

Evaluating Malaysia's Need for Central Bank Digital Currency

Technological advancements and the increasing pace of digitalisation have led to the rising adoption of digital payments and the emergence of privately-issued digital assets¹ (Diagram 1).

Diagram 1: Comparison of fiat currency, e-money and digital assets

	 Issued and backed by a sovereign body	 Privately-issued and backed by assets	 Privately-issued and not backed by assets
Instrument	Fiat currency 1. Bank notes and coins 2. Central Bank Digital Currency (CBDC)	Electronic money (E-money) <i>e.g., Boost, GrabPay, Setel, ShopeePay, and Touch 'n Go</i>	Digital assets Stablecoin <i>(e.g., Tether, USD Coin)</i>
			1. Exchange tokens¹ <i>(e.g., Bitcoin, Ethereum)</i> 2. Security tokens² 3. Utility tokens³
Store of value	Value is backed by a sovereign body (e.g., Government, central bank)	Value is backed by fiat currency	Value is backed by assets (e.g., fiat currency, commodity)
Medium of exchange	<ul style="list-style-type: none"> Widely used as a means of payments Some countries are exploring the feasibility of issuing CBDC (digital form of fiat currency) 	Widely used as a means of payment	May potentially be used as a means of payment subject to effectiveness of value stabilisation mechanism
Unit of account	Widely used for pricing of goods and services	Denominated in fiat currency	Not widely used for pricing of goods and services

¹ Used as a means of exchange or for investment

² May provide rights, e.g., ownership, repayment of a sum of money, or entitlement to future profits

³ Can be redeemed for access to a specific product or service

Note: Examples are meant to be illustrative and do not amount to any form of endorsement.

Source: Bank Negara Malaysia, Financial Action Task Force, Bank for International Settlements, Cryptoassets Taskforce

Most digital assets, in their current form, are not used as payment instruments primarily because they do not exhibit the universal characteristics of money. In essence, their characteristics prevent them from being a good store of value and medium of exchange as they are prone to price volatility, vulnerable to cyber threats and lack scalability². For example, the price of Bitcoin recorded a steep decline of 39% within a single day in March 2020³. Hence, it is crucial for the public to have a clear understanding of digital assets such as their features, underlying technology, and corresponding risks (Diagram 2). It is noteworthy that new forms of digital assets such as stablecoins have started to emerge. Some stablecoins seek to minimise volatility in their value by linking or backing it with assets such as fiat currency⁴.

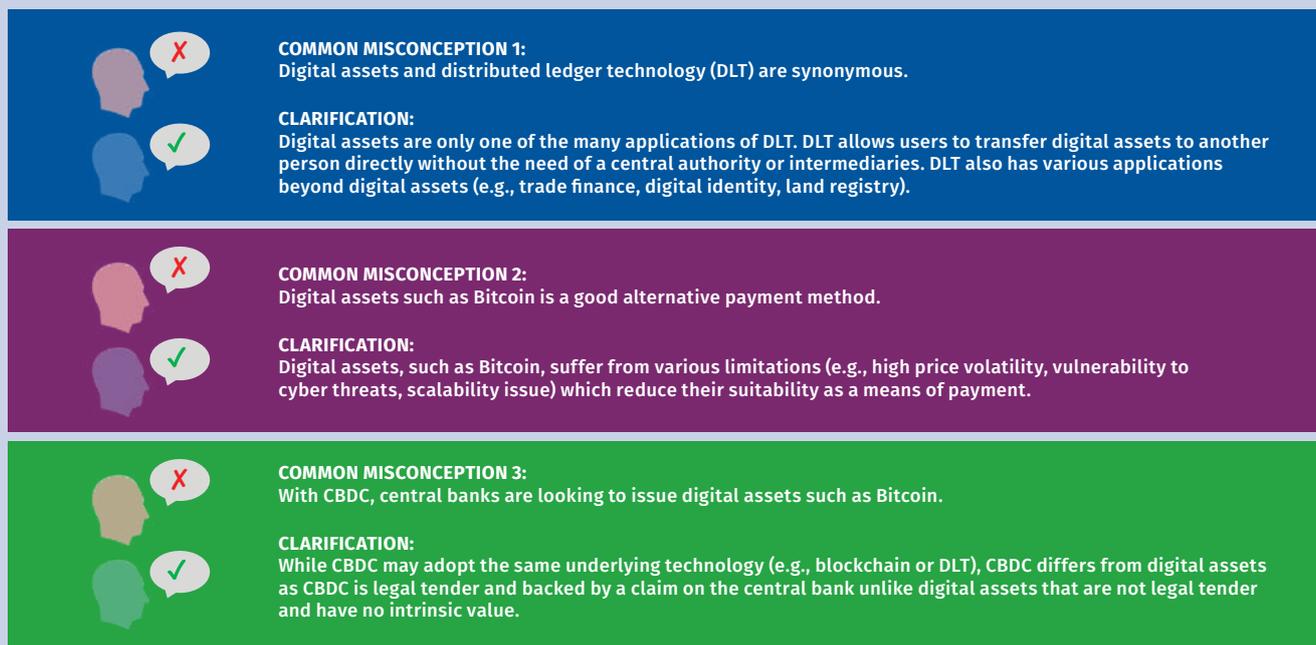
¹ Digital asset or virtual asset refers to a digital representation of value that can be digitally traded and functions as a medium of exchange and/or unit of account and/or store of value but does not have legal tender status. It is not issued nor guaranteed by any jurisdiction, and fulfils the above functions only by agreement within the community of users of the digital asset (Source: FATF's Virtual Currencies Report 2014).

