The Birth of
BITCOIN

By Eric Ubias

Interest in Bitcoin has gone mainstream on Main Street. It has dominated headlines and caused market volatility with news of social media bans on cryptocurrency ads, crackdowns on Bitcoin-related Ponzi schemes, and big banks blocking Bitcoin buys on credit cards. Bitcoin itself actually started in 2009 in the wake of the financial crisis. At its inception, Bitcoin was just an online payment platform that did not rely on any trusted financial institutions for transaction processing and settlement. In short, Bitcoin's innovation was to allow for online virtual currency transactions to take place through a system where trust was decentralized, and no gatekeeper was required. It was revolutionary.

Nearly a decade later, regulators are still grappling with how to address the explosive growth of Bitcoin and other cryptocurrencies within the existing patchwork of traditional state and federal laws. For instance, the Internal Revenue Service (IRS) treats cryptocurrencies as property for U.S. tax purposes, whereas the Commodities Future Trading Commission (CFTC) defines them as commodities, and the Securities and Exchange Commission (SEC) treats them as securities, depending on their characteristics and use. That said, and thankfully, a coordinated approach and regulatory framework are likely to emerge in the near term. This is particularly necessary as Bitcoin has spawned a legion of new cryptocurrencies, an influx of investors, and created a new source of capital fundraising. Even if Bitcoin and its progeny turn out to be short lived, the distributed ledger technology upon which they are built can survive without them and attorneys should be ready.

Blockchain Basics

At its core blockchain is a type of distributed ledger or limited database that is shared over the Internet. It is maintained through a peer-to-peer network of computers or nodes where transactions are verified by network participants through a decentralized ''consensus mechanism.'' At periodic intervals, transactions are grouped into ''blocks'' of data, verified, and then recorded on the shared ledger. Cryptographic tools are used to verify and record transactions. Each new block builds upon and links to the prior block, ultimately creating a chain of blocks or a blockchain. The ''consensus mechanism,'' or agreed upon set of rules for updating the blockchain, is a key distinguishing feature between the different implementations of blockchain within the distributed ledger technology world.

Ultimately, one of blockchain's main benefits is this robust record of shared duplicate copies spread across the Internet, which eliminates the risk of a single point of failure to the network. The tamper-resistant features provide data security and can prevent fraud. No one entity controls the information, allowing for multi-party use. Finally, the fact that all prior entries are immutable (barring a consensus-based rule change) provides a robust and reliable instrument for tracking and generating audit trails.

Smart Contracts

Smart contracts are computer programs built on blockchain technology with preset rules that trigger defined outcomes. They are often described as self-executing. However, just as vending machines require insertion of coins to work, smart contracts also require cryptocurrencies to function. One prototypical use case for a smart contract is to perform an escrow-type role, collecting and releasing or transferring cryptocurrencies after certain conditions are met.

The Ethereum blockchain is an alternative to the Bitcoin blockchain with similar characteristics and rules, although its cryptocurrency is called Ether. However, while Bitcoin's blockchain can support smart contracts, Ethereum was specifically designed with a contract-oriented programming language for creating smart contracts. As smart contracts read and write transactions to a blockchain they share the same blockchain benefits of security, transparency, reduced costs, cross-border transactions, and ability to operate without a gatekeeper. However, they pose many challenges for attorneys who need to deal with them.

If the terms and conditions of an agreement are to be memorialized in a smart contract, they must be written in code. The computer logic must be scrutinized to confirm that it reflects the intentions of the parties. The more complex the contract, the greater the chance that a smart contract will result in computer coding errors or unintended consequences. Once smart contract transactions are recorded to the blockchain they are irrevocable. Also, the same unregulated, cross-border nature of smart contracts can pose issues when disputes arise. Importantly, there is no blockchain small claims court to mediate cross-border disputes over low-value transactions, and even disputes warranting full blown litigation may face jurisdiction, forum, and even evidentiary hurdles.

Initial Coin Offerings

One common use for smart contracts is in the so called "Initial Coin Offering" (ICO), an innovative and controversial means of raising capital. ICO is a sobriquet drawn from the term IPO, or Initial Public Offering, which is a very different fundraising mechanism where securities are offered and registered under the Securities Act of 1933.

Start-up companies developing blockchain technologies have used ICOs as a low-cost way of raising money to fund their projects. Like Bitcoin and Ethereum, their blockchain platforms rely on cryptocurrencies to function. The perception has been that raising funds through ICOs can avoid federal securities laws if the coins have certain characteristics. That said, this recent statement from congressional testimony by the SEC Chairman may prove otherwise: "[b]y and large, the

structures of ICOs that I have seen involve the offer and sale of securities and directly implicate the securities registration requirements and other investor protection provisions of our federal securities law."[1]

Some companies have long anticipated this development, giving rise to so-called SEC compliant ICOs. However, this invariably means that companies are taking steps to stay within the exemption safe harbors and avoid SEC registration by targeting accredited investors (i.e. investors with a net worth over $1 million or that meet certain income requirements).

This approach may not be viable for many start-ups currently contemplating ICO funding. More importantly, it also does not resolve the bigger issue of whether characterizing these coins as securities may impair the viability of blockchain projects who use them remembering that the coins are meant to be used. Companies may seek to comply with the exemption from SEC registration safe harbors requirements allowing the ICO to proceed, but this triggers onerous restrictions when reselling the coins. If the accredited investors never intend to actually use the coins or blockchain application, what impact might that have? If a company goes through the SEC registration process for their ICO, does that mean that subsequent buyers who simply want to purchase the coins need to go through a broker? These raise thorny, unresolved legal and ethical issues even for the most diligent practitioners who are advising clients in this area.

Ethical Issues

As attorneys navigate the ever-changing slate of issues that blockchain technology and cryptocurrencies present, mindfulness of evolving ethics issues is key. Most states including New York, Florida, and Pennsylvania have in some form adopted the 2012 ABA model rule change that expanded the ethical duty of competency to include a requirement that attorneys "keep abreast of changes in the law and its practice including the benefits and risks associated with relevant technology." This is particularly important as state legislation related to these issues goes into effect. For instance, in Delaware, corporations can now maintain shareholder lists and other corporate records on distributed ledger technology. Arizona codified recognition of smart contracts and is contemplating allowing the payment of state taxes using cryptocurrencies. In the international sphere, Dubai has committed to being the first blockchain-powered government by 2020. Blockchain and the subsequent innovations it spawned have had a disruptive effect, which will likely only continue. Keeping abreast of these developments is already an ethical requirement for some and an opportunity for all as this regulatory landscape evolves.

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1   United States Sen. Committee on Banking, Housing, and Urban Affairs. Hearing on "Virtual Currencies: The Oversight Role of the U.S. Securities and Exchange Commission and the U.S. Commodity Future Trading Commission" February 6, 2018 (statement of J. Clayton, Chairman, SEC).