

Blockchain & Cryptocurrencies

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PRIVATE & CONFIDENTIAL



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1. Understanding Blockchain:

A. Introduction to Blockchain

The Next Technology Revolution

“Rather than to stay at the margins of the finance industry, blockchain will become the beating heart of it”

- Giancarlo Bruno, World Economic Forum

“In many ways, virtual currencies might just give existing currencies and monetary policy a run for their money”

- Christine Lagarde, IMF

“From Silicon Valley to Wall Street, technologists and investors alike are buzzing about the potential for the Blockchain to revolutionize...well everything” - Goldman Sachs



“Filecoin ICO raises record \$250 million from accredited investors” - CoinDesk

Some Key Blockchain Data Points

- ➔ 77% of financial services firms are expected to adopt blockchain by 2020
- ➔ Over 2,500 blockchain patents filed
- ➔ 10% of global gross domestic product will be stored on blockchains by 2027

Source: World Economic Forum Report

Blockchain Deal Flow

Equity Deals

- **Since 2012, 650+ equity deals have totaled more than \$2.1B**

ICOs

- **Since 2014, 220+ ICOs have totaled more than \$3.5B**

Definition

- Blockchain is a new form of information technology that may be thought of as a shared spreadsheet, *i.e.*, an immutable (write once and read only) ledger of time stamped transactions that is operated:
 1. In a decentralized manner by a peer-to-peer network of unaffiliated parties
 2. Through pre-defined consensus mechanisms in lieu of a central authority
 3. Employing military-grade cryptography in order to prevent the ability to edit or tamper with the information recorded in it



1. Understanding Blockchain:

B. How Blockchain Works

How Blockchain Works

Depending on the objectives of a given project, blockchains can be structured so that they are:

➔ **Public**

➔ **Permissioned**

➔ **Private**

Public Blockchains

- Public blockchains are large distributed networks based on **open-source code** that is developed and maintained by their respective communities.
- Anyone can participate in a public blockchain at any level, *i.e.*, anyone can read a transaction record as well as write data and validate the transactions (also referred to as “**mining**”) in exchange for a given cryptocurrency, without needing any permission or providing any identification.
- Examples of public blockchains include **Bitcoin** and **Ethereum**.

Permissioned Blockchains

- Permissioned blockchains are also large distributed networks; however, **they may or may not be based on open-source code**. They operate under the leadership of a known entity that determines the role that individuals can play within the network.
- They may or may not use cryptocurrencies as the incentive mechanism for participants to serve the network.
- Examples of permissioned blockchains include **Ripple** and **Corda**.

Private Blockchains

- Private blockchains are smaller and **centralized networks**.
- Their membership is limited and closely operated and controlled by one entity.
- As a result, the use of cryptocurrencies is not currently warranted.
- Examples of private blockchains include **MONAX** and **Multichain**.

Blockchain can record and facilitate the transfer of any assets...

Physical Assets

- Boat
- Condo
- Car

Intangible Assets

- Security
- Patent
- License

Digital Assets

- Music
- Images
- eBooks



1. Understanding Blockchain:

C. Blockchain Applications

Blockchain Applications

- Some of the most well-known applications of blockchain technology are in financial services:
 - Remittance: **Abra, BitPesa** and **Circle**
 - Trade Finance: **Blockstream, Chain**, and **Digital Asset Holdings**

However, the practical applications for blockchain technology go way beyond financial assets!

- Projects in this space tend to be in early stages, and range from:
 - Medical records: **MedRec, Pokitdok**
 - Digital Rights, Micropayments, E-Commerce: **Ascribe, Media Chain, and OpenBazaar**
 - Identity: **Civic, Uport**
 - Supply chain: **Everledger, Hyperledger, R3, TO**
 - Real Estate: **BitFury, ChromaWay, Factom, Velox**
 - Energy: **Power Ledger, L03 Energy, Impact PPA, Energi Mine**

Financial Inclusion to the Unbanked

Problem

- *2 billion adults don't have access to basic financial services (i.e., a bank account)*
- *Due to cost to serve a physical branch and inability to prove identity, many banks don't operate in remote or low-income areas*

Solution

*Blockchain-based
Self-sustaining &
Community-owned*

platforms that offer:

- *Identity*
- *Low Cost Services*
- *Universal Access to basic financial services*

Healthcare

Problem

- *Medical records are often scattered across multiple systems*
- *Critical information sometimes isn't accessible when it is needed most*

