

Embedded supervision: How to regulate Libra 2.0 and the token economy

This column uses the revised proposal for the Libra global stablecoin as an example to illustrate possibilities for supervisors to harness information in distributed ledger based-finance via ‘embedded supervision’, **writes Raphael Auer for VoxEU**



Introduction

Authorities around the world are grappling with the rise of digital currencies and decentralised finance based on distributed ledger technology (DLT). The announcement of Libra and similar ‘stablecoin’ projects, such as Tether, USD Coin, and TrueUSD, puts a broader set of regulatory issues on the agenda, including regulations on the quality of asset backing (Fatás and Weder Di Mauro 2019, Cecchetti and Schoenholtz 2019, G7 Working Group on Stablecoins 2019, FSB 2020). The overarching consideration is that, when faced with innovations, how best to apply technology-neutral regulation so that similar economic and financial risks are treated on par.

Yet, the fact that regulation must be technology-neutral does not preclude public authorities from embracing innovation in supervision. Where ‘regulation’ is the process of setting the rules that apply to the regulated entities, ‘supervision’ is the compliance monitoring and enforcement of these rules, which has to be dynamic and adaptable.

Supervision might well evolve with technology. In recent work (Auer 2019b), I put forward the concept of ‘embedded supervision’. Embedded supervision is a framework that provides automatic

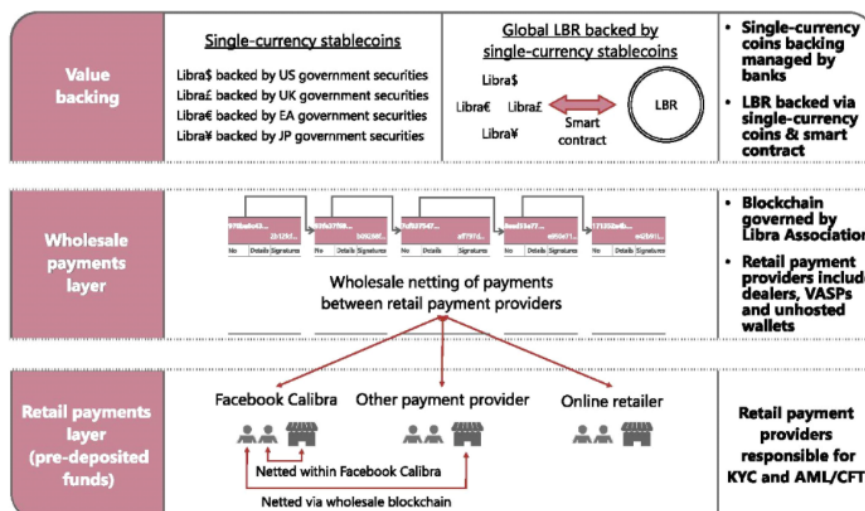
monitoring by reading the ledger of a DLT-based market (see Figure 1). The ledger of a DLT-based market contains much information which is relevant for supervisory purposes. As such, it can be used to improve the quality of data available to the supervisor, while reducing the need for firms to actively collect, verify and report data to authorities.

A key quote from the article:

Allowing for embedded supervision could be important in the development of so-called asset ‘tokenisation’ – the process by which claims on or ownership in real and financial assets are digitally represented by tokens, allowing for new forms of trading and improved settlements (Bech et al. 2020).

In particular, one key early use case of embedded supervision may be the monitoring of full asset-backing of a blockchain-based stablecoin. To exemplify both the merits and limits of embedded supervision applied to stablecoins, consider the revised Libra proposal (Libra 2.0, see Libra Association 2020).

[The chart below] lays out the basic architecture of Libra 2.0, which has three layers. The first layer is the value-backing of two distinct types of stablecoins, single-currency stablecoins, such as Libra\$ or Libra€, and a global stablecoin (LBR), that is a basket of the single-currency stablecoins. On the second layer these stablecoins are made available to payment service providers (PSP) and eWallet providers, such as Facebook’s digital wallet Calibra. On the third layer, the single-currency stablecoins and LBR are made available to retail clients.



Source: Source: Auer (2019b)

Notes: Libra 2.0 is to feature both single-currency stablecoins such as Libra\$ or Libra€, as well as a global stablecoin (LBR) that is a basket of the single-currency stablecoins. The architecture has three layers. The first layer is the value-backing. For the single-currency stablecoins, the value backing is guaranteed via reserves held at commercial banks. For LBR, the value backing is a smart contract that locks in a sufficient amount of single-currency stablecoins according to the basket composition. In the second wholesale layer, the various stablecoins are made available to retail payment providers, including designated dealers, virtual asset service providers (VASPs), and potentially also anonymous ‘unhosted’ wallets. An example for a retail payment service provider is Facebook Calibra. The third layer is that these payment service providers, in turn, make LBR and the single-currency stablecoins available to retail clients for use in payments.

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