

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

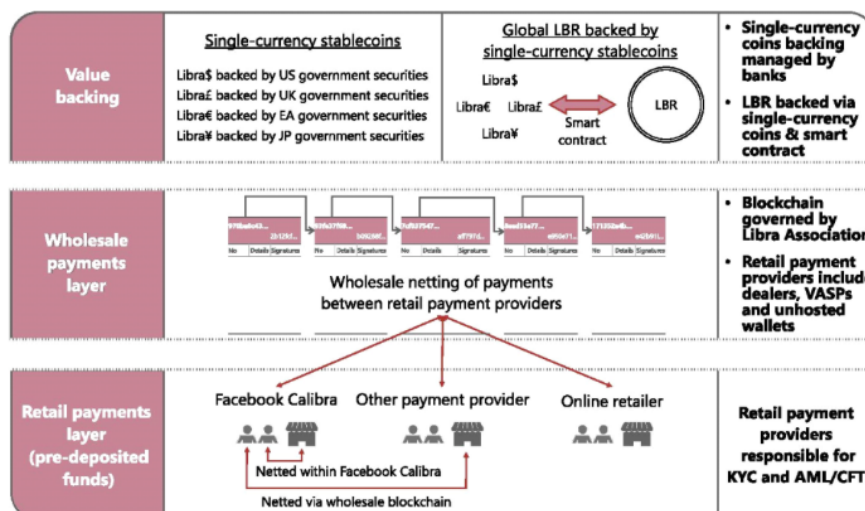
monitoring by reading the ledger of a DLT-based market (see Figure 1). The ledger of a DLT-based market contains much information which is relevant for supervisory purposes. As such, it can be used to improve the quality of data available to the supervisor, while reducing the need for firms to actively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

Alissa Lefebre

Economist

alissa.lefebvre@ing.com

Deepali Bhargava

Regional Head of Research, Asia-Pacific

Deepali.Bhargava@ing.com

Ruben Dewitte

Economist

+32495364780

ruben.dewitte@ing.com

Kinga Havasi

Economic research trainee

kinga.havasi@ing.com

Marten van Garderen

Consumer Economist, Netherlands

marten.van.garderen@ing.com

David Havrlant

Chief Economist, Czech Republic

420 770 321 486

david.havrlant@ing.com

Sander Burgers

Senior Economist, Dutch Housing

sander.burgers@ing.com

Lynn Song

Chief Economist, Greater China

lynn.song@asia.ing.com

Michiel Tukker

Senior European Rates Strategist

michiel.tukker@ing.com

Michal Rubaszek

Senior Economist, Poland

michal.rubaszek@ing.pl

This is a test author

Stefan Posea

Economist, Romania

tiberiu-stefan.posea@ing.com

Marine Leleux

Sector Strategist, Financials

marine.leleux2@ing.com

Jesse Norcross

Senior Sector Strategist, Real Estate

jesse.norcross@ing.com

Teise Stellema

Research Assistant, Energy Transition

teise.stellema@ing.com

Diederik Stadig

Sector Economist, TMT & Healthcare

diederik.stadig@ing.com

Diogo Gouveia

Sector Economist

diogo.duarte.vieira.de.gouveia@ing.com

Marine Leleux

Sector Strategist, Financials

marine.leleux2@ing.com

Ewa Manthey

Commodities Strategist

ewa.manthey@ing.com

ING Analysts

James Wilson

EM Sovereign Strategist

James.wilson@ing.com

Sophie Smith

Digital Editor

sophie.smith@ing.com

Frantisek Taborsky

EMEA FX & FI Strategist

frantisek.taborsky@ing.com

Adam Antoniak

Senior Economist, Poland
adam.antoniak@ing.pl

Min Joo Kang
Senior Economist, South Korea and Japan
min.joo.kang@asia.ing.com

Coco Zhang
ESG Research
coco.zhang@ing.com

Jan Frederik Slijkerman
Senior Sector Strategist, TMT
jan.frederik.slijkerman@ing.com

Katinka Jongkind
Senior Economist, Services and Leisure
Katinka.Jongkind@ing.com

Marina Le Blanc
Sector Strategist, Financials
Marina.Le.Blanc@ing.com

Samuel Abettan
Junior Economist
samuel.abettan@ing.com

Franziska Biehl
Senior Economist, Germany
Franziska.Marie.Biehl@ing.de

Rebecca Byrne
Senior Editor and Supervisory Analyst
rebecca.byrne@ing.com

Mirjam Bani
Sector Economist, Commercial Real Estate & Public Sector (Netherlands)
mirjam.bani@ing.com