Solution

- *Decentralized record management systems that uses blockchain technology to:*
- *Manage authentication,*
 - *Confidentiality,*
 - *Accountability, and*
 - *Data sharing*

Food Contamination

Problem

- *Every year 420,000 people die as a result of contaminated food*
- *Critical issues are related to the lack of access to information & traceability*
- *6 days to trace mangoes to the exact farm of origin.*

Solution

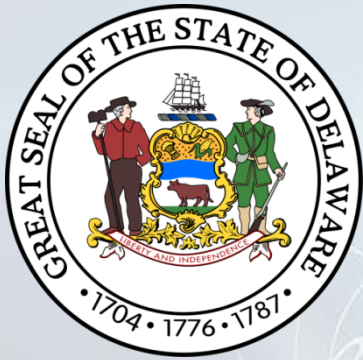
*By using
blockchain, it
takes just 2.2
seconds!*



1. Understanding Blockchain:

*E. Delaware's Recently
Enacted Blockchain
Legislation*

Delaware's Recently Enacted Blockchain Legislation



On August 1, 2017, Delaware became the first state to allow corporations to use blockchain technology for:

- **the creation and maintenance of corporate records, including the stock ledger, and**
- **the electronic transmission of stockholder communications**

Potential Benefits

Corporations are now able to:

- ➔ Issue and track shares electronically on a real-time basis
- ➔ Settle transactions instantaneously
- ➔ Directly communicate with ultimate owners



2. Understanding Cryptocurrencies:

A. How Cryptocurrencies Work

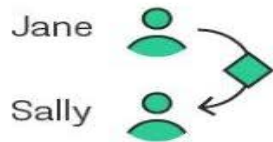
Definition

A cryptocurrency is generally understood to be a digital representation of value (which value is largely determined by the willingness of users to accept it) that is:

1. Issued and managed through the use of blockchain technology
2. Secured by cryptography
3. Designed to work as a medium of exchange that can be transferred, stored, and traded electronically
4. Not denominated in a fiat currency (although some cryptocurrencies are convertible into fiat currency)
5. Not a liability of any entity nor backed by any central bank or government (and therefore lacking legal tender status)
6. Supplied in limited amounts (i.e., Bitcoin has a 21 million bitcoin cap), or predictable amounts (i.e., there are over 110 billion dogecoins, with approximately 5 billion dogecoins added every year)

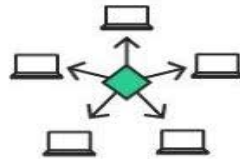
How Cryptocurrencies Work

Transaction



Jane uses bitcoin to buy a cup of coffee at Sally's internet café, using her private key to transfer ownership of the currency.

Mining network



Word of the transaction is sent through the bitcoin network to "miners" with powerful computers.

Block



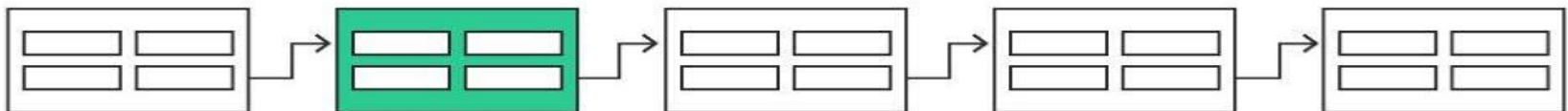
Miners use trial-and-error computations to solve a puzzle created by combining data about recent transactions. The first to find the unique number that unlocks the puzzle earns the right to bundle the transactions into a confirmed batch known as a block.

Verification



The winning miner is rewarded with newly minted bitcoin – but only after other miners confirm that the block's transactions don't contain any attempts to spend the same funds twice.

The Chain



Source: Bloomberg



2. Understanding Cryptocurrencies:

B. Raising Capital Through Token Sales

U.S. Regulations

Raising Capital Through Token Sales

- Tokens can be acquired:
 1. From another holder
 2. As compensation through the “mining” process
 3. From a cryptocurrency exchange or trading platform
 4. Through a “token sale”
 - colloquially known as “Initial Coin Offerings” or “ICOs”
 - capital-raising method that a significant number of emerging and established companies offering blockchain-based services have been pursuing as an alternative to traditional forms of fundraising
- Given the uncertain regulatory landscape, in most cases we advise our clients to conduct token sales under regulatory frameworks such as Regulation D, Regulation S, Regulation A+, and Regulation Crowdfunding.

As of November 7th, it is estimated that nearly \$3.5B has been raised via token sales.

