

TOKEN AND TOKENISATION IN THE FINANCIAL WORLD

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WHAT IS IT? A token is a new way to represent an asset such as a currency or a financial instrument. A token has the particularity of being registered and transferred electronically on a blockchain system.

Tokenisation refers to the process of issuing a token. Tokenisation can also mean the securitisation of an asset, when an illiquid asset such as real estate portfolio is transformed into a dematerialised security such as tokens.

SOME REAL EXAMPLES OF TOKENS

Crypto currencies



Bitcoin Ethereum

Crypto currencies are tokens.

They are registered on a blockchain and owners of crypto currencies can prove their ownership and transfer them.

Asset-backed tokens



HQLA^x

HQLA^x is a company facilitating the movement of collateral.

An HQLA^x token represents a basket of securities.

The token can be exchanged without moving the securities.

Utility token (usage right)



Golem

Golem is a cloud computing platform.

Users of the system pay using the Golem token instead of a local currency such as EUR or USD.

IN A NUTSHELL

- Tokens represent a **fungible or non-fungible asset** that is often found on a blockchain
- A token can be issued in very **different ways**. There can be an **issuer** (such as a private company) or it could be distributed **without an issuer**, for instance when generated through mining
- A token prevents double spending. Generally, the owner of a token is certain to own it once the token is received
- **No intermediary is required** to hold or move the ownership of the asset. The usual intermediary is dematerialised through a **decentralised infrastructure**
- When a token is built through a **smart contract**, it can be programmed to **enforce rules**. For instance, an equity token can include a shareholder's agreement rule that will automatically be enforced
- When there is an asset backing a token, **tokenisation** is either the **digitalisation** of this asset as a whole or the **securitisation** of this underlying **asset**

WHAT ARE WE DOING?

- We invested in companies that develop the core technology required for tokenisation such as R3 and Digital Asset Holding
- We are actively driving market changes and have invested in initiatives such as Liquidshare
- We are partnering with academics and working with them on research papers to better understand the long-term impact on the financial industry
- We are running engaged leadership groups at BNP Paribas to imagine how our business will evolve with the development of token-based infrastructures

OUR VISION

- Tokens are in an **early stage of development**. While the technology is gaining maturity, their legal recognition remains nascent
- We see a number of **new market infrastructures** that use tokens to represent assets
- Tokens are an **alternative approach** to dematerialising financial instruments. The industry is only starting to understand how they could complement Central Security Depositories – the most common dematerialisation platform for financial instruments
- One of our main business principles is safety of assets and as such, cybersecurity is a cornerstone of our digital transformation. The technical, legal and regulatory environment for these matters is increasingly complex, hence our continuous investment in data and information security

KEY DATES

- **2009**
First generation of blockchain platforms issuing their native token system
- **2013**
Second generation of blockchain platforms allowing the issuance and exchange of a broad range of tokens
- **2015**
First European ESMA consultation on blockchain networks and on the assets circulating on those
- **2016**
First legislative action in France to cover Security tokens for unlisted financial instruments (Loi Sapin II). Came into force in 2018
- **2017**
Issuance through ICO of numerous Utility tokens, mostly using Ethereum and a newly defined standard (ERC-20)
- **2018**
Publication of the EU Commission's **Fintech Action Plan** (March 2018): the Commission highlights the need to continue monitoring crypto-assets and ICO developments to assess potential risks and the applicability of EU financial regulation, and to decide on the opportunity of an EU-specific initiative
- **2019**
Publications of the EU Commission ESMA, **Advice, Initial Coin Offerings and Crypto-Assets** and EBA, **Report with advice for the European Commission on crypto-assets** (Jan. 2019)



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A LEGAL FRAMEWORK IN CONSTRUCTION

Tokens are recorded and exchanged on a new type of electronic bookkeeping infrastructure that relies on distributed ledger technology, i.e. blockchain. In the last five years, the technology has gained such momentum that regulators started actively studying how tokens could fit in the existing regulatory frameworks, or alternatively, how current rules could be adapted to include tokens within their scope.

At European level, ESMA (European Securities and Market Authority) has been actively monitoring the topic, consulting the industry and publishing several advisory reports on the matter. ESMA's work provides the legal groundwork on which to build the European "token" regulatory framework of tomorrow. In its latest recommendation of January 2019, ESMA makes a distinction between two types of tokens: those qualifying as financial instruments, and the others. For the first type, the full set of EU rules governing financial instruments is deemed applicable by the EU regulator. However, ESMA also highlights the lack of an appropriate legal regime for tokens not qualifying as financial instruments, recommending the creation of a dedicated harmonised European regime.

In France, the introduction of the Sapin II law and of the 'Blockchain ordinance' in 2017, meant that the legal existence of certain financial securities (e.g. non-listed securities, shares of mutual funds) registered on a blockchain was recognised for the first time. In parallel, the PACTE law – which is to be adopted later this year – will create a regulatory framework for utility tokens and crypto-asset service providers, notably by establishing an optional certification process for token issuers willing to conduct an ICO.

Elsewhere, tokens have attracted regulatory attention from countries all around the world. Many regulators are actively looking into, or have started developing their own 'crypto' legal framework. Examples of such initiatives can be found on all continents, ranging from countries like Liechtenstein, Malta, Switzerland and Estonia, to South Africa, Japan and Venezuela. Undoubtedly, 2019 will be a year of significant regulatory developments in the blockchain and crypto arena.

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NOTES

GLOSSARY

- **Crypto-asset and Digital asset**: synonym of token in most instances
- **ICO (Initial Coin Offering)**: this is the public offering of a Utility token, which does not have the characteristics of a financial security
- **TGE (Token Generation Event)**: It can be an ICO, an STO or an Airdrop
- **STO (Security Token Offering)**: this is the offer of a Security token to investors, i.e. of a financial security
- **AirDrop**: free distribution of tokens
- **Mining (or forging, baking)**: refers to the distribution or redistribution of tokens to the entities that maintain the blockchain infrastructure by validating transactions and maintaining the integrity of the ledger
- **ERC-20**: A standard for tokens on the Ethereum blockchain system

There are also other meanings, which are not covered in this paper, such as:

- **Security token**: is a physical device, like RSA's SecureID, or a software solution, that allows the holder to access an electronically restricted resource by validating using cryptographic techniques
- **Session token**: is a unique identifier that is attributed to a website visitor and that facilitates its navigation on the site
- **Tokenisation**: is a way to hide sensitive data and substitute it with a token, which can be communicated instead to a third party. The third party can then check its validity

WHERE TO LEARN MORE

- ESMA Report
https://www.esma.europa.eu/sites/default/files/library/esma50-157-1391_crypto_advice.pdf
- Louis Bachelier on token and ICO
<https://www.louisbachelier.org/cryptoasset-valuation-indentifying-the-variables-of-analysis/>

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