, the converse of a Bitcoin. It is structured to meet several strategic economic and political goals of the Chinese government. It is programmable, and can consequently be completely monitored, and also have restrictions placed on its end use. All transactions with the digital yuan will be traceable through the owner's digital wallets and recorded in government ledgers. This data can also be used as inputs for China's digital surveillance programme — the "Social Credit System". Financial institutions will be required to back the DCEP with 100 per cent reserves on the currency, thereby eliminating valuation risk and the possibility of speculation on the currency. If widely accepted, it will boost financial inclusion and reduce tax evasion, money laundering, and corruption; expedite international payments; reduce the cost of issuing, distributing, and maintaining cash; and boost the efficacy of monetary policy by generating real-time data.

The rapid expansion of private digital payments in China has raised concerns about the overwhelming dominance of the two major private sector players, AliPay and WeChat Pay, that handle 93 per cent of mobile payments in China. Apart from compromising the PBOC's control of payments and money supply, a failure of their networks could result in serious instability, jeopardising the health of the financial system. The DCEP will facilitate PBOC's control over cash flows and link different payment systems. Furthermore, in the case of a stimulus programme or following a natural disaster, the DCEP will enable the PBOC to conduct targeted interventions, bypassing banks and directly transferring funds to targeted recipients, thus preventing the misuse of allocated funds. The implications for monetary policy are far-reaching. If the DCEP completely replaces cash and deposits, it could notionally allow for the implementation of negative interest rates, though this may generate adverse distribution effects — penalising savers, while the wealthy shift into expensive alternative assets.

Internationalising the Yuan: DCEP and ASEAN

As the Chinese economy grows in strength, the PBOC has sought to internationalise the yuan, as a concomitant to China's growing economic strength, and to reduce the dominance of the US dollar as reserve currency. An internationalised yuan will help Chinese firms lower their cost-of-capital and currency risk while making it easier to mobilise funds. Apart from near-instantaneous transfers of payments, the DCEP will lower counterparty risk and the cost of transferring funds across borders.

In 2016, the IMF included the yuan in its special drawing rights (SDR)[3] basket as an official reserve currency. Since then, the yuan has achieved some, albeit, limited progress in gaining acceptance (Table 1). By the end of June 2020[4], US$230 billion worth of yuan were held in official foreign exchange reserves (2 per cent of total reserves), compared to US$6.9 trillion (62 per cent) in US dollars, making the yuan the world's fifth-largest reserve currency, behind the US dollar, the euro, the Japanese yen, and the pound sterling. A digital yuan could potentially boost the currency's quest for international use. A recent Morgan Stanley[5] study projected that contingent upon stable economic growth and removal of capital controls, within a decade the yuan's share could rise to between 5 to 10 per cent of total global reserves.

Deeply connected to China's economy through trade, investment, travel,

Table 1: Currencies: Internationalisation Comparison (2019)

Currency	Share of Forex Trading (%)	Share of Official Forex Reserves (%)	Share of Global Payments (%)
US dollar	88.3	61.7	40.1
Euro	32.3	20.3	34.2
Yen	16.8	5.4	3.3
Pound	12.8	4.6	7.1
Yuan	4.3	1.9	2.2

Source: BIS, CSIS, Culled from CSIS
https://chinapower.csis.org/china-renminbi-rmb-internationalization/

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3 The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a weighted average of a basket of currencies including the US dollar, the euro, the yuan, the yen, and the pound sterling

4 International Monetary Fund. "Currency Composition of Official Foreign Exchange Reserves (COFER)" Updated until September 30, 2020. https://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4

5 Cheng, Evelyn. "China's yuan could become the world's third largest reserve currency in 10 years, Morgan Stanley predicts." CNBC, September 4, 2020. www.cnbc.com/2020/09/04/chinas-yuan-rmb-to-become-third-largest-reserve-currency-by-2030-morgan-stanley.html

people-to-people links, and a long border, ASEAN may be the most promising region to drive international usage of the e-yuan. By mid-2020, following part by lockdowns and the resultant slowdown in economic activity that hampered trade with Europe and North America, and a gradual revival of some Southeast Asian economies, ASEAN became China's biggest trading partner. China-ASEAN trade rose to US$1.6 trillion in the first five months of 2020, accounting for 14.7 per cent of China's trade, compared with the United States and the European Union's shares of 11 per cent and 13.9 per cent, respectively. The Regional Comprehensive Economic Partnership (RCEP) signed by China and ASEAN, among others, in November 2020, is likely to further consolidate the relationship.