Raising Capital Through Token Sales (cont'd)

- Token sales are also a powerful new tool for creating decentralized communities, incentivizing participants and providing faster liquidity to investors.
- In a typical token sale, network creators sell an amount of the network's tokens at a discount to users, investors, or both.
 - ➡ Some token sales take place **when or after** the token network is launched.
 - ➡ Other token sales happen **long before** the token network is launched and has genuine functionality.

Simple Agreement for Future Token (“SAFT”)

- One of the most common way to structure a token sale before the token network is launched and has genuine functionality is via a Simple Agreement for Future Token (“SAFT”).
- The SAFT is an investment contract whereby investors purchase the right to receive tokens upon the subsequent network launch.
- It exchanges an issuer’s promise to deliver tokens upon the launch of the network for the investors’ promise to immediately pay cash.
- The SAFT is, at heart, a forward contract, but for tokens.

Recent SEC Position Statement

On July 25, 2017, the SEC merely reiterated that:



*“Whether a particular investment transaction involves the offer or sale of a security – regardless of the terminology or technology used – will depend on the **facts and circumstances**, including the **economic realities of the transaction.**”*

The Howey Test

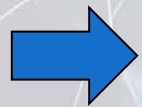
- The SEC will apply the investment contract test set forth in the Howey case (U.S. Sup. Ct. 1946) (the “Howey Test”).
- The core factors of the Howey Test are:
 - ➔ Whether purchasers of the instrument contributed money or valuable goods or services
 - ➔ Whether purchasers were investing in a common enterprise reasonably expected to earn profits through that enterprise
 - ➔ Whether the expected profits are to be derived from the efforts of others

Application of the Securities Act

- If a token is structured so that it entitles its holder to a share of profits, revenues, dividends, or voting rights, or provides an expectation of profits based on the projected utility that such token may have in the future, then, the token is likely to be deemed a security.
- Offerings of tokens deemed to be securities that have a U.S. nexus need to comply with the registration requirements of the U.S. federal securities laws, or rely on an exemption, such as Regulation D or Regulation S.
- Offerings of tokens deemed to be securities would also be subject to limitations on resales, and general solicitation may be prohibited.
- Anti-fraud provisions of the U.S. securities laws apply regardless of whether the offering is registered or exempt.

Tokens Not Deemed As Securities?

- If a token is structured so that it:
 - ✓ can be currently used to purchase goods or services from its issuer, or operate a website or an application of its issuer, as in the case of the so called “access tokens,” “app tokens,” or “utility tokens”, and
 - ✓ does not have traditional characteristics of securities, including an expectation of profits derived from the efforts of others,... then the token may not be deemed a security.
- However, the value of a token may be influenced by the increased demand for services or goods of a token’s issuer, and therefore cause the token to take on securities-like characteristics.



No bright line. Needs to be analyzed on a case-by-case basis

Federal Regulations

- Financial Crimes Enforcement Network (FinCEN) treated “convertible” virtual currencies as “**value**” for purposes of anti-money laundering (AML) / combating the financing of terrorism (CFT) regulations, and stated:

“The definition of a money transmitter does not differentiate between real currencies and convertible virtual currencies. Accepting and transmitting anything of value that substitutes for currency makes a person a money transmitter under the regulations implementing the Bank Secrecy Act.”

- Internal Revenue Service determined that, for purposes of federal taxation, **virtual currency is property**.
- Commodities Futures Trading Commission (CFTC) defined **virtual currencies as “commodities”** under the Commodity Exchange Act, and therefore, it may exercise jurisdiction over a token sale.

Money Transmission

- Token sales may also subject an issuer to regulation as a money services business, which could mean that the issuer may need to comply with a wide range of federal and state regulations, including money transmitter laws and anti-money laundering and “know-your-customer” provisions.
- Each U.S. State has the authority to interpret its own money transmission laws and any state could take the position that the activity involving virtual currency is subject to regulation, especially if the service also involves the handling of fiat currency.
- In addition, because money transmission licensing statutes are viewed primarily as consumer protection statutes, both regulators and courts may be inclined to view the scope of covered activity broadly.



2. Understanding Cryptocurrencies:

C. Non-U.S. Regulation of Token Sales

Latest Non-U.S. Regulatory Developments

- Regulatory frameworks for tokens and token sales vary across jurisdictions depending on how a jurisdiction perceives cryptocurrencies, and whether securities laws, consumer and investor protection laws and AML regulations are considered applicable.
- Given the global nature of most token sales, issuers may be subject to the jurisdiction of numerous countries.
- While several jurisdictions (i.e., Singapore, Canada, Hong Kong, the U.K. and Gibraltar) have mostly followed the path recently tread by the United States, China, South Korea and Russia took a step further and halted token sales altogether.

