


# Governance of Digital Money: Stability of Next-Gen Financial Sectors


by


Michael Palage


([michael@palage.com](mailto:michael@palage.com))


# Evolution of Global Financial Sector


1690  BARCLAYS


1898  البنك الأهلي المصري  
NATIONAL BANK OF EGYPT

1950  Diners Club

1966  mastercard.

2004  支付宝  
ALIPAY

2008 

2013  WeChat Pay

 البنك التونسي  
BANQUE DE TUNISIE

1894

 VISA

1958

 AMERICAN  
EXPRESS

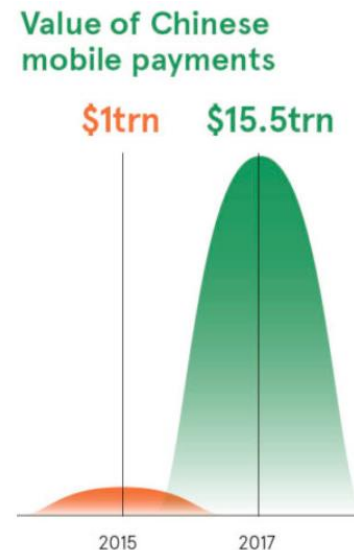
1958

 fawry

2008

# Chinese - Mobile Payment Market

- PayPal processed \$451 billion in transactions in 2017, however, both Alipay and WeChat Pay individually processed more transactions in a single month.
- Alipay has over 700 million active monthly users and WeChat Pay has over 1 billion active monthly users, whereas ApplePay has only 127 million users worldwide.
- Source: <https://www.raconteur.net/finance/alipay-wechat-china-payments>



# Egyptian - Mobile Payment Market

- The Egyptian market has the largest population (48 million) of internet users in the region, however only 8% make online transactions.
- In 2017, only 32% of the Egyptian population had a banking account
- Fawry is the oldest and most popular mobile payment in Egypt and can be used in over 65,000 businesses within, In 2017 it processed E£22bn (\$113.2m)
- Fawry revenue is generated by a convenience fee imposed on the bill payer, although Fawry shares a portion of the fee with business that allows its customer pay with Fawry.

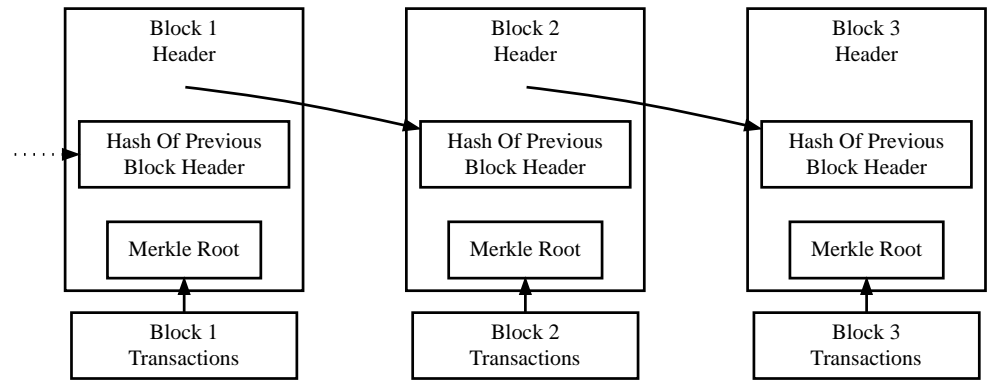
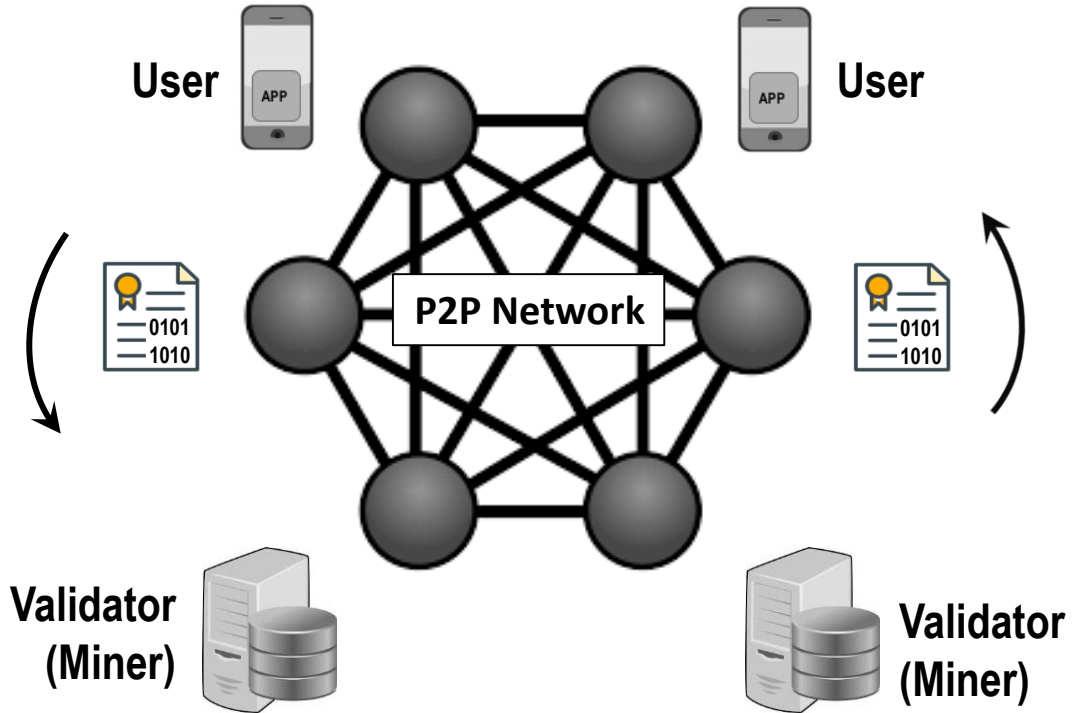
# Tunisia - Mobile Payment Market

