

Digital money needs to be bound to the real world

Beyond preserving economic value, such assets should also be aligned with national interests. **By Woo Jun Jie**

THE emergence of digital money has raised important questions pertaining to the nature and function of money.

In economics 101, we are told that money performs three key functions: store of value, unit of account, and medium of exchange.

By this definition, cryptocurrency has served as a medium of exchange and unit of account. The growing list of merchants who are willing to accept cryptocurrencies as payment speaks of its role as medium of exchange, while the creation of trade of cryptocurrencies on highly transparent and secure distributed ledgers known as blockchains ensures that all transactions are accounted for.

However, the collapse of major crypto firm FTX, the stablecoin Terra and its reserve asset cryptocurrency Luna has shown that cryptocurrencies are not reliable stores of value. Millions of dollars have been wiped out with these collapses and other notable crypto scams (or “rug pulls”) amid what has come to be known as the “crypto winter”.

It is for these reasons that policymakers across the world are paying close attention to how digital assets should be regulated and which digital assets should be permitted for public and commercial use.

Digital assets, particularly digital money, were a key topic of discussion during the recently-concluded Point Zero Forum, an annual conference co-organised by the Monetary Authority of Singapore (MAS) and Switzerland’s Financial Market Supervisory Authority (FINMA).

Much of the discussion was centred on the notion of “purpose-bound money” (PBM), a concept that was first introduced in MAS’ exploratory project on programmable money known as Project Orchid.

The details came in a MAS technical white paper published on Jun 20, 2023, which proposes a more specific conceptualisation of PBMs. Under this approach, a PBM involves “wrapping” the digital money with a common protocol that specifies the contractual arrangements that must be met before the money can be released to a recipient.

For instance, when a PBM is transferred from the buyer of a good to its seller, the digital money is first held in escrow. Once the buyer receives the goods that he has purchased, the protocol is activated and the money is released to the seller.

After that, the seller can use the digital money for other purposes without constraints. In other words, it is as good as any fungible legal tender.

Purpose-bound and soulbound

In this way, digital money is “bound” to its purpose, namely the fulfilment of a contract between a buyer and seller. This helps ensure that digital money does not lose its connection to real economic value, as was the case with some cryptocurrencies.

Policymakers and regulators are not the on-



ly ones who are concerned about binding digital assets to real economic value.

In early June 2023, the luxury conglomerate Louis Vuitton released a series of non-fungible tokens (NFTs) linked to their products and experiences, and which cannot be sold once purchased. Such NFTs are known as “soulbound” tokens that, once purchased, become part of the buyer’s digital identity by virtue of their non-transferability.

Unlike PBMs, soulbound tokens are not meant to be traded. Rather, they are a one-off transaction between their buyers and sellers. This means that the intrinsic value of soulbound tokens can be enjoyed only by their buyers. On the flipside, there is also no risk of it losing its value, since there is no possibility of exchange.

PBMs and soulbound tokens represent the opposite ends of a spectrum in a global response to cryptocurrency’s inability to serve as a store of value. While PBMs aim to become a form of legal tender between two transacting parties, soulbound tokens represent an asset that creates value only for its buyer and becomes part of his or her digital persona.

Nonetheless, both emphasise means to ensure the preservation of economic value, whether through the PBMs’ common protocol, or soulbound tokens’ non-transferability. In other words, there is a desire to “bind” the digital asset in question to a stable and specific, or specifiable, economic value.

Beyond technical specifications however, there is a need to take a broader perspective with regard to the digital asset space. Beyond simply making digital assets purpose-bound or soulbound, it is crucial to ensure that our entire digital asset endeavour is mission-bound.

For Singapore, the overarching mission that defines its digital assets space should include ensuring that digital asset companies contribute to broader national economic goals, and that the interests of citizens and investors are protected.

By virtue of their connection to economic value and hence the wealth of those who buy

Purpose-bound money and soulbound tokens represent the opposite ends of a spectrum in a global response to cryptocurrency’s inability to serve as a store of value.

PHOTO: REUTERS

or trade in them, digital assets will become an increasingly important component of Singapore’s overall economy.

While our policymakers and regulators have made clear their intention to ensure that digital assets create value for the economy rather than risk for investors, it is equally important to ensure that financial institutions, fintechs and investors are equally aligned with this mission of aligning digital assets to economic value.

Mission-bound

A good example of this is a 2021 case in which a digital asset company foiled a government official’s impersonation scam by flagging a suspicious account to the police. As intermediaries between consumers and the digital asset market, financial institutions and digital asset businesses play an important role in preventing scams and safeguarding the interests of individual investors.

Given its relatively nascent stage of development, there is a need to establish the boundaries and codes of practice within which digital asset firms and investors operate.

To this end, MAS recently announced a set of regulatory measures that require digital asset companies in Singapore to ring-fence their customers’ assets by holding them in a trust account that is separate from the companies’ own assets. This will help prevent huge losses of customers’ assets in the event of another crypto crash.

Beyond regulatory measures, there may also be a need for digital asset companies, financial institutions and investors to establish codes of practice for the digital asset space. This will complement MAS’ efforts by establishing norms and standards that can help align the burgeoning digital assets sector with Singapore’s goals of economic development and financial system stability.

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