Latest Non-U.S. Regulatory Developments



China

- On September 4, 2017, the People's Bank of China issued a statement prohibiting the use of token sales.
- Citing concerns for illegal fundraising, illegal issuance of securities, fraud, and pyramid schemes, China's financial regulators stated that all current token sales must cease.
- Companies that have already completed token sales are required to issue a refund to token purchasers.
- Domestic exchanges (i.e., BTCChina) were shut down.



South Korea

- On September 29, 2017, South Korea's Financial Services Commission (FSC) stated that it would ban raising money through all forms of virtual currencies.
- The FSC pointed to fears that unproductive crypto speculation was negatively affecting financial markets, which made additional measures "inevitable."
- "Stern penalties" would be issued on financial institutions and any parties involved in issuing of ICOs.



Russia

- On September 4, 2017, the Bank of Russia noted the "high risks" of exchanging cryptocurrencies, as well as participation in ICOs.
- "Given the high risks of circulation and use of cryptocurrency, the Bank of Russia considers it premature to admit cryptocurrencies, as well as any financial instruments nominated or associated with crypto-currencies, to circulation and use at organized trades and in clearing and settlement infrastructure on the territory of the Russian Federation for servicing transactions with cryptocurrencies and derivative financial instruments on them."

Latest Non-U.S. Regulatory Developments (cont'd)



Singapore

- On August 1, 2017, the Monetary Authority of Singapore (MAS) stated that some tokens may be considered securities subject to the Securities and Futures Act.
- If the tokens fall within the definition of securities, issuers would be required to submit and register a prospectus with the MAS prior to the offer and sale of the tokens, unless an exemption applies.



Canada

- On August 24, 2017, the Canadian Securities Administrators (CSA) stated that some tokens may constitute securities under Canadian securities laws.
- Additionally, some cryptocurrencies may be considered derivatives and subject to Canadian derivatives laws.



Hong Kong

- On September 5, 2017, the Securities and Futures Commission declared that, depending on a facts and circumstances analysis, tokens may be securities, and thus subject to the securities laws of Hong Kong.
- If a token falls within the definition of a security, dealing in or advising on the tokens, or managing or marketing a fund investing in the tokens, may constitute a regulated activity that would require a license or registration.

Latest Non-U.S. Regulatory Developments (cont'd)



The UK

- On September 12, 2017, the Financial Conduct Authority (FCA) declared token sales to be “very highrisk, speculative instruments” and advised the public to invest only if they are an experienced investor, are confident about the quality of the token project, and are prepared to lose their entire investment.
- The FCA also stated that whether a token sale falls within the FCA’s regulatory scope would be decided on a case by case basis.



Gibraltar

- On September 22, 2017, the Gibraltar Financial Services Commission (FSC) announced it will implement a new regulatory framework aimed at bringing oversight to the cryptocurrency exchange sector.
- Further, the FCS stated that it is “considering a complementary regulatory framework covering the promotion and sale of tokens, aligned with the DLT framework.”



The EU

- Each member of the European Union may have a different approach towards the regulation of tokens.
- However, the forthcoming 5th Anti-Money-Laundering Directive specifies that providers of exchange services between tokens and fiat currencies and wallet providers offering custodial services of private keys may need to be registered or licensed in the European Union countries where they are established.

Latest Non-U.S. Regulatory Developments (cont'd)



Israel

- On August 30, 2017, Israeli regulators formed a new committee to study the applicability of domestic securities laws to ICOs.
- In January, the Israeli tax authorities announced that cryptocurrencies would be taxed as an asset, not foreign currency.



Japan

- On April 1, 2017, Japan recognized bitcoin as a legal method of payment.
- On September 29, 2017, Japan's Financial Services Agency approved 11 companies as operators of cryptocurrency exchanges.
- However, industry insiders have stated that despite recent moves, there is still uncertainty over Japan's stance on ICOs.



Estonia

- One of Estonia's government agencies proposed launching a token – the “estcoin” – as an extension of its e-Residency program.
- The proceeds would be used to invest in Estonian digital infrastructure projects and technology startups.
- European Central Bank President Mario Draghi commented: *“No member state can introduce its own currency; the currency of the euro zone is the euro.”*



3. Appendix

Dario de Martino

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M&A Attorney, New York

Education

- Columbia Law School (LL.M., 2006)
- Federico II University (J.D., 2002)

Dario de Martino is an **M&A attorney** and serves as the **Co-Chair of Morrison & Foerster's Blockchain + Smart Contracts Practice Group**.

