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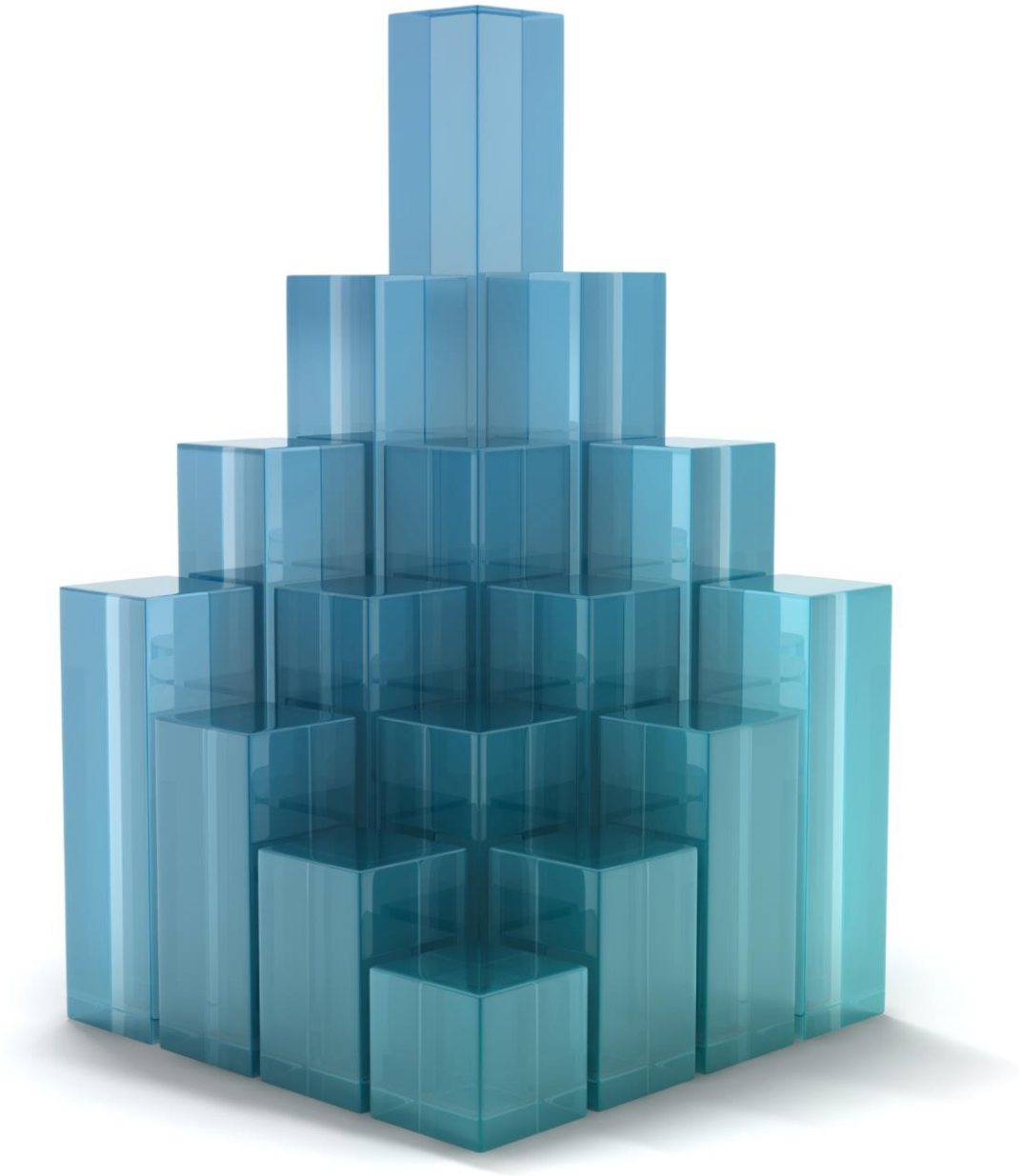

Stablecoins

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Introduction

With the value of cryptocurrencies fluctuating on an almost daily basis, there has been an increased focus on creating a cryptoasset which can be transferred digitally but also crucially benefits from stability and trust. Such an asset is known in the industry as a "stablecoin", and over recent months, this latest innovation has seen a significant growth in adoption.

