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Blockchain and State Law: Five Legislative Developments

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Blockchain technology is rapidly expanding into major sectors of the economy. Whether it is the meteoric rise of the digital currency bitcoin or the heightened regulation of initial coin offerings by the Securities and Exchange Commission, the implications of blockchain technology are as pervasive as they are momentous. Unsurprisingly, blockchain has not only piqued the interest of investors and technophiles, but has also caught the attention of state legislatures across the country, who have begun drafting bills to clarify the technology's use in preexisting legal and regulatory schemes. Some states have taken steps to lay the groundwork for the use of blockchain technology in issuing and recording transfers of corporate equity and/or recognizing its utility in the context of other transactions and smart contracts.

What is Blockchain?

Satoshi Nakamoto[1] first put forth a unified concept of blockchain in the now famous white paper titled "Bitcoin: A Peer-to-Peer Electronic Cash System." Nakamoto's work with blockchain conceptualizes a virtual distributed ledger system that operates across scattered yet synchronized computer systems, also known as "nodes." Essentially, blockchain systems are harmonized peer-to-peer networks that not only track data amongst nodes, but in doing so, verify the authenticity and ownership of such information.

Blockchain's decentralized accounting system has earned it the formal moniker "distributed ledger technology." The technology works much in the way of a pen-and-paper ledger, enhanced with twenty-first century updates. Changes to the virtual ledger are memorialized using cryptographic hash-linked "blocks." When a group of transactions or other changes occurs to the ledger, a block is generated recording such events. Nodes periodically validate the blocks, and consequently the underlying transactions, across the system. Once certified, the block is timestamped and a unique, cryptographic hash is generated for that block. Validated blocks contain the hashes for all prior blocks. The grouping of blocks with prior hashes creates chains of blocks (i.e., blockchains).

Because the technology works across a peer-to-peer network (as opposed to the traditional secured, central database) and the periodic proofing of the provenance of the ledger's information, blockchain technology has been touted as a revolutionary way to store and maintain fluid information. Because of this decentralization, blockchain networks are more resilient against hacking and other malicious interference than traditional "brittle network" ledger systems.

Satoshi Nakamoto's white paper conceptualized blockchain as a system of electronic transactions. The extent of blockchain's uses seems nearly boundless. Tech-savvy transactional lawyers view blockchain technology as a way to safely manage corporate securities and other similar assets, while curbing the costs associated with brokers and other middlemen. Similarly, the technology has found a use in the world of contracts and the transfer of goods and services. Blockchain technology may be used to write, store, or validate contracts and other instruments. For example, blockchain can support "smart contracts." Using coded contract provisions and clauses embedded into a blockchain ledger, smart contracts can self-execute