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BLOCKCHAIN AND ITS LEGAL IMPLICATIONS

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- Privacy certifications: CIPP/A, CIPP/C, CIPP/E, CIPP/US, CIPM, CIPT, FIP
- Security certifications: SSCP, PCIP, CCSK, CISMP, Security+
- Vice Chair, In-House Counsel Committee of the International Technology Law Association (ITechLaw)
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- This material has been prepared for informational purposes only, and is not intended to provide, and should not be relied on for legal advice. If you need legal advice, please contact an attorney directly.

- The views expressed are mine alone and do not necessarily reflect the views of my employer.

BLOCKCHAIN AND ITS LEGAL IMPLICATIONS

Ushering in a New (Golden) Age?

The blockchain bandwagon…

CNBC HOME INTL NEWS MARKETS INVESTING TECH MAKE IT VIDEO

Bloomberg

Markets

Long Island Iced Tea Soars After Changing Its Name to Long Blockchain

By Arie Shapira and Kailey Leinz

December 21, 2017, 10:06 PM GMT+8 *Updated on December 22, 2017, 6:17 AM GMT+8*

FORTUNE

FINANCE • ONETIME

This Iced Tea Company Pivoted to Blockchain. Now its Stock is Up 200%

BITCOIN

Tiny company which owns some Hooter's restaurants says it will use blockchain for rewards program, boosting stock by 50%

- Chanticleer Holdings (BURG), an owner of burger restaurants, said Tuesday it will use blockchain-related technology for its customer rewards program.
- The company's shares rose nearly 50 percent in Tuesday trading.
- Small companies used this trick to artificially boost their shares to end 2017.

Tae Kim | @firstadopter

Published 10:38 AM ET Tue, 2 Jan 2018 | Updated 1:18 PM ET Tue, 2 Jan 2018

CNBC

Blockchain – a quick re-cap

It is more than Bitcoin.
It does not need a token or a coin!

It is a digital ledger that keeps a record of all transactions taking place on a peer-to-peer network

Allows participants to create, disseminate and store information securely via encryption

Key characteristics

- **Consensus**: a transaction can be executed only if the other parties on the network approve it
- **Trusted digital identity (Provenance)**: Full audit trail of historical transaction information available for examination
- **Immutability (Tamper-free)**: It is impossible to tamper as blocks are linked to each other and secured through cryptography
- **Finality**: one single system of records across the network

Overview of blockchain initiatives (USA)

In the United States:

- Delaware law allowing corporations to use blockchain to maintain corporate records, including stock transaction records (2017)
- Wyoming and Nevada laws recognizing blockchain as a form of electronic records (2017)
- Arizona law recognizing the use of blockchain in relation to the sale of goods, leases and documents of title (2017)
- Vermont law authorizing blockchain to be considered a record of regularly conducted business activity (2016) and law recognizing "*blockchain-based limited liability companies*", which are companies operating a business utilizing blockchain technology for a "material portion" of its business activities (2018)

Overview of blockchain initiatives (Asia)

- Australia: According to Nikkei Asian Review, the Ministry of Internal Affairs and Communications, who oversees the Japanese administrative system and manages local governments, will test a blockchain-based system for processing government tenders
- Singapore: the Monetary Authority of Singapore announced Project Ubin, a collaborative project to explore the use of blockchain for clearing and settlement of payments and securities (http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/Project-Ubin.aspx)
- Australia: IBM signed a five-year AU$1 billion ($740 million) deal with the Australian government to use blockchain and other new technologies to improve data security, according to Bloomberg (5th July 2018)

Here come the “smart contracts” …

- The term “smart contract” has no clear and settled definition.
- “Smart contracts” are computer protocols that facilitate, verify, or enforce the negotiation or performance of a contract, or that make a contractual clause unnecessary. The computer code will validate and execute whatever terms have been agreed by the parties when certain criteria are met (e.g. an insurance policy that automatically pays out to a policyholder on the occurrence of an insured event).
  - Distributed applications (“dApps”) can use smart contracts.
- This enhances speed and certainty of execution while eliminating intermediaries and associated costs.
- Smart contracts are meant to be stand-alone agreements – not subject to interpretation by outside entities or jurisdictions.

Is it enforceable?

