

# Digital assets could serve as bartering device

Bartering for goods or services with a digital asset will in effect blur our view of typical transactions in the form of delivery versus payment in money. **BY DUAN JIN-CHUAN**

**D**IGITAL technology makes it possible to create cryptocurrencies like Bitcoin. Naturally, the same technology can be deployed to tokenise the fiat monies issued by sovereigns; pools of durable goods; financial claims; or any properties of intrinsic value. Technical feasibility aside, we must ask: "What will compel people to do so?" Typical reasons could be: serving as a trusted medium of exchange; a more reliable means for storing value; making trades more convenient and cost-competitive; or a mix of these. Are these reasons really sound?

Before going further, I contend that cryptocurrencies aren't digital assets because they have zero intrinsic value. Apart from being accepted in some circles as a medium of exchange, such digital tokens are at best speculative instruments. As for those initial coin offerings on plausible business proposals, they are essentially initial public offerings of tokenised equity shares even though they are for now not put to the same listing requirements.

Investment for future consumptions typically motivates us to hold assets of value. So, the same reason shall apply to their digital forms. But we still need to be motivated to accept the digital form over the conventional practice of recording them on paper or in a centralised electronic database.

Perhaps obvious, trading digital assets should be inherently more cost competitive than dealing in their conventional form. However, an often-overlooked aspect about digital assets is their potential to also serve as a bartering device in many instances. Bartering for goods or services with a digital asset will in effect blur our view of typical transactions in the form of delivery versus payment in money because transactions can be just as conveniently completed as delivery versus delivery.

When asset ownership can conveniently change hands via bartering with digital assets, the very existence of the conventional channel of asset trading through organised exchanges will be challenged. Worth noting is the potential positive side effect resulting from the market's disciplinary forces exerted on sovereigns to run more responsible monetary policies. These happenings are, in my opinion, an inevitability of this digital era.

## TRUST-HELD DIGITAL ASSETS

By trust-held I mean that a claim entitles its owner to a specified share of the underlying assets legally placed in a trust with a third party of repute. The trust company and the arranging institution get rewarded with an upfront or annual fee, or simply a fraction of the assets pool for the service.

Placing the assets of value under a trust is essential to making the tokenised claims attractive because the owners can be assured of those assets being under the safekeeping of a trusted third party.

If the assets are not trust-held, it will undoubtedly be less appealing to the takers of digital tokens because the promise may vanish, in full or in part, as a result of legally protected bankruptcy or simply fraud.

## BARTERING WITH DIGITAL ASSETS

Paper gold has been around for a long time and quite widely held for hedging/investment purposes. It serves as a concrete example to make my point.

SPDR Gold Shares are an example of trust-held paper gold traded as an ETF on NYSE Arca as well as SGX. Even though records and transactions are managed via an electronic means, SPDR Gold Shares are not digital gold however



'Cryptocurrencies are not digital assets because they have zero intrinsic value.'

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because centralised database technology is used. One can imagine a digital version by relying on the distributed ledger technology with which its owners can easily barter.

Digital gold has natural divisibility, meaning that transactions in fractions of the total claim to the underlying gold pool present no operational difficulty. Lacking divisibility is in effect the reason that conventional barterers with goods and services are inefficient. Transactions using digital gold are barterers because they bypass the intermediate step of first converting gold to fiat money. When transactions can be conducted with one fewer layer of intermediation, their cost-competitiveness emerges.

A trust-held digital asset will face limited physical supply. In some cases, these are hard limits; for example, there is only one Raffles Hotel in Singapore, while in other instances they are soft limits because newly mined gold can add to the total supply. In contrast, non-trust-held digital assets can be expanded on credit and are associated with varying degrees of credit risk hinging upon the ability of the issuing party to honour that promise.

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The bartering function of trust-held digital assets is a natural by-product but should not be the driving reason for digitalisation. Some digital assets will be more appealing barter instruments than others due to better liquidity with more frequent price discoveries.

An individual trust-held digital asset due to its limited supply may only in a very small way fulfil the transaction function. Collectively, however, digital assets differing in type, pool size, or trust arrangement may take up a substantial chunk of the total transactional needs currently served by fiat monies.

## SECURED SECONDARY MARKET TRANSACTIONS

The step of placing assets of value in a trust in exchange for a tokenised claim can be understood as an act of primary market transaction. Facilitating secondary market transactions (changing hands from one rightful owner to another) is critical to wider acceptance.

Digital assets with bartering potential need to operate on a system that facilitates easy decentralised verifications. Through distributed verifications, secondary market transactions no longer need to be intermediated through an exchange.

Neither is the trust's direct involvement required in secondary market transactions because an acquirer knows that the tokenised claim is fully backed by the equivalent quantity of assets under the safekeeping of a third party of repute.

A proof-of-stake blockchain with the owners of a digital asset exercising the verification function proportional to their stakes seems to me a natural architecture for digital assets. Adding the trust company as a trusted verification node will be an obvious enhancement to the design.

Other distributed ledger technologies will emerge in the digitalisation drive because heterogeneity typically occurs as competitors juggle to cater to different tastes, constraints, and market conditions.

## A BRIGHTER FUTURE BUT NOT FOR ALL

Bartering with digital assets presents a potential threat to organised exchanges. Take Reits (real estate investment trusts) as an example. Reits are currently traded on organised exchanges such as SGX. Tokenised Reits can be directly exchanged for fiat money, other digital assets, or goods and services without going through an organised exchange.

A digital wallet can be equipped to present, say, the last five transaction prices of digital gold versus fiat money and/or another popular digital asset. Therefore, the price discovery function typically associated with organised exchanges is not compromised in barterers with digital assets.

History has taught us that people may resort to barterers when confidence in a fiat money is seriously eroded. Digital assets will therefore exert a disciplinary force on sovereigns to act more responsibly.

Unless a country chooses to totally cut off its wired/wireless connections to the outside world, moving digital assets across national boundaries is non-stoppable. Citizens of a country facing hyperinflation or excessive currency control may simply go about their daily lives by bartering with digital assets created in another trustworthy jurisdiction.

In this digital era, our feet may be physically tied down but expressing our discontent through digital wallets may soon become a possibility. How amazing is the prospect that ordinary citizens can curtail the power of a sovereign reigning over their economic lives!

A fiat money's medium-of-exchange function may be largely replaced by bartering with digital assets. In terms of storing value, it is obviously dominated by the assets with intrinsic value underlying the tokenised claims. It is therefore not inconceivable that fiat monies may also end up having a limited shelf life.

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