² For digital assets with decentralised trust model, such as Bitcoin, each user needs to download and verify the history of all transactions ever made. This has the effect of slowing down transaction processing time, making it not scalable to facilitate day-to-day retail payments. For instance, Bitcoin is only able to process 3.3 transactions per second compared to about 2,000 to 3,500 transactions per second for the major international cards networks (Source: BIS Annual Economic Report 2018, "V. Cryptocurrencies: Looking beyond the hype").

³ Source: <https://www.coindesk.com/bitcoin-prices-in-2020-heres-what-happened>

⁴ Fiat currency refers to currency notes and coins issued by a sovereign body, e.g., Government or central bank of a country, which is recognised as legal tender and can be used to settle a debt or payment obligation in that country.

Diagram 2: Debunking common misconceptions on digital assets



Source: Bank Negara Malaysia, Bank for International Settlements

The rapidly evolving digital asset and payments space has prompted central banks to evaluate the merits of issuing CBDC. CBDC can be a means to achieve public policy objectives by capitalising on the benefits afforded by emerging technologies such as DLT⁵.

Balancing the benefits and risks of CBDC issuance

CBDC⁶ is a digital payment instrument issued by a central bank that represents a direct liability of the central bank⁷. While CBDC issuance may yield potential benefits such as faster settlement, easier accessibility, and better system resilience⁸, it is not without its risks.

Depending on the way a CBDC is designed⁹, there may be different implications to monetary policy transmission and stability of the financial system. For instance, while an interest-bearing CBDC may facilitate faster transmission of monetary policy rate changes to end-users, it may trigger financial stability risk if it leads to large shifts of bank deposits to CBDC. This may destabilise commercial bank deposit funding and potentially affect the supply of credit in the economy¹⁰, thus giving rise to financial stability risks. Robust controls must also be put in place in a CBDC system to mitigate operational and cybersecurity risks. In addition, CBDC issued by a foreign central bank that is denominated in foreign currency may undermine the effectiveness of monetary policy transmission, if it is widely used as a means of payment in Malaysia. Accordingly, it is crucial for central banks to approach any decision to issue CBDC thoughtfully to ensure it is carefully designed to avoid compromising monetary and financial stability.

⁵ While CBDC is often associated with distributed technology such as DLT, where records of transactions are held across a network of computers (nodes), it can also be designed using a centralised technology, with differing levels of efficiency and protection from single points of failure.

⁶ There are generally two categories of CBDC, namely retail or general purpose CBDC that are issued to facilitate day-to-day retail transactions and wholesale CBDC that are issued to facilitate settlement between financial institutions.

⁷ BIS and G7 central banks, "Central Bank Digital Currencies: Foundational Principles and Core Features", October 2020, pg. 3.

⁸ For instance, CBDC system could act as an additional payment method to mitigate over-reliance on existing payment systems. The choice of DLT in the design of a CBDC could also mitigate single point of failure risk.

