

In a race to the first ever digital currency China organizes test trials

Introduction

Since 2014 China has been exploring the launch of a digital currency. However, it is not until recently that tensions with the USA as well as the worldwide pandemic of Covid-19 have increased China's will to organize test trials [1][2]. The "digital yuan" would be the first ever digital currency despite other central banks, including the European Central Bank, having also surveyed digital currencies. What is China's DCEP? In what aspect does it differ from the country's currency, the yuan, and why is it China's ambition to launch it?

What is the Digital Currency Electronic Payment (DCEP)

Before taking a look at the digital currency that China is implementing let's define a currency: "the money that is used in a particular country at a particular time", which in China is the yuan [3]. In what does the yuan then differ from the digital currency? The digital currency is simply the yuan but only accessible in digital form and not in physical form [4]. China refers to its digital currency, or digital "yuan", as Digital Currency Electronic Payment (DCEP). Since a few months thousands of citizens have the ability to participate in test trials by using a predetermined amount of the digital yuan as a way of payment in three major cities, including the technology hub Shenzhen [5]. China wishes to have the digital currency launched and in use for the Winter Olympics planned in 2022, taking place in Beijing [6].

Some have compared the digital currency design with cryptocurrencies, which is a whole other topic that this article will only discuss briefly. According to Investopedia cryptocurrencies are digital currencies too and many of them are decentralised networks based on blockchain technology [7]. Blockchain technology prevents fraud when using such digital currencies [8]. As Tanvi Ratna points out, there are three main similarities between DCEP and cryptocurrencies being the following:

- (i) The use of both online and offline wallets
- (ii) the use of two-key architecture to secure transactions
- (iii) The leverage of degrees of programmability

More information on cryptocurrencies and their similarity to the design of the DCEP here [9].

Although they might share some similarities, the digital yuan can't be classified as a cryptocurrency and this for two main reasons:

- (i) DCEP is under control of a central bank and transactions aren't anonymous

The main differentiation is that DCEP, unlike cryptocurrencies, is under control of a central bank [of China], and thus neither decentralised nor anonymous. As defined above, cryptocurrencies are decentralised networks and anonymous.

Being backed-up by the central bank, DCEP raises awareness regarding the traceability of transactions. On the one hand the "surveillance" is beneficial for identifying corruption and financial crimes and thus offers more control over its economy than most central banks, like Reuters mentions [11]. However, there is some concern whether this will be another opportunity for China to spy on its citizens. Although, the former PBOC president announced that some amount of anonymity will be possible, this will only be the case for a particular frequency and a certain amount of money [12].

(ii) DCEP is a fiat currency

The DCEP is a digital fiat currency. Fiat money is a government-issued currency that is not backed by a physical commodity, such as gold or silver, but rather by the government that issued it [13]. In this way it does also differ from cryptocurrencies which are a lot more volatile as they are not recognized by the government as being a tax payment. In this purpose the state-backed digital yuan is more stable [14].

How to use the digital currency

Now all the previous being said, how to use DCEP as a means of payment? Briefly, the People Banks of China issues DCEP to commercial banks which on their turn will distribute DCEP to individuals through their wallets. These wallets can be accessed through a smart phone app developed by the central bank [of China] itself [15]. A representation can be seen in Figure 1.

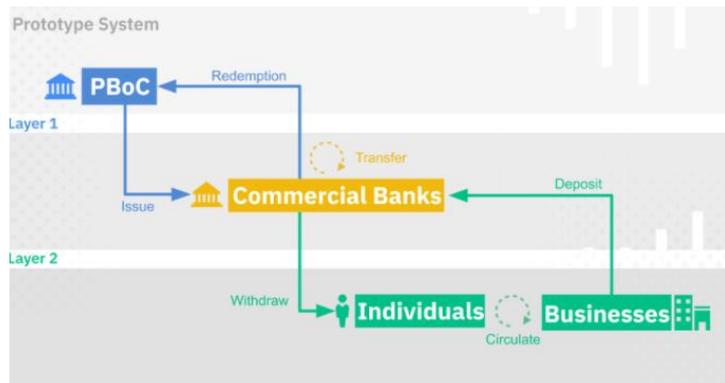


Figure 1 issuance and distribution of DCEP.
Issued from <https://research.binance.com/en/analysis/china-cbdc>

DCEP is tied on-to-one with the Yuan, meaning that the value of DCEP equals that of the physical yuan [16]. One may see the similarity with mobile payment systems, however they do differ from one another. When a payment is done through the use of a mobile payment system this is done through an intermediary, a traditional bank. The smart phone app developed for the digital yuan does not make any use of an intermediary, as the DCEP is distributed through digital wallets, not bank accounts. As such, there is no physical money backing you up in a bank account [17]. This makes DCEP indeed fully digital. By the means of two phones touching, a barcode or QR code a payment can be completed.