- The Tunisia dinar is a “non-convertible currency”, thus cross-border eCommerce purchases are not possible without the Tunisia Central Bank granting specific allowances. See <https://www.export.gov/apex/article2?id=Tunisia-eCommerce>
- As part of the Digital Tunisia 2020 initiative, Tunisia Telecom recently account the launch of TelecoMoney that will be the transfer of funds between the mobile wallets of three telecom providers.
- A second phase of TelecoMoney envisions the transfer of funds to other financial institutions.
- Tunisia Post has also experimented in connection with digital currencies (eDinar).

# Blockchain/Distributed Ledger Technology

# Blockchain / DLT

Blockchain is networking platform having a **distributed ledger** containing **hashed blocks** of data created by **validators (miners)**, who use a **consensus protocol** to authenticate data from a **cryptographically-signed** exchange of **tokens** (and/or processing of a **smart contract**) between **digital wallets** for anonymous parties on a **peer-to-peer network**.



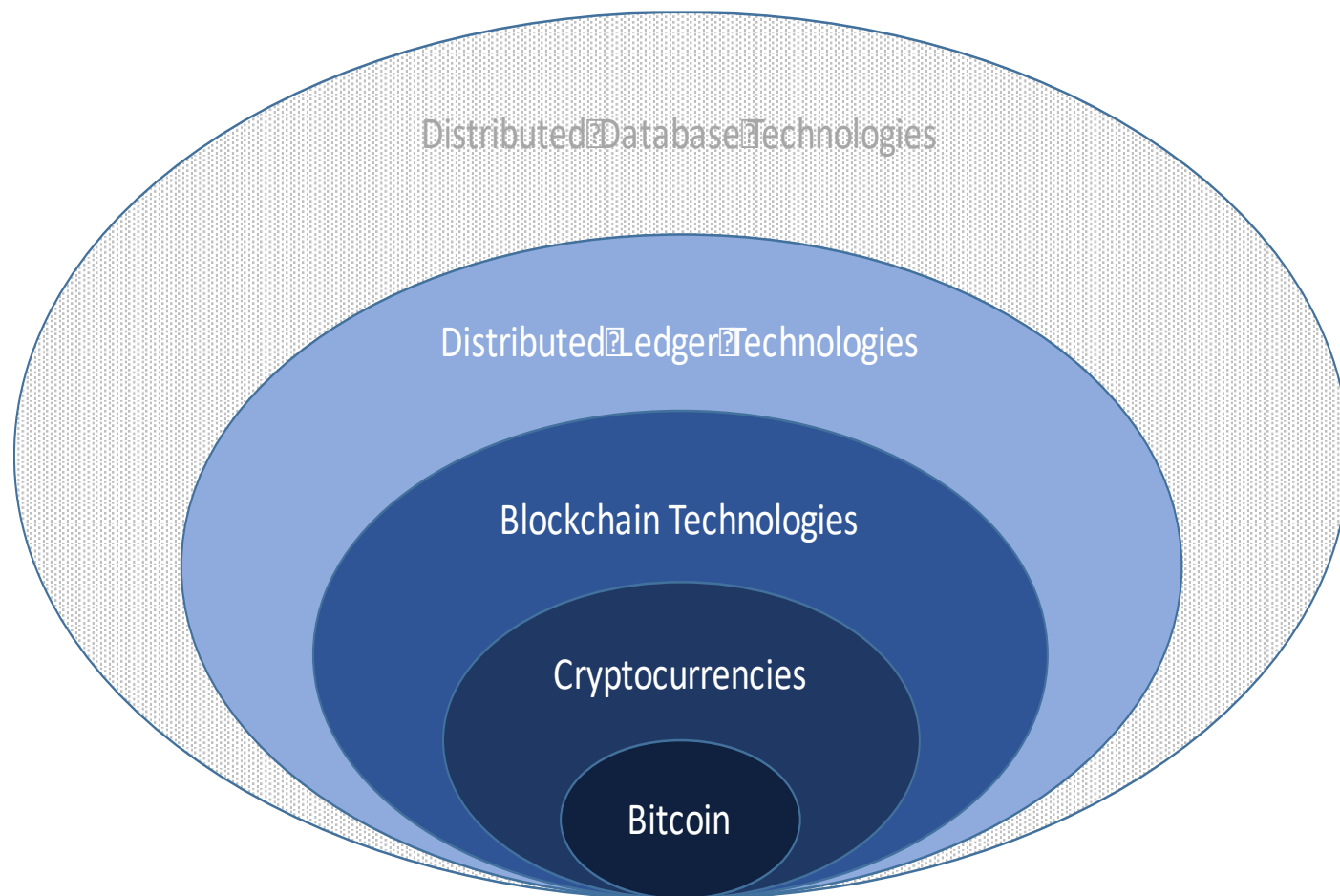
Simplified Bitcoin Block Chain

# Blockchain/DLT Building Blocks

- The Ledger
  - “Blocks” of data
  - Peer to Peer Network
  - Protocol
  - Cryptography
  - Consensus
