

# Tokenization of Assets in Finance Industry

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By DC Web Makers  
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# Outline

- What is Tokenization?
- ICO Versus STO
- Security Legal Definition
- Benefits of Tokenization
- Tokenization Examples
- Challenges
- Financial institutes and Token Economy
- Industry adoptions
- Resources

# About Presenter

- **Matt** is a serial entrepreneur and the founder of 3 successful tech startups: DC Web Makers, Coding Bootcamps and High School Technology Services.
- He is a leading author of Hands-on Smart Contract Development with Hyperledger Fabric book by O'Reilly Media.
- He has written more than 100 technical articles and tutorials on blockchain development for Hyperledger, Ethereum and Corda platforms.
- He has a master's degree in business management from the University of Maryland.
- Prior to blockchain development and consulting, he worked as senior web and mobile App developer and consultant, angel investor, business advisor for a few startup companies.

# What is Tokenization?

The process of tokenization creates a bridge between real-world assets and their trading, storage and transfer in a digital world. The corresponding basis is built by using the blockchain technology.

# What is Tokenization?

In the most abstract form, tokenization converts the value stored in tangible or intangible object into a token that usually can be manipulated along a DLT / blockchain system. In simple words, tokenization can turn almost any asset, either real or virtual, into a digital token and enables the digital transfer, ownership and storage without the necessary need of a central third party / intermediary.

# What is Tokenization?

The rise in popularity of asset tokenization bridges the gap between traditional and new capital markets. A Security Token Offering (STO) is an evolution of fundraising. What is it about and how is it different to Venture Capital (VC), Initial Public Offering (IPO), or Initial Coin Offering (ICO)?

# What is Tokenization?

- The tokenization of assets refers to the process of issuing a blockchain token (specifically, a security token) that digitally represents a real tradable asset.
- The security tokens (like equity, utilities, or payment tokens) are created through an ICO and STO.

# ICO Versus STO

- An ICO issues either a coin (cryptocurrency) or utility token.
- STO issues a security token, which is a digital stock certificate. It is different from a utility token. A utility token is treated to be a commodity, like gold with a useful value, but isn't used for security.



# ICO Versus STO

- The biggest difference between STOs and ICOs is that STOs issue a token that is considered to be a security, whereas ICOs issue a token (or coin) that can be a utility, commodity (or currency), or a security. This could result in many differences in the offering processes.

# ICO Versus STO

- Securities are different from commodities. For example, equity securities represent ownership of a company, while commodities are items of useful value, but are not considered as a right to ownership.
- Securities can only be traded at registered trading platforms and participants that trade securities are required to be registered broker and dealers under the applicable securities laws.

# Security Legal Definition

- A security is a tradable financial asset. The legal definition of a security varies by countries.
- In some countries, a security includes equities and fixed income instruments.
- In the US, commonly known securities include debt securities such as commercial papers; bonds and debentures; equity securities such as stocks; or a more exotic type, derivatives, such as forwards, futures, options, and swaps.

# Benefits of Tokenization

1. Greater liquidity
2. Faster and cheaper transactions
3. More transparency
4. More accessibility

# Benefits of Tokenization

## 1- Greater liquidity

- It mainly includes private securities or liquid assets like fine arts. These token can be traded in the secondary market of the issuer's choice.

# Benefits of Tokenization

## 2- Faster and cheaper transactions

- Using smart contracts, certain parts of exchange process is automated. Such automation reduces admin burden in buying and selling with few intermediaries.

# Benefits of Tokenization

## 3- More transparency

- It allows token-holder's right and legal responsibilities to be embedded directly into the token along with an immutable right of ownership.