Mr. de Martino represents a broad array of **U.S.-based** and **international clients**, ranging from global corporations to closely held companies, most of which are active in the following industries: **technology**, including blockchain and cryptocurrencies, **financial services**, and **healthcare**.

His practice focuses on **domestic and cross-border corporate transactions**, principally in connection with **public and private mergers and acquisitions, joint ventures** and **corporate governance matters**.

Select examples of his experience include the following:

- Represented **Ducera Securities** as financial advisor to Monsanto in its **\$66 billion** sale to **Bayer AG**.
- Represented **Inovalon**, a leading technology company providing advanced, cloud-based analytics to the healthcare industry, in its **\$105 million** acquisition of Creehan & Company, an independent provider of specialty pharmacy and medications management software-as-a-service platforms.
- Represented **DST Systems, Inc.**, a leading provider of sophisticated information processing and servicing solutions, and its wholly owned subsidiary ALPS Holdings, Inc. in its acquisition of Kaufman Rossin Fund Services, LLC, a provider of specialized administration services to the global financial community.
- Represented **FUJIFILM Holdings**, a leading provider of imaging, information, and document solutions, in its acquisition via tender offer of **Cellular Dynamics International**, a developer and manufacturer of fully functioning human cells in industrial quantities.

Blockchain + Smart Contracts Group

Morrison & Foerster's Blockchain + Smart Contracts Group provides a holistic, comprehensive approach to the emerging blockchain, smart contracts and distributed ledger space.

Our Blockchain + Smart Contracts cross-practice, cross-industry, **global team unites 70 attorneys** in our M&A, Private Equity, Financial Transactions, FinTech, Technology Transactions + Internet of Things, Data Security + Privacy, Financial Services Regulatory, Tax, Capital Markets + Securities, and other legal content areas and provides our clients with cutting-edge knowledge and strategic guidance.

Our multidisciplinary team operates in offices throughout the United States, Europe and Asia, providing services to:

- Start-ups
- Financial Institutions
- Corporations
- Asset Management and Investment Funds

Blockchain Key Implications

Financial Transactions

- Our seasoned professionals have extensive experience leading international and domestic commercial transactions, with a special emphasis in evolving markets and technologies. We know deals and have a long track record of assisting emerging growth and large companies on the most complex ones.

Technology Transactions + Internet of Things

- We actively assist both established and emerging technology sector clients in creating and leveraging new technology platforms and harnessing evolving business models.

Data Security + Privacy

- We have the ability to handle privacy issues of any complexity, involving any technology, across any jurisdiction. We take a practical, comprehensive approach that balances our clients' compliance goals with their commercial realities.

Financial Services Regulatory

- Our knowledge of the regulatory and business environments and frequent interaction with regulators combine to enhance our clients' ability to execute their business goals effectively.

Tax

- The role of our tax lawyers is to minimize the risks to our clients to the extent possible and communicate clearly the risks that cannot be eliminated, so that our clients can make informed business decisions.

Capital Markets + Securities

- Our clients appreciate our dexterity and experience in crafting new financial products and offering methodologies when off-the-shelf approaches do not work. It's true: we like complex financings and addressing novel legal questions.

Blockchain + Smart Contracts Representative Matters

- We advised **VISA** with respect to a strategic collaboration with the company Chain in a deal to use Chain Core, an enterprise blockchain infrastructure that facilitates financial transactions on scalable, private or “permissioned” blockchain networks.
- We advised **a major financial services company** in a deal to develop a blockchain-based recordkeeping system for certain financial transactions.
- We are advising **emerging companies** (including **Bitcoin**, **Cosmos** and other well known names in the space), venture funds (including **Outlier Ventures**), hedge and private equity funds (including **Governing Dynamics**) and others on initial token offering/ICO and other blockchain matters.
- We are advising **DisLedger** on patent strategy in connection with a distributed ledger system to improve blockchain efficiency.
- We are advising **hedge funds and other investors** in assessment of trading digital currency and related blockchain matters, including custody, principal transactions and personal trading policies.
- We are advising the **first relay** that is expected to run on the 0x protocol.
- We are advising a **financial technology client** that is expected to facilitate the first multi-bank blockchain-based receivables purchase transaction.



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