  - Permissioned (Closed) / Permission less (Open)
- 
- Podcast on Blockchain/DLT basics, see <http://www.ipfridays.com/blockchain-meets-intellectual-property-interview-with-michael-palage-ip-fridays-episode-94/>



# Bitcoin vs. “Blockchain” vs. “DLT”



- Bitcoin is the original cryptocurrency using a “blockchain” distributed ledger
- There are now numerous other blockchain cryptocurrencies (e.g. Ethereum, Litecoin, XRP)
- Blockchain technology is now being used as a platform for **Distributed APPLICATIONS**
- There are a number of different distributed ledger architectures (e.g., Hyperledger)
- Distributed ledgers are one type of decentralized data store...

# Blockchain/DLT - Cryptocurrency

- October 2008 – White Paper entitled “Bitcoin: A Peer-to-Peer Electronic Cash System” written by Satoshi Nakamoto is published.
- Current global cryptocurrency global market cap - \$119,304,208,289 (4-Dec-2018)

- Bitcoin’s valuation/market cap (4-Dec-2018)

\$4,004.16 USD (-0.22%)  
1.00000000 BTC (0.00%)

Buy ▾ Get Loan ▾  
SPONSORED

◀ Share ★ Watch

Market Cap	Volume (24h)	Circulating Supply	Max Supply
\$69,696,582,991 USD 17,406,025 BTC	\$5,421,085,745 USD 1,358,478 BTC	17,406,025 BTC	21,000,000 BTC

- XRP valuation/market cap (4-Dec-2018)

\$0.357565 USD (-0.92%)  
0.00008921 BTC (-0.93%)