⁹ Some examples of CBDC design features include whether it is interest-bearing and whether users are subject to caps on how much CBDC they may hold.

¹⁰ As the CBDC is a convenient, efficient and risk-free instrument, bank depositors may be keen to hold CBDC instead of placing deposits at banks. This may be exacerbated if the CBDC also offers some form of returns. Deposit withdrawals particularly by retail depositors may reduce the availability of low cost and stable funding for banks, which will subsequently lead to deposit competition and drive cost of funding higher for the banking system. In a worst case scenario, if banks are unable to replace these funding sources, they may have to reduce their balance sheet, thus impacting the supply of credit. In times of financial stress, this may result in runs on bank deposits into CBDC which might potentially undermine financial stability.

Motivations for CBDC work are driven by specific country circumstances

CBDC should not be an end in itself. Instead, it can be a tool to achieve broader public policy outcomes. Understanding the problem statements and the desired public policy goals is therefore critical in guiding any decision and research on CBDC. It is worth noting that the underlying motivations for CBDC work may differ across countries depending on their level of development and specific circumstances. Some of the underlying motivations include promoting financial inclusion¹¹, modernising less developed domestic payment systems¹², enhancing cross-border payments, providing continued access to a state guaranteed means of payment¹³ in response to declining usage of physical cash and enhancing monetary policy tools¹⁴ (Diagram 3).

Diagram 3: Spectrum of motivations for CBDC work



Source: Central Bank websites and publications, News flow

¹¹ This is especially the case for countries with low levels of financial inclusion.

¹² For countries with less developed payment systems, CBDC may offer a way to leapfrog to better and more advanced payment systems.

¹³ As part of its mandate, a central bank provides the public with access to a means of payment that has legal tender status and safeguards its value by maintaining price stability.

¹⁴ For example, an interest-bearing CBDC could be used as a monetary policy tool to improve monetary policy transmission.

Malaysia's context and approach to CBDC

At the moment, the Bank does not have any immediate plans to issue CBDC. In Malaysia, the financial system continues to support the functioning of the economy while meeting the needs of individuals and businesses. To this end, the existing monetary and financial policy tools have remained effective in safeguarding monetary and financial stability¹⁵. Moreover, domestic payment systems, including the RPP continue to operate safely and efficiently to support the needs of the economy and allow real-time digital payments¹⁶.

Nevertheless, given that this is a rapidly evolving situation, we will actively assess the potential value proposition of CBDC in light of developments in the digital assets and payments space. Key policy decisions on CBDC will be guided by clear benefits to Malaysia as a whole, while ensuring that the associated risks arising from CBDC issuance, particularly financial stability risks, are effectively managed. CBDC issuance should complement existing payment instruments including physical cash to ensure that all Malaysians, in particular the underserved communities, have continued access to safe and efficient payment solutions. We will also actively monitor the trend of key indicators with direct impact to our mandates, which may provide useful data points for us to evaluate the merits of CBDC issuance. These include, among others, the level of physical cash usage in Malaysia¹⁷, the extent to which privately-issued digital assets are used for payments in Malaysia¹⁸, and the extent to which CBDC is being used to facilitate cross-border trade¹⁹. As part of our efforts to enhance understanding of the associated risks and policy implications of CBDC, we are actively building internal capacity to support informed decisions on CBDC issuance including by conducting proof-of-concepts (POC).

¹⁵ Further details on the Bank's monetary and financial policy tools can be found in the Bank's Economic & Monetary Review 2020.

¹⁶ Greater details on the progress of e-payments migration can be found in this chapter of the Bank's Annual Report 2020, entitled "Promoting Safe and Efficient Payments and Remittance Systems".

¹⁷ Any rapid decline may strengthen the case for CBDC issuance to ensure the public continues to have access to risk-free central bank money.

¹⁸ While privately-issued digital assets are not recognised as legal tender and not regulated as a payment instrument in Malaysia, this may not deter some members of the public from dealing with digital assets. In view of this, the Bank monitors the extent to which they are used for fund transfer and payment for goods and services.

¹⁹ CBDC issuance may be necessary to facilitate cross-border trade and strengthen Malaysia's competitive positioning vis-à-vis its regional competitors.