Can China use its deepening economic engagement and growing regional clout to pressure Southeast Asian entities to use the yuan for transactions in trade? China' sheer weight in international trade, will encourage the use of the DCEP by overseas businesses and countries where China is the dominant trade and investment partner. While most ASEAN trade with China is denominated in US dollars, the role of the yuan in the region and beyond in trade settlements is increasing, helped by the development of a cross-border yuan payments system. Shanghai is developing yuan-denominated commodity derivative markets. By August 2019, the region's cross-border yuan settlements crossed 1 trillion yuan. China's biggest payment apps WeChat Pay and Alipay have been making inroads in some countries, but to gain traction they need to facilitate convertibility into local currencies in the apps. The Chinese government expects the e-yuan (DCEP) to be widely used by the Beijing Winter Olympics in 2022.

China can deploy numerous levers to expand the use of the e-yuan, including through the Belt and Road Initiative (BRI) which invests in more than 68 countries, and through encouraging yuan-denominated lending at the Asian Infrastructure Investment Bank (AIIB), and encourage its use in the Free Trade Zones within China. China is also building offshore yuan markets, incentivising the issue of yuan-denominated Dim Sum bonds, and promoting cross-border financial investments. The speed and convenience offered by the digital yuan could make it appealing to businesses trading with China, especially those from ASEAN and other economies with soft currencies. China settles 15 per cent of its foreign trade in yuan, a number that should rise as China is the first country to emerge from the COVID-19 induced economic slowdowns. The Peoples Bank of China is pushing for a shift from the West dominated SWIFT system to China's own Cross-Border Interbank Payments-System (CIPS) for settlements, though yuan trading is heavily concentrated in Hong Kong (76.36 per cent), in contrast to 6.18 per cent yuan trading in London. As an alternative to the dominant US dollar, a digital yuan will allow China to bypass sanctions, enabling users to avoid the scrutiny of the SWIFT system that monitors cash flows on behalf of Western law enforcement and international agencies. Oil exports from Russia, Iran, and Venezuela can be paid in the DCEP, thus circumventing crippling sanctions.

However, four factors can constrain the internationalisation of the yuan:

- The acceptance of the yuan as a reserve currency will depend on the trust and confidence placed on the currency. Trust in turn, is shaped, by the currency's stability and its track record over time, especially during periods of turbulence. So far, during periods of stress, the Chinese government has tended to revert to an interventionist mode with capital and currency controls, a strategy that is unlikely to win over many converts, and will dissuade transactions or reserve holdings in the yuan. The use of a currency is also shaped by the issuing country's current account position. For China to encourage other countries to use the yuan, it should allow inward and outward FDI to be denominated in the yuan, boost Singapore and London as yuan trading hubs, and evolve into a large net importer of goods so the yuan can be used as payment for those imports.

- Internationalisation of currencies depends on open markets that enable the currency to find its market value. China has maintained tight controls on capital flows to insulate its economy against instability. Restrictions on yuan convertibility lower its appeal as an international currency. Prospects for internationalisation of the yuan will also be shaped by the liquidity and depth of China's financial and capital markets, and the availability of financial instruments to hedge against currency and other risks. On these counts, the yuan is not just behind the dollar, but other hard currencies as well. However, the rapid growth of China's financial markets will continue to narrow the gap. Global players in ASEAN, be they multinationals, international portfolio investors, or banks, expect to operate in a multi-currency environment with easy access to liquid, global currencies — essential in today's highly integrated world.

- Prospects for the yuan will be brighter when there is geopolitical stability and economic growth. However, enduring geopolitical concerns including anxiety about China's aggressive postures in the South China Sea, and other strained bilateral relationships; and tensions with Taiwan, will deter investors from considering the yuan. Despite the attraction of a CBDC, market players seek stability, predictability, and independent market valuation of the currency of denomination. Since the IMF added the yuan to the four existing currencies in the SDR basket in 2016 with a weight of 10.9 per cent, the yuan's gains as a reserve currency have come mostly at the expense of the euro, the yen, and the British pound, but not the US dollar.