An article going through the process of how to use the digital Yuan as a payment method in a practical way can be found here [18].

Not only does the digital currency differ from the tradition mobile payments systems, but it does offer some advantages too:

- (i) The use of wallets issued by the PBOC itself cuts out any third party which removes any intermediary infrastructure and thus results in lower transaction costs.
- (ii) There is no need for card network payments, like Visa or Mastercard, as the PBOC and the issuing banks are directly linked. This in turn cuts of costs as well.
- (iii) The DCEP app released by the PBOC does not need any internet connection to be able to run, unlike the mobile payment systems. This will facilitate the ease of use, the adoption in rural communities as well as prevent it from failing during technological blackouts.

In the context of the Coronavirus epidemic this digital currency, additionally to the mobile payment systems, offers a more hygienic option compared to cash [15].

Why is it the PBOC's ambition to launch DCEP

China's will to launch its digital currency is clearly supported by two main reasons:

- (i) enhanced economic monitoring and monetary sovereignty

One of the reasons why it may be in China's favour to implement this currency is that it results in the state having more control over its own economy, as previously argued. But not only that. As several countries announced the possibility of launching their own digital currency (as for example the Libra from Facebook), this could be a way to reinforce the monetary sovereignty of China. Briefly, money sovereignty of a country means that a country exclusively decides what the official legal tender is and thus controls which currency is used inside its borders. By launching the DCEP China attempts to prevent the adoption of another foreign currency first [19].

- (ii) challenging the U.S. Dollar as the global reserve currency

Further on, the DCEP could be a possible threat for the dollar, currently holding the position of global reserve currency. However, David Roche, from Independent Strategy, argues that China still has a long way from overruling the U.S. Dollar as the yuan is accountable for only 2% of international trade settlements [20]. This in comparison with the dollar: "approximately 40% of the world's debt is denominated in dollars" and "more than 61% of all foreign bank reserves are denominated in U.S. dollars" [21]. The Chinese currency being a reserve currency would result in lower borrowing costs for Chinese exporters, lower interest rates for bonds denominated in yuan and the currency would be less tied to the dollar, to name a few [22].

Will the digital currency successfully be adopted as a currency

The adoption of the digital currency across China will mostly depend on the ease-of-use and its benefits. Not less than 86% of payments are done through the use of a mobile phone in China according to Keith Lamb [23]. Thus, China is already well evolved as a cashless society, with payments mostly effectuated by the means of scanning a QR code or even by face recognition. However, this new currency will not totally run cash out of the country as inhabitants in more rural regions not familiar with digital payments have to be able to take part in the economy [24].

Outside its borders Chandler Guo, a cryptocurrency pioneer, is quite certain that the usage will expand globally as 39 million Chinese live abroad and will probably adopt the digital currency [25]. Furthermore, according to Goldman Sachs the currency will be accountable for 15% of total consumption payments in the 10 years, while others argue that central banks may start holding DCEP if the usage increases [26][27].

Overall, the DCEP offers benefits for the Chinese government, reduces transfer fees for customers but raises the attention to privacy issues which can be concerning. Whether the digital yuan will successfully be adopted in China and beyond its borders is another arising question as opinions amongst experts vary.