Timothy Rahill
Credit Strategist
timothy.rahill@ing.com

Leszek Kasek
Senior Economist, Poland
leszek.kasek@ing.pl

Oleksiy Soroka, CFA

Senior High Yield Credit Strategist
oleksiy.soroka@ing.com

Antoine Bouvet

Head of European Rates Strategy
antoine.bouvet@ing.com

Jeroen van den Broek

Global Head of Sector Research
jeroen.van.den.broek@ing.com

Edse Dantuma

Senior Sector Economist, Industry and Healthcare
edse.dantuma@ing.com

Francesco Pesole

FX Strategist
francesco.pesole@ing.com

Rico Luman

Senior Sector Economist, Transport and Logistics
Rico.Luman@ing.com

Jurjen Witteveen

Sector Economist
jurjen.witteveen@ing.com

Dmitry Dolgin

Chief Economist, CIS
dmitry.dolgin@ing.de

Nicholas Mapa

Senior Economist, Philippines
nicholas.antonio.mapa@asia.ing.com

Egor Fedorov

Senior Credit Analyst
egor.fedorov@ing.com

Sebastian Franke

Consumer Economist
sebastian.franke@ing.de

Gerben Hieminga

Senior Sector Economist, Energy
gerben.hieminga@ing.com

Nadège Tillier

Head of Corporates Sector Strategy
nadege.tillier@ing.com

Charlotte de Montpellier
Senior Economist, France and Switzerland
charlotte.de.montpellier@ing.com

Laura Straeter
Behavioural Scientist
+31(0)611172684
laura.Straeter@ing.com

Valentin Tataru
Chief Economist, Romania
valentin.tataru@ing.com

James Smith
Developed Markets Economist, UK
james.smith@ing.com

Suvi Platerink Kosonen
Senior Sector Strategist, Financials
suvi.platerink-kosonen@ing.com

Thijs Geijer
Senior Sector Economist, Food & Agri
thijs.geijer@ing.com

Maurice van Sante
Senior Economist Construction & Team Lead Sectors
maurice.van.sante@ing.com

Marcel Klok
Senior Economist, Netherlands
marcel.klok@ing.com

Piotr Poplawski
Senior Economist, Poland
piotr.poplawski@ing.pl

Paolo Pizzoli
Senior Economist, Italy, Greece
paolo.pizzoli@ing.com

Marieke Blom
Chief Economist and Global Head of Research
marieke.blom@ing.com

Raoul Leering

Senior Macro Economist

raoul.leering@ing.com

Maarten Leen

Head of Global IFRS9 ME Scenarios

maarten.leen@ing.com

Maureen Schuller

Head of Financials Sector Strategy

Maureen.Schuller@ing.com

Warren Patterson

Head of Commodities Strategy

Warren.Patterson@asia.ing.com

Rafal Benecki

Chief Economist, Poland

rafal.benecki@ing.pl

Philippe Ledent

Senior Economist, Belgium, Luxembourg

philippe.ledent@ing.com

Peter Virovacz

Senior Economist, Hungary

peter.virovacz@ing.com

Inga Fechner

Senior Economist, Germany, Global Trade

inga.fechner@ing.de

Dimitry Fleming

Senior Data Analyst, Netherlands

Dimitry.Fleming@ing.com

Ciprian Dascalu

Chief Economist, Romania

+40 31 406 8990

ciprian.dascalu@ing.com

Muhammet Mercan

Chief Economist, Turkey

muhammet.mercan@ingbank.com.tr

Iris Pang

Chief Economist, Greater China

iris.pang@asia.ing.com

Sophie Freeman

Writer, Group Research
+44 20 7767 6209

Sophie.Freeman@uk.ing.com

Padhraic Garvey, CFA

Regional Head of Research, Americas

padhraic.garvey@ing.com

James Knightley

Chief International Economist, US

james.knightley@ing.com

Tim Condon

Asia Chief Economist

+65 6232-6020

Martin van Vliet

Senior Interest Rate Strategist

+31 20 563 8801

martin.van.vliet@ing.com

Karol Pogorzelski

Senior Economist, Poland

Karol.Pogorzelski@ing.pl

Carsten Brzeski

Global Head of Macro

carsten.brzeski@ing.de

Viraj Patel

Foreign Exchange Strategist

+44 20 7767 6405

viraj.patel@ing.com

Owen Thomas

Global Head of Editorial Content

+44 (0) 207 767 5331

owen.thomas@ing.com

Bert Colijn

Chief Economist, Netherlands

bert.colijn@ing.com

Peter Vanden Houte

Chief Economist, Belgium, Luxembourg, Eurozone

peter.vandenhoute@ing.com

Benjamin Schroeder

Senior Rates Strategist

benjamin.schroeder@ing.com

Chris Turner

Global Head of Markets and Regional Head of Research for UK & CEE

chris.turner@ing.com

Gustavo Rangel

Chief Economist, LATAM

+1 646 424 6464

gustavo.rangel@ing.com

Carlo Cocuzzo

Economist, Digital Finance

+44 20 7767 5306

carlo.cocuzzo@ing.com