- The programmable nature of DCEP and complete loss of privacy, coupled with the ability of the PBOC to monitor and control the end use of money may be a deterrent for market participants considering the DCEP. There are obvious remedies for this, including entering into agreements with other central banks issuing CBDCs, ensuring interoperability between different CBDCs as they evolve, common protocols agreed upon by central banks, settlement of privacy issues, regulation of data, and assurances about a stable and transparent regulatory regime.

ASEAN's Options

What should ASEAN do to maintain autonomy in its choice of currency for international trade and finance? ASEAN is far from considering monetary integration or a common digital currency, given the region's vast heterogeneity. The region's need for strategic autonomy in trade dictates that it be regarded as a significant player in the global economy. ASEAN should start by strengthening the regional architecture and work towards adopting a common stance towards currency usage, especially among its major trading states.

The ASEAN Digital Integration Framework, integral to the ASEAN Economic Community 2025 blueprint, provides a platform for enhanced discussions on a CBDC for the region and on issues of collaboration and safeguarding financial stability when exposed to competition with the DCEP. While the pace of experimentation differs across the region, Singapore's project Ubin envisions an expansive agenda that simplifies usage across platforms. Similarly, Thailand and Cambodia have launched projects that are at an advanced stage, while other countries are giving serious consideration, with pilot programmes expected in the near future. To address the challenges arising from DCEP, ASEAN finance ministers and central banks could consider establishing a region wide platform encompassing common global standards, streamline national digital ID systems, and collaborate with financial institutions to develop open API standards that catalyse adoption of digital financial services by the vast number of unbanked in ASEAN. Integral to this is the development of protocols that will enable ASEAN to interface with digital currencies developed elsewhere in the world, including the DCEP.

While actual currency decisions are made by individual firms, ASEAN should work towards a common regional position on currency issues. Since ASEAN trades actively with other economic powers, the need for competitiveness and autonomy would suggest that ASEAN maintain flexibility and autonomy in its dealings with other major trading partners such as, the European Union, the United States, Japan, and South Korea. Most large businesses are diversified across several regions. Companies actively engaged in international trade and finance will have a strong preference for hard currencies and the lower risk and fungibility they offer in global markets. Switching currencies, especially those that have not been tested during times of volatility can inject uncertainty and necessitate additional expensive risk management measures. Before adopting the yuan, investors will also demand increased transparency in reporting of official economic data to enable them to assess the currency’s prospects. For the yuan to gain traction at the retail level, people need to hold digital wallets that allow them to convert readily into other currencies. That prospect isn’t likely soon.

In the medium to long-term, when the DCEP has acquired a track record and gained public confidence, the yuan will undoubtedly become a major currency of settlement in international trade. The speed of adoption will largely depend on acceptance by markets and buttressed by the rapid expansion of off-shore payments in the yuan. In the interim, the US dollar, and to a lesser degree the euro will remain dominant in international transactions. The growth of digital currencies could portend significant changes in the architecture of international payments, including the possibility of rapid scaling up the supply of CBDCs. Ultimately, the risk associated with holding the yuan as opposed to the US dollar will shape decisions.

History offers instructive lessons on currency switching. Businesses will not destabilise long-standing relationships with suppliers and creditors. Despite the impressive growth of Japan and Germany in the post-War period, the use of Deutsche mark and Japanese yen did not grow substantially. Changes in currency usage are slow. The most significant change over the past century has been from the British pound to the US dollar. Market players need to have the utmost confidence in a currency and a loss of faith in the existing currency before they make a switch.

About the Author

Dipinder S Randhawa is an Adjunct Senior Fellow at the Rajaratnam School of International Studies, Nanyang Technological University. His research interests are in the areas of Development Economics, Finance and Banking, Policy formulation and analysis, technologies of the Fourth Industrial Revolution, and the economic consequences of the pandemic. Earlier Dipinder held research positions at the Institute of South Asian Studies and the Risk Management Institute. He has taught at Syracuse University and the National University of Singapore and held visiting appointments at Universities in China and Thailand. Dipinder received PhD from the Whitman School at Syracuse University.

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