- A number of countries allow electronic contracts as long as the usual rules of contract formation (offer, acceptance and consideration) are followed, but issues remain:
  - Which law will govern and which court is competent?
  - What happens if the order of code is wrong or if something is not initialized? There is no way back (immutability of the blockchain). Who bears the liability? Can you bring a negligence claim against programmers? Is insurance possible?
  - What happens if a data breach takes place?

Data protection points to consider

- Any system that holds personal data will need to comply with applicable data protection laws, but given the decentralized nature of blockchain, which ones should apply and how do we determine the applicable laws?
- What mechanisms will be put in place to ensure that any cross-border transfer of data is in line with legal requirements?
- How do we identify the data controller(s) and data processor(s)? How feasible is such identification in relation to public blockchains with thousands of participants?

Possible conflicts with data protection rules

- The EU GDPR includes a right for data subject to request the erasure of their personal data (the “right to be forgotten”). This presents challenges with the immutability on the blockchain.
- The principle of immutability also conflicts with the data protection principle of storage limitation, i.e. data must be kept in such a way that enables data subjects to be identified for no longer than is necessary for the purposes for which their data are being processed.
- Potential solution may be to store personal data in separate “off-chain” databases, but to do so would sacrifice many of the benefits of using a blockchain in the first place!

What about the public key?

- Every transaction taking place will be published and linked to a public key of a particular user. It is encrypted so it is not possible to directly identify the person (individual or entity) behind the public key. Example:

public key::
79be667ef9dcbbac55a06295ce870b07029bfcdb2dce28d959f2815b16f81798483ada7726a3c4655da4fb
fc0e1108a8fd17b448a68554199c47d08ffb10d4b8

- However, the re-use of the public key enables individuals to be singled out by reference to their public key, even if they cannot be directly identified.
- The public key will therefore likely qualify as personal data under the GDPR.

What is a cryptocurrency?

European Banking Authority defined a virtual currency as "*a digital representation of value that is neither issued by a central bank or public authority nor necessarily attached to a fiat currency, but is used by natural or legal persons as a means of exchange and can be transferred, stored or traded electronically*".

Why regulate?

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Why regulate?

- Consumer protection concerns, especially in relation to suitability (complex, risky and volatile instruments)
- Potential abuses as other investments in traditional financial assets, like market manipulation, fraud, Ponzi schemes, etc.
- Some types of crime would be difficult or impossible without digital currencies (e.g. ransomware)
- Some cryptocurrencies can provide anonymity and are difficult to trace
- Concerns surrounding money laundering, terrorist financing and other criminal activities (arms, counterfeiting, human trafficking, etc.)
  - The filing of suspicious activity reports (SARs) was likely instrumental in prosecutions of Silk Road, AlphaBay and similar darknet market

Regulatory positions

United States:

- On 21 May 2018, the North American Securities Administrators Association (NASAA) announced, **Operation Cryptosweep**, one of the largest coordinated series of enforcement actions in the United States and Canada to crack down on fraudulent initial coin offerings (ICOs).
- William Hinman, director of the SEC's division of corporate finance, said at a conference in San Francisco in June 2018: "*Based on my understanding of the present state of ether, the Ethereum network, and its decentralized structure, current offers and sales of ether are not securities transactions. And, as with bitcoin, applying the disclosure regime of the federal securities laws to current transactions in ether would seem to add little value*."
  - When a cryptocurrency becomes sufficiently decentralized, it no longer is deemed security. However, smaller ICOs will likely be deemed securities.

Regulatory positions

- **China**: in September 2017, China's central bank issued a statement banning ICOs and digital token trading, forcing all cryptocurrency exchanges to close.
- **Bangladesh**: The Central Bank has stated that "*any transaction through bitcoin or any other cryptocurrency is a punishable offense*."
- **Japan**: in 2017, it passed the Virtual Currency Act (Act), allowing "virtual currencies" as a legal form of payment. Japan's Financial Services Agency officially recognized 16 companies as registered cryptocurrency exchange operators.

Other issues

- Compliance with KYC and anti-money laundering (AML) laws
- Intellectual Property
  - Many public blockchain projects are open source projects
  - Open Source licensing issues
- Taxation
  - For tax purposes, cryptocurrencies often treated as property, not currency
- Competition concerns
  - Consortium of competitors collaborating to set up blockchains
  - Potential for firms to collude through a blockchain?
  - Potential to exclude or raise the costs of rivals outside of the consortium?

Thank you

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