Buy ▾ Get Loan ▾  
SPONSORED

◀ Share ★ Watch

Market Cap	Volume (24h)	Circulating Supply	Total Supply
\$14,419,626,084 USD 3,597,451 BTC	\$474,209,097 USD 118,307 BTC	40,327,341,704 XRP	99,991,780,039 XRP

# Cryptocurrency

- Violative & Speculative

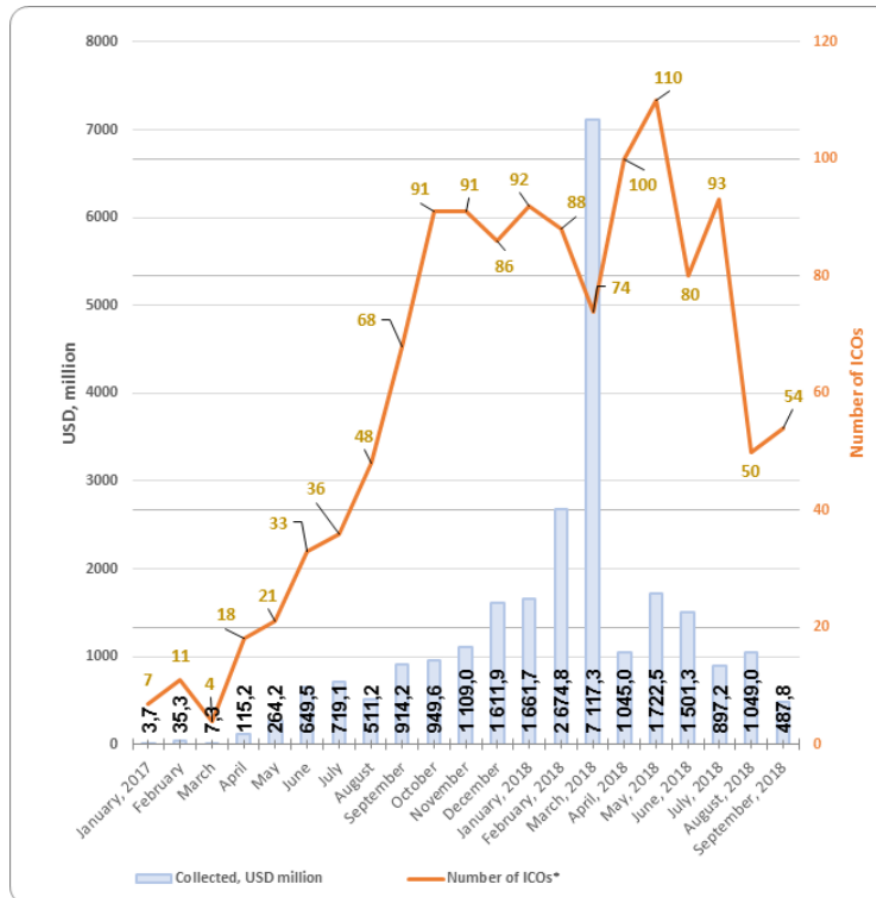


Source:

# Emerging Legal Issues - ICOs

- ICOs have emerged as an alternative to traditional Venture Capital for start-ups.

Figure 1.1. Trends in funds collected and number of ICOs since the start of 2017



Source:

<https://www.coinspeaker.com/2018/10/arterly-ico-market-analysis-q3-2018/>

# Emerging Legal Issues - ICOs

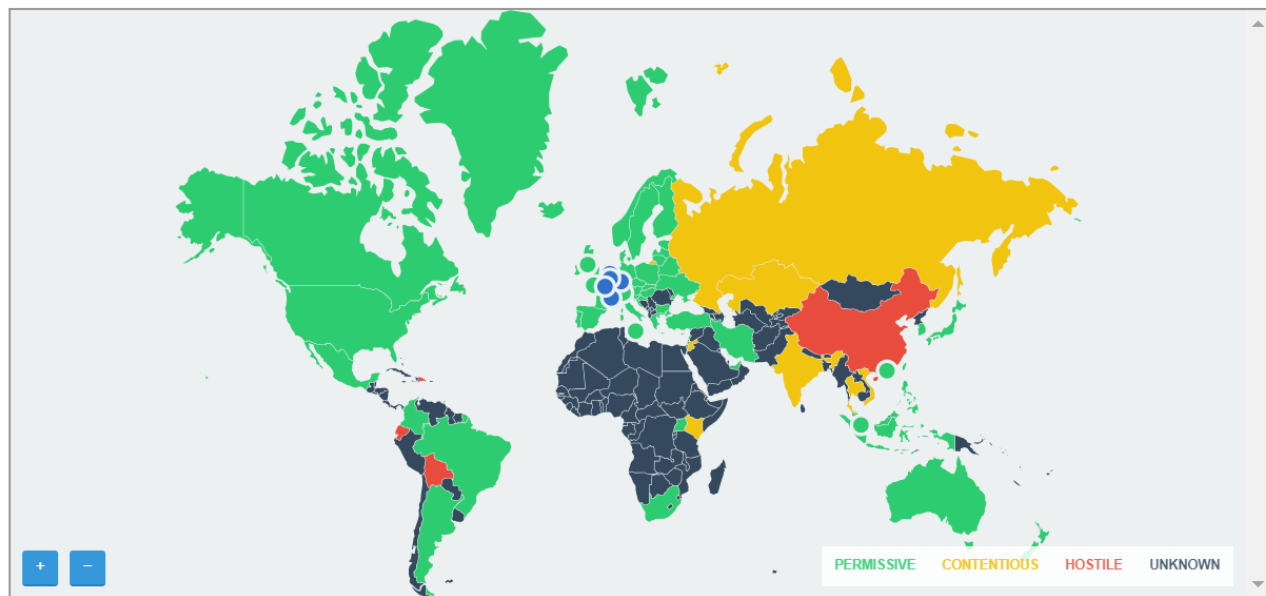
- ICOs generally involve the issuance of “tokens”.
- The two most common type of token classifications are “utility tokens” and “security tokens”
- On 25 July 2017, the United States Security and Exchange Commission (SEC) issued an investigative report in connection with Decentralized Autonomous Organizations (DAOs) regarding the offering and sale of digital assets by "virtual" organizations that are subject to the requirements of the federal securities laws. See <https://www.sec.gov/litigation/investreport/34-81207.pdf>
- China’s regulators have accused ICOs of being “illegal fundraising, pyramid schemes and fraud.” See, <https://www.ccn.com/crackdown-continues-chinese-authorities-issue-joint-warning-on-illegal-crypto-fundraising/>
- The Monetary Authority of Singapore (MAS) has taken actions to shut down illegal ICOs, see <https://nulltx.com/singapores-mas-shuts-down-ico-and-forces-it-to-refund-investors/>
- The SEC has initiated a number of actions against non-compliant ICOs, see <https://www.sec.gov/ICO>

# Other Emerging Legal Issues

- The United States Government through the Office of Foreign Asset Control recently brought an enforcement action against two Iranians in connection with a cyberattack and their use of Bitcoin addresses. See, <https://www.coindesk.com/get-ready-for-crypto-sanctions-enforcement>
- US Special Counsel Robert Muller in indicting 12 Russian intelligence officers specifically cited their use of Bitcoin in their alleged interference in the US 2016 election, see <https://www.businessinsider.com/mueller-russian-hackers-bitcoin-cryptocurrency-2018-7>
- The United States Department of Homeland Security Small Business Innovation Research Program has issued pre-solicitation to investigate the potential tracking of “privacy” cryptocurrency, see <https://www.coindesk.com/us-homeland-security-is-interested-in-tracking-privacy-coins>
- There are several governments that are in different states of evaluating/implementing/rejecting State Issued Digital Currencies, see <https://cointelegraph.com/news/state-issued-digital-currencies-the-countries-which-adopted-rejected-or-researched-the-concept>

# Emerging Legal Issues – Legislative/Regulatory

bitlegal.io



- BitLegal  
<http://www.bitlegal.io>

## LATEST NEWS

### Uzbekistan Approves New Crypto Trading Law for Foreign Companies

Uncategorized September 20, 2018

A new presidential resolution (“Resolution”) came into effect on the 2nd September 2018 in the Republic of Uzbekistan, which will cover the regulation and...