References

- [1] Anonymous. (2020, Oct 22). China's "digital yuan," explained. Retrieved from: <https://medium.com/swlh/chinas-digital-yuan-explained-9f3ec3da46e7>
- [2] Stafford, M. (2020, Oct 5). The US effort to cut off China's access to semiconductor technology, explained. Retrieved from: <https://themilsources.com/2020/10/05/us-effort-to-cut-off-chinas-access-to-semiconductor-technology-explained/>
- [3] Cambridge University Press. (n.d.). In Cambridge Business English Dictionary. Retrieved from: <https://dictionary.cambridge.org/fr/dictionnaire/anglais/currency>
- [4] Frankenfield, J. (2020, Jun 27). Definition digital currency. Retrieved from: <https://www.investopedia.com/terms/d/digital-currency.asp>
- [5] Kharpal, A. (2020, Oct 12). China hands out \$1.5 million of its digital currency in one of the country's biggest public tests. Retrieved from: <https://www.cnbc.com/2020/10/12/china-digital-currency-trial-over-1-million-handed-out-in-lottery.html>
- [6] Pladson, K. (2020, Oct 5). China leads in race for digital currency. Retrieved from: <https://www.dw.com/en/china-digital-currency-yuan-bitcoin/a-55134692>
- [7] Frankenfield, J. (2020, May 5). Definition cryptocurrency. Retrieved from: <https://www.investopedia.com/terms/c/cryptocurrency.asp#:~:text=A%20cryptocurrency%20is%20a%20digital,a%20disparate%20network%20of%20computers.>
- [8] Jane, L. (2020, Oct 13). Here's a first glimpse of China's digital yuan. Retrieved from: <https://qz.com/1916695/heres-a-first-glimpse-of-chinas-digital-yuan/>
- [9] Ratna, T. (2020, Oct 15). China's Digital Yuan Blurs the Lines Between CBDCs and Crypto. Retrieved from: <https://www.coindesk.com/china-digital-yuan-cbdc-crypto>
- [10] Goh, B., & Shen, S. (2019, Nov 1). China's proposed digital currency more about policing than progress. Retrieved from: <https://www.reuters.com/article/us-china-markets-digital-currency-idUSKBN1XB3QP>
- [11] Ossinger, J. (2019, Nov 13). PBOC Wants 'Controllable Anonymity' in China's Digital Currency. Retrieved from: <https://www.bloomberg.com/news/articles/2019-11-13/pboc-wants-controllable-anonymity-in-china-s-digital-currency>
- [12] Chen, J. (2020, Apr 23). Definition fiat money. Retrieved from: <https://www.investopedia.com/terms/f/fiatmoney.asp>
- [13] Anonymous. (2020, Jul 16). How does China's DCEP work? Retrieved from: <https://www.inaa.org/how-does-chinas-dcep-currency-work/#:~:text=Enhanced%20Economic%20Monitoring%20%26%20Monetary%20Sovereignty,spending%20habits%20with%20unprecedented%20precision.>
- [14] Binance Research. (2019, Aug 28). First Look: China's Central Bank Digital Currency. Retrieved from: <https://research.binance.com/en/analysis/china-cbdc>
- [15] TLDR News. (2020, Jun 13). The Future of Cryptocurrency? China's Entirely Digital Currency Explained (DCEP) - TLDR News. [Youtube] Retrieved from: <https://www.youtube.com/watch?v=aYs68uEDPC4>

- [16] Michael (2020, Oct 6). China's National Digital Currency DCEP / CBDC overview. Retrieved from: https://boxmining.com/dcep/#DCEP_will_operate_on_a_twtiered_system
- [17] Ezquer, E. (2020, Oct 15). DCEP Adoption: How to use the Digital Yuan. Retrieved from: <https://www.asiacryptotoday.com/dcep-adoption-how-to-use-the-digital-yuan/>
- [18] Shirai, S. (2019, Nov 20). China's digital currency could threaten dollar's dominance. Retrieved from: <https://www.japantimes.co.jp/opinion/2019/11/20/commentary/world-commentary/chinas-digital-currency-threaten-dollars-dominance/>
- [19] Huang, E. (2020, Nov 2). The Chinese yuan is 'a long way' from achieving reserve currency status, says strategist. Retrieved from: <https://www.cnbc.com/2020/11/03/the-chinese-yuan-is-a-long-way-from-achieving-reserve-currency-status-strategist.html>
- [20] Best, R. (2020, Oct 26). How the U.S. Dollar Became the World's Reserve Currency. Retrieved from: <https://www.investopedia.com/articles/forex-currencies/092316/how-us-dollar-became-worlds-reserve-currency.asp#:~:text=Standing%20on%20Its%20Own%20as,accumulated%20reserves%20of%20U.S.%20dollars>
- [21] Amadeo, K. (2020, Aug 4). How the Yuan Could Become a Global Currency. Retrieved from: <https://www.thebalance.com/yuan-reserve-currency-to-global-currency-3970465>
- [22] Anonymous. (2020, Nov 5). Digital yuan push for fully cashless society on course to pay off. Retrieved from: <https://www.scmp.com/comment/opinion/article/3108657/digital-yuan-push-fully-cashless-society-course-pay>
- [23] Lamb, K. (2020, Nov 11). The future of China's digital currency. Retrieved from: <https://news.cgtn.com/news/2020-11-11/The-future-of-China-s-digital-currency--VkaX4E1i8g/index.html>
- [24] Vincent, D. (2020, Sep 24). 'One day everyone will use China's digital currency'. Retrieved from: <https://www.bbc.com/news/business-54261382>
- [25] Gonzalez, E. (2020, Nov 20). Goldman Sachs Expects Digital Yuan To Succeed In 1B Customers In 10 Years. Retrieved from: <https://pooppress.com/goldman-sachs-expects-digital-yuan-to-succeed-in-1b-customers-in-10-years/>
- [26] Data & Research. (2020, Oct 11). China Aims For the First Sovereign Digital Currency, But Will It Succeed? Retrieved from: <https://cryptoadventure.org/china-aims-for-the-first-sovereign-digital-currency-but-will-it-succeed/>