A stablecoin is generally understood to be a cryptoasset pegged in value to fiat currency or other assets. It is designed to avoid the volatility inherent in other cryptocurrencies whose price is entirely market driven. While the price fluctuations of other cryptoassets make them perhaps more attractive for speculation, the relative stability of stablecoins offers the possibility of cryptocurrencies being adopted for use in everyday transactions and of becoming a digital form of cash. This would allow a much wider pool of users access to the benefits of digital currencies, for example greater speed and certainty of settlement across a blockchain. In this way, stablecoins offer a bridge between the traditional financial markets and the emerging opportunities offered by cryptocurrency technology.

Over the recent months there has been a proliferation in private companies taking the lead in developing stablecoins, for example, the "MUFG Coin", a stablecoin that MUFG plans to roll out which will be pegged 1:1 to the Japanese yen, and the "Circle USDC", a U.S. dollar-pegged stablecoin. The potential advantages need to be balanced, however, against regulatory and policy goals covering matters such as consumer protection, financial services regulation, market integrity and financial crime, and careful thought needs to be given to how to structure a stablecoin accordingly.

Types of stablecoin

There are three principal models used with the aim of enabling stablecoins to achieve their characteristic price stability. These are set out below.

Model I: Fiat/commodity-collateralised

This is the simplest stablecoin model, under which the stablecoin is (wholly or partly) 'backed' by an asset such as a fiat currency, gold or other commodity collateral. A central entity guarantees the issuance and redeemability of the stablecoin by reference to the asset which it holds as collateral. This approach can be problematic, as it requires a degree of centralisation and trust in the issuing party which, in turn, imposes a potentially significant level of counterparty risk for the holder of the stablecoin, particularly if the holder has no security over or other rights to the collateral.

Model II: Crypto-collateralised

In this model, the collateral backing the stablecoin is itself a cryptocurrency.

It appears from current market practice that the crypto-collateralised model is sometimes operated through paired coin systems,[1] where issuers issue:

- a stablecoin; and
- another token, used to pay an accrued fee to redeem the locked-up or pledged cryptocurrency. This redemption fee is likely to be determined by an algorithm which is designed to maintain a price band for the stablecoin.

The crypto-collateralised model has the benefit of decentralisation, as the collateral is held in a smart contract which does not require trust in a central party. However, the stablecoins in this model might need to be overcollateralised in order to account for the price volatility of the cryptocurrency collateral.

Model III: Non-collateralised

Using this model, stablecoins are not backed by any outside collateral but by a type of self-sustaining economic system. The value of the stablecoins is maintained through the use of a system which, for example, expands and contracts the supply of the coin based on an algorithm. This operates in a similar manner to the way in which central banks maintain the value of fiat currencies, but can be done in a decentralised manner.

Public versus private stablecoins

Stablecoins can also be categorised into public and private stablecoins. Private stablecoins are those issued by commercial enterprises and public stablecoins are issued by central banks. Stablecoins also offer the possibility of developing an international coin, pegged to a basket of fiat currencies or commodities. This would reduce volatility even further by hedging against

[1] Though there is nothing inherently precluding this paired coin model being adopted in the fiat/commodity-collateralised model.

fluctuations in the value of national currencies, and has the potential to dramatically increase the efficiency of cross-border settlement.

Private stablecoins

Private companies have to date been the front-runners in developing stablecoins, primarily due to the barriers facing central banks seeking to offer digital fiat currencies. For example, a major commercial bank, MUFG plans to roll out a stablecoin which will be pegged 1:1 to the Japanese yen. The "MUFG Coin"[2] will be released in select amounts to customers in Japan as part of a large-scale trial set to begin in 2019, following successful in-house trials. Users will be able to use an app to convert their fiat deposits to MUFG coins, which can then be used to make payments at shops and restaurants and can be transferred to the accounts of other users.