### Philippines Crypto Law to Regulate ICOs

Uncategorized September 20, 2018

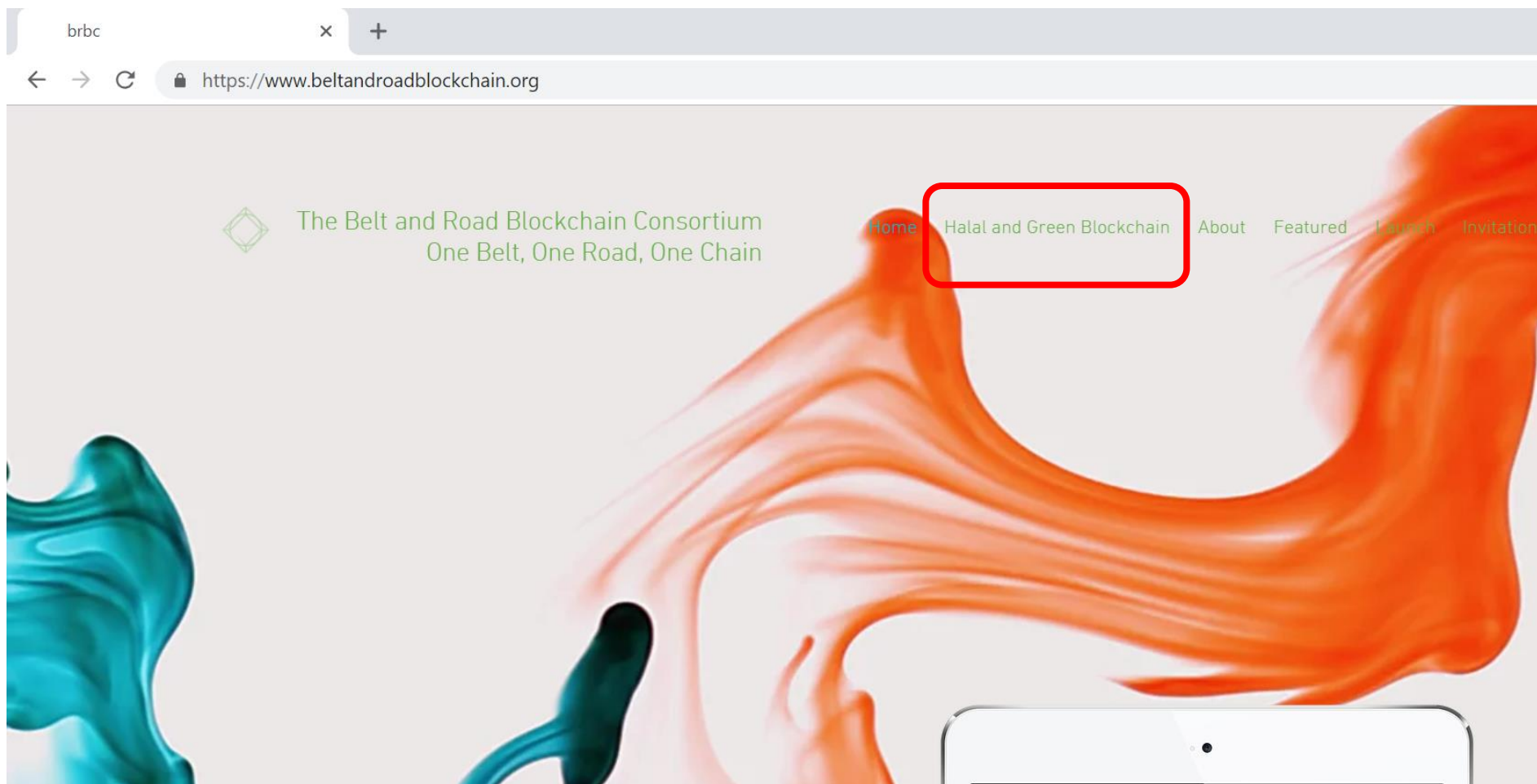
The Philippines Securities and Exchange Commission (PSEC) published a draft Memorandum Circular (“Memorandum”) that would govern initial coin offerings (ICOs) in the country. In its...

### Cryptocurrency Regulation in the UK

United Kingdom September 12, 2018

Although, the UK stands as the hot spot for leaders in Fintech innovation and financial entrepreneurs, with regard to cryptocurrency, the UK seems to...

# Halal Compliant Blockchain/DLT Projects





Thank You