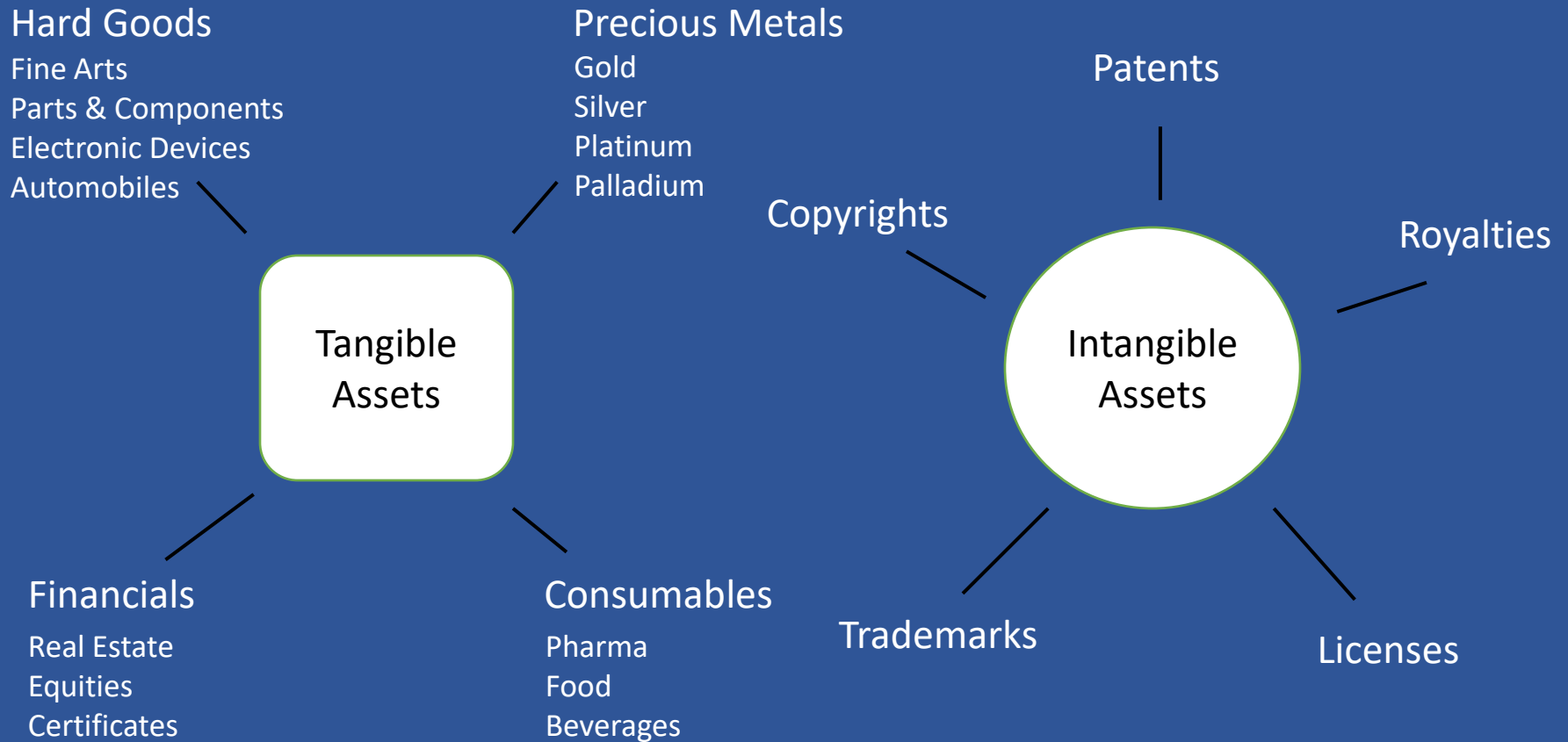
# Benefits of Tokenization

## 4- More accessible

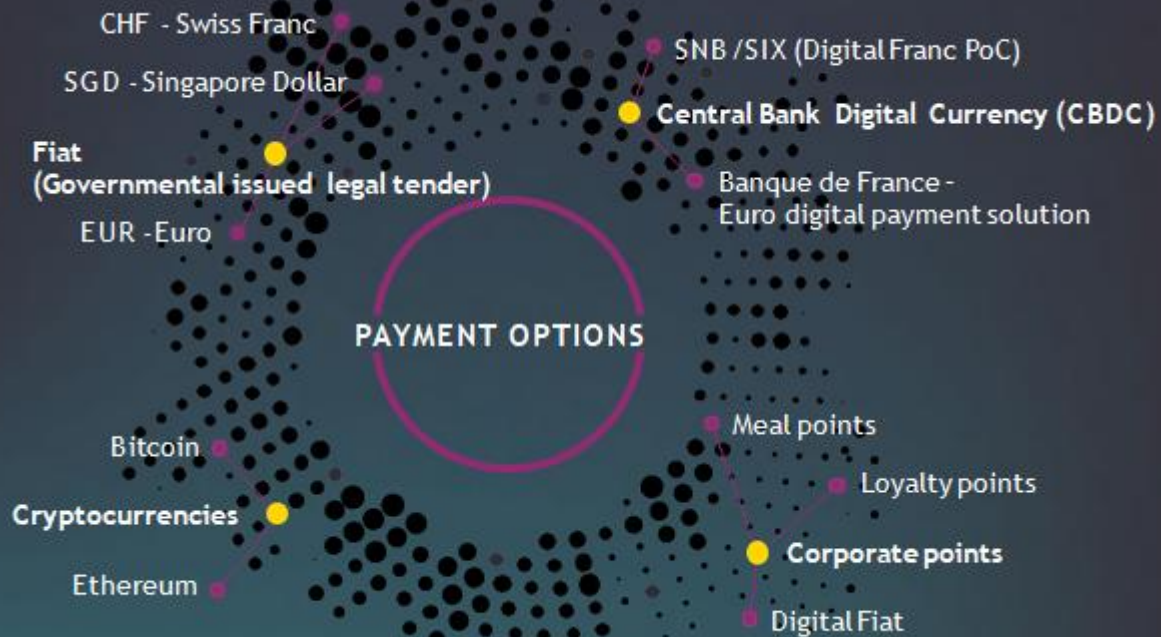
- It opens investment in assets to much wider audiences due to reduced investment amount and periods. Since tokens are highly divisible, it allows for smaller percentage of underlying assets.



# Tokenization Examples



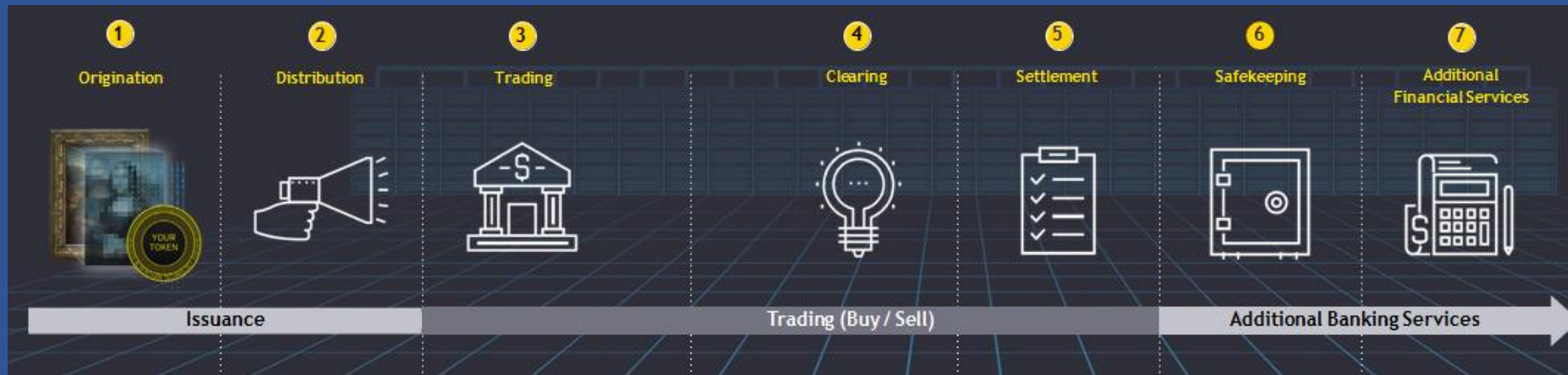




# Challenges

- First challenge is that security laws vary from one country or jurisdiction to another.
- Other two challenges are: a- where to register/issue STO and b- In what secondary market they can trade them.

# Infrastructure Requirements for Tokenization



Tokenization triggers changes in the securities trading value chain. While the sequence remains unchanged the individual steps may vary.

# Financial Institutes and Token Economy

How financial institutes can stay relevant in the token economy

1. Business model
2. Platform integration
3. Cybersecurity
4. Compliance
5. Jurisdiction

# Financial Institutes and Token Economy

## 1. Business model

- Advise issuers on how to structure their token or could act as safe keeper of the tokenized asset (at real estate property, luxury vintage car, collectible art, etc)
- Offer services to maintain customer accounts in cryptocurrencies and tokens or prefer to act as central distributors facilitating access for their clients to transact on diverse tokenization platforms or token exchanges.
- Leverage expertise as custodian banks or paying agents to create lifecycle event transactions on the distributed ledger or, in a more advanced model, implement life cycle processing in smart contracts and deploy them on a public blockchain platform.