Another example of the development of stablecoins in the private sphere is the launch of a U.S. dollar-pegged stablecoin by Circle, a start-up payments company backed by Goldman Sachs, with the support of Coinbase, a cryptocurrency exchange.[3] The "Circle USDC"[4] runs on the Ethereum blockchain and is intended to be used by customers for payments and trading within the cryptocurrency space. Circle plans to add similar coins pegged to the euro and the pound.[5]

Central bank digital currencies

Central banks are increasingly investigating the possibility of creating digital versions of national currencies, recognising the potential of combining the opportunities offered by distributed ledger technology with the existing trust inherent in national fiat currencies. The central bank would initially issue a central bank digital currency (CBDC), which would then circulate between banks, businesses and consumers without further central bank involvement. CBDCs could be narrowly targeted, for example restricted to wholesale transactions between financial institutions, or opened up more widely to consumers as a general purpose currency. The advantages offered by a stable, digital form of cash are particularly evident in the central bank domain as an alternative to bank deposits. For example, a CBDC offers an alternative to the outdated and costly wholesale payment technology used by many central banks. It also has the potential to be used as a monetary policy tool to improve the transmission of policy rates to the real economy, allowing central banks to react more quickly and efficiently to economic challenges.

However, central banks may be limited in their ability to develop CBDCs due to concerns about the robustness of new payment systems and potential risks created by a CBDC circulating on a distributed ledger technology system; for example, in a crisis, bank depositors could turn to CBDC, if it is perceived as a lower risk form of money, which could in turn drain deposits from commercial banks, threatening commercial banks' lending activity.[6]

Advantages of stablecoins

The key advantage of stablecoins is their practical application for everyday transactions without the level of price fluctuations associated with other cryptocurrencies. This stability has the potential to be particularly valuable as an alternative to cash in countries where there is hyperinflation and monetary instability.

Stablecoins have the benefits of distributed ledger technology, providing speed and convenience in accessing other currencies and settling payments in potentially a global market. Transferring funds using distributed ledger technology can provide more liquidity to markets, reduce credit risk and offer greater convenience to users, particularly in relation to cross-border transfers, through lower transaction fees and shorter transfer times. Quicker and cheaper transfers can facilitate trade, and the use of stablecoins and distributed ledger technology also has the potential to increase financial inclusion by providing a universally accessible peer-to-peer payment system.

2 https://www.investopedia.com/news/japans-biggest-bank-releasing-its-own-cryptocurrency-march/
3 https://www.cnbc.com/2018/10/23/cryptocurrency-giants-coinbase-and-circle-form-a-joint-venture-to-boost-adoption-of-dollar-backed-stable-coins.html
4 https://www.circle.com/en-gb/usdc
5 https://www.cnbc.com/2018/05/15/goldman-sachs-backed-start-up-circle-introducing-a-crypto-us-dollar.html
6 https://static1.squarespace.com/static/59aae5e9a803bb10bedeb03e/t/5b5780276d2a737b3c172bfc/1532461095681/Cellular+structure+for+a+digital+fiat+currency+July+2018.pdf

Challenges

While stablecoins bring significant advantages, they also present structural and security (as well as regulatory, discussed below) challenges. On a structural level, the scalability of stablecoins depends on the ability of distributed ledger technology to reach a global level of efficiency and robustness to compete with centralised systems. User experience is also a potential barrier to the mass adoption of stablecoins, as owning and using cryptoassets can be challenging,[7] particularly for retail users or investors. Widespread adoption at a consumer level will only be possible if platforms offer a similar level of simplicity, efficiency and security as traditional bank payment solutions as well as the same level of trust. Many stablecoins are currently looking to establish and engender trust and confidence with users, and best practices are beginning to emerge around engaging in audits of the underlying code, audits of the entity's balances through attestations, proving transparency around their banking relationships, custody measures and insurance arrangements, and providing visibility around their regulatory posture.

Regulatory considerations

Careful consideration needs to be given to the regulatory structuring of a stablecoin. Depending on its characteristics, the stablecoin may, for example, constitute a deposit, e-money, a debt or other form of security or a true and potentially unregulated cryptocurrency[8] (aka an exchange token)[9] under English law. The challenge is seeking to apply existing regulations to a novel set of circumstances, with the concern of whether regulators or the courts would share a particular interpretation. If that interpretation can be reconciled with the policy goals behind the relevant existing regulations, then it is likely to be on surer ground. Therefore, in what is still uncertain territory, it is prudent to be cautious and thoughtful as to the regulatory status of a stablecoin, and to be mindful of a fast developing regulatory landscape which means that where it is arguable that a stablecoin is unregulated today, that may not be arguable tomorrow.[10] Moreover, stablecoins are likely to be designed for global use and therefore regulatory considerations in many jurisdictions, especially those of users (and not just the jurisdiction of the issuer), are likely to be relevant.

Separately, and of critical importance to regulators and central banks, meeting AML/CTF requirements is a challenge facing issuers of stablecoins and other cryptoassets. The "pseudo-anonymity" of cryptoassets (transactions are publicly recorded but users' addresses cannot always be traced back to their real identities) provides greater transparency than non-banked cash but less than other forms of online payment. This means that it is difficult to know the extent to which they are being used to engage in illegal transactions.[11] However, there are developing solutions and technical standards for better monitoring, reporting, tracking, and tracing of cryptoassets than with physical cash, where compliance may be built into the smart contract and underlying code.

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7 There are several challenges related to purchasing, using, and storing cryptoassets for both retail and institutional investors and users. These challenges range from the process of purchase, where to purchase, how to purchase and the general user experience. Other challenges include the storage of cryptoassets through appropriate custody solutions and the availability of insurance policies that would help promote both access and provide comfort to retail and institutional investors and/or users of cryptoassets and promote wider scale adoption.

8 By "true cryptocurrency" we mean tokens which do not grant any rights to the holder, at least as against the issuer of the coin, including where there is no issuer, such as Bitcoin, for which new coins are generated by the "mining" process and no right of redemption attaches to the Bitcoin. The value of Bitcoin is determined by the market demand for Bitcoin at any given time.

9 Please see paragraph 2.11 of the UK Cryptoassets Taskforce Final Report, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752070/cryptoassets_taskforce_final_report_final_web.pdf. The Cryptoassets Taskforce comprises the FCA, Bank of England and the HM Treasury. The Cryptoassets Taskforce describes each of the three categories of cryptoassets in their report published on 20 October 2018.

10 Please see Chapter 5 of the UK Cryptoassets Taskforce Final Report.

11 Please see, for example, paragraphs 4.10 to 4.13 of the UK Cryptoassets Taskforce Final Report. To address the related financial crime risks, the UK government will bring fiat-to-cryptoasset exchange firms and custodian wallet providers within the scope of AML/CTF regulation, as required by the EU Fifth Anti-Money Laundering Directive (5MLD). As set out in Chapter 5 of UK Cryptoassets Taskforce Final Report, the UK government also intends to broaden the UK's approach to go beyond the 5MLD requirements, and will consult on bringing within scope of the UK's anti-money laundering regime:

- exchange services between different cryptoassets, to prevent anonymous 'layering' of funds to mask their origin
- platforms that facilitate peer-to-peer exchange of cryptoassets, which could enable anonymous transfers of funds between individuals
- cryptoasset ATMs which could be used anonymously to purchase cryptoassets
- non-custodian wallet providers that function similarly to custodian wallet providers, which may otherwise facilitate the anonymous storage and transfer of cryptoassets

Conclusion

The stablecoin landscape is new and rapidly changing. There are clear structural and regulatory considerations which will need to be addressed to achieve the scalability and full potential of stablecoins, particularly in the central bank domain. However, stablecoins have the potential for significantly greater practical usage and wider adoption than other cryptoassets to help move transactions and trades from traditional financial markets onto the blockchain. In this way, the development of stablecoins has the potential to drive significant change in national economies and ultimately on a global level.

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