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# ASIA EMBRACES DIGITAL CURRENCY AND CRYPTOCURRENCY

By David Lee Kuo Chuen

A decade ago, everyone was sceptical about cryptocurrency. Today, Asian governments are harnessing its technology to raise payment efficiency and improve financial inclusion. Initially, the technology was advocated and harnessed by ‘cypherpunks’, that is, individuals who advocate the use of cryptography and other strong encryption technologies to promote social and political change. At that time, being a cypherpunk meant standing on the opposite side of the government; today, I see cypherpunks, otherwise more appropriately known as cryptopunks, working closely with governments.

## The rise and challenges of cryptocurrency

In 2014, China moved ahead with its adoption of the quick response (QR) code for digital devices. It was a major innovation that disrupted the Chinese banking sector because it meant that there was no need for the point-of-sale (POS) system anymore. With QR codes and digital devices, organisations could transact with customers even in remote villages. Today, China is also incorporating the unspent transaction output (UTXO), which refers to the amount of digital currency marked as spendable after a person has executed a cryptocurrency transaction, into its digital currency implementation. This move was taken straight from Bitcoin’s playbook.

Southeast Asian economies, such as Singapore, Thailand, and Cambodia, have also been progressing rapidly on the financial innovation front. Thailand’s central bank is developing a retail central bank digital currency (CBDC). Cambodia was the first country in the region to introduce a ‘government-authorised digital currency’, which is different from a CBDC as its digital currency is not a liability on the central bank balance sheet, and cannot be separated from its payment systems as far as the government is concerned. In fact, Cambodia has started its blockchain payment system called Bakong, which is an augmented form of CBDC using Bitcoin technology minus the energy-intensive Proof of Work.<sup>1</sup>

Among regulators, the U.S. Securities and Exchange Commission is the most innovative, and it is looking into establishing a safe harbour for cryptocurrency. However, most global financial centres have legacy issues involving regulations. So, although governments will take more time to deal with them, they should all be catching up. Interestingly, while it would be expected that the developed economies would take full advantage of these currency innovations to race ahead, it is the developing economies with infrastructural challenges, which have not plugged fully into the global financial system, that possess greater flexibility to promote cryptocurrencies. Hence, while the Philippines and Indonesia have major challenges in setting up their communication infrastructure, they should be able to catch up once they resolve these issues.

India also has its fair share of problems in terms of regulation. It needs to protect its sovereignty, especially with regard to its currency, and is concerned about taxation and capital management issues. Therefore, India is doing the right thing in the first stage by guarding against the money laundering and tax evasion that come along with cryptocurrency. But India is moving very fast too and there has been a 180-degree change in its attitude towards cryptocurrency, with the Reserve Bank of India announcing that it may launch its first CBDC trial programme by December 2021.

All governments are worried not only about protecting their citizens’ privacy, but also about criminals making use of the data the authorities have stored centrally, like health certificates. However, regulation can only do so much. Governments need to be ‘trust-less’ in the sense that once they are in the virtual realm, there is always a danger that data can be accessed, thereby putting their citizens at risk. Hence, they need to dive in with innovative cyber technologies despite knowing the cybersecurity risks.

Other challenges include interoperability issues when dealing with multi-country CBDC. If real-time gross settlement

and the automatic current system are done away with, as in the case of retail CBDC, then the movement of currency will be a lot faster than before. As a result, there is a danger that rapid withdrawals of capital from a country can affect exchange rates. National debt would multiply manifold, and companies would never be able to repay their debt if their borrowings are in foreign currency. And it will take place much faster than before because everything is programmable and capable of bypassing the traditional payment system. These are all issues that Asian governments need to look closely into so that we do not have a repeat of the 1997 Asian Financial Crisis.

## The way forward

The market structure has gone through tremendous changes in just the last decade. While it was expected that governments would legitimise cryptocurrency, the speed at which this has transpired has amazed everybody. The question we are now constantly hearing is when would there be mass adoption of CBDC and cryptocurrency.

There are several reasons for the rapid development of cryptocurrency. First, about a decade back, when we talked about fintechs and their mission of promoting financial inclusion (a key driver of cryptocurrency), we were looking at the disruption of financial firms. Fintechs were small, but within a few years, they have grown into giants. Moreover, many of them have moved away from their original mission and are showing a lot more rent-seeking behaviour—very much like traditional financial firms, not only in terms of their profit outlook, but also in how they cater to the needs of shareholders and their board of directors.

Another catalyst for the rapid adoption of cryptocurrency is stablecoins, which are a form of cryptocurrency that attempts to peg its market value to an external reference, say a currency like the U.S. dollar or the price of a commodity like gold. A decade back, even those in the crypto community were not very bullish on stablecoins because cryptocurrency was all about replacing fiat currency. But this has now changed, and stablecoins have become more attractive as they attempt to provide the instant processing and security of cryptocurrency payments, along with the volatility-free stable valuations of fiat currencies. Cambodia, for instance, has a stablecoin for the U.S. dollar and another stablecoin for its own local currency, the riel, even though it is known more as a payment system than a stablecoin. In another instance, Libra (now called Diem), a blockchain-based payment system created by Facebook, has made many governments feel vulnerable.

Because of such developments, about 70 percent of central banks have plans to issue CBDC, or are doing research

on ways to retail it.<sup>2</sup> The line between cryptocurrency on a public blockchain and stablecoins or tokenised fiat currency on a private blockchain built by the government is blurring. The development of CBDC is moving towards crypto token designs that cross borders, enable managed anonymity for privacy protection, and have eWallets from the retail giants, bypassing the traditional banking systems linked to the Real Time Gross Settlement System administered by governments and Automated Clearing Houses administered by the banks. Even Singapore’s Government Technology Agency, GovTech, uses public blockchain such as Ethereum for its OpenCerts and TradeTrust projects.

Meanwhile, the crypto community is becoming increasingly entrenched in the metaverse, which is a fully realised digital world that exists beyond the one in which we live. This development caters to the younger generation who live in a very tight space. It is like living in the film *The Matrix* or *Ready Player One*, where people plug into the virtual space, or put on their augmented reality (AR), virtual reality (VR), or extended reality (XR) goggles, and live in the space where they can roam freely, admiring their own paintings and playing games with their friends. Even Facebook has launched a metaverse space. Metaverse will be the catalyst for CBDC and cryptocurrency, as well as Non-Fungible Tokens (NFTs) with DeFi (decentralised finance geared toward disrupting financial intermediaries).

Despite these innovations, I believe the direction of development in cryptocurrency is still towards financial inclusion—including more people, increasing the marginal propensity to consume, and enabling sustainable growth. But the key players have changed and governments are taking the lead. I believe all governments will eventually catch up, even those that are currently grappling with more legacy issues and have less flexibility. At this moment, mankind is at a critical juncture, where governments and people alike are looking into the ethics of cryptocurrency and its related offerings, and the fintech giants and start-ups replacing those resisting the metaverse revolution.

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### Endnotes

<sup>1</sup> Proof of Work requires one member of the network to prove to others that a certain amount of a specific computational effort has been expended, hence preventing anybody from gaming the system.

<sup>2</sup> Christian Barontini and Henry Holden, “Proceeding with Caution—A Survey on Central Bank Digital Currency”, Bank for International Settlements, January 2019.