# Financial Institutes and Token Economy

## 2. Platform integrations

- Depending on the business model they choose to embrace, they will implement different operating models.
- One of the main components of those new operating models being the choice of blockchain platform, which depends on the regulation, type of products or services they want to offer to their clients and other factors like product strategy, and its potential as regards the type and size of the user community.



# Financial Institutes and Token Economy

## 3. Cybersecurity

- Financial institutions need to carefully plan for cybersecurity at afferent levels from network and infrastructure, through systems, to applications. and consider the opportunity of differentiation through advanced cybersecurity prevention.

# Financial Institutes and Token Economy

## 4. Compliance

- Anti Money Laundering (AML), Know Your Customer (KYC) and other regulations are at the center of any financial institution's obligations when comes to client service.

# Financial Institutes and Token Economy

## 4. Jurisdiction

- With legislative and regulatory frameworks differing from Jurisdiction to Jurisdiction, financial institutions must ensure tokens remain compliant both in the issuer's as well as in the investor's multiple Jurisdictions (Ex a Canadian seller and Japanese buyer).

# Industry Adoptions

- HSBC's moved \$20B in assets to blockchain
- J.P. Morgan launched a U.S. dollar-backed cryptocurrency
- Singapore's Stock Exchange backed new Ethereum security token platform

# Industry Adoptions

## Global Top 4 IPO, STO and ICO by raised funds (March 2020)

### Top IPO

1. Saudi Aramco (25.6bn USD)
2. Alibaba (21.8bn USD)
3. SoftBank Corp (21.3bn USD)
4. NTT Mobile (18.0bn USD)

Source: renaissancecapital.com

### Top STO

1. tZero (134.0m USD)
2. Proxima Media (100.0m USD)
3. Bolton Coin (67.8m USD)
4. Nexo (52.5m USD)

Source: blockstate.com

### Top ICO

1. EOS (4bn USD)
2. Telegram (1.7bn USD)
3. Dragon Coin (320m USD)
4. Huobi (320m USD)

Source: Techworld

# Industry Adoptions

	IPO	STO	ICO
<u>Risk</u>	High	Medium	Low
<u>Costs</u>	High	Medium	Low
<u>Issued</u>	Shares	Token representing securities	Utility token
<u>Issuer</u>	Public company	Start-up, public company, SMEs, large companies	Start-up, public company, SMEs
<u>Platform</u>	Regulated Stock Exchange	Digital (e.g. website of issuing company or on crypto exchange if IEO)	Digital (e.g. website of issuing company or on crypto exchange if IEO)
<u>Participation</u>	Generally, via Broker (e.g. Bank)	Directly	Directly
<u>Accepted Funds</u>	Generally, Fiat only	Fiat and/or crypto-assets	Fiat and/or crypto-assets
<u>Initiated</u>	Generally, Investment bank to underwrite the IPO	Generally, direct launch to the public without a centralized third party (except if IEO)	Generally, direct launch to the public without a centralized third party (except if IEO)
<u>Documentation Requirements</u>	Prospectus, Filings, Registration with the regulator	Prospectus, Filings, Registration with the regulator, website	Whitepaper, website
<u>Investor rights</u>	Generally, Voting rights, dividends	Generally, Voting rights, dividends (if structured similar to e.g., shares)	Generally, Limited to digital access to service/application
<u>Controlling Authority</u>	Regulator	Regulator	None
<u>Underlying</u>	Asset	Asset	None
<u>Dividends</u>	Yes	Depending on Token structure	None
<u>Credibility</u>	High	Medium	Low

Source: ey.com

# USA Securities Law

Read our below articles on current laws around  
Blockchain Security Token in USA

- <https://blockchain.dcwebmakers.com/blog/review-of-blockchain-security-token-offering-under-usa-securities-laws.html>
- <https://blockchain.dcwebmakers.com/blog/investigation-report-of-sec-on-decentralized-autonomous-organization.html>

# Initial Coin versus Security Token Offerings

- <https://myhsts.org/tutorial-initial-public-versus-initial-coin-offerings-via-blockchain-crowdfunding.php>
- <https://coding-bootcamps.com/blog/security-token-versus-initial-coin-offerings-blockchain-crowdfunding.html>
- [Security Tokens and Stable coins Quick Start Guide Book by Brian Wu and others](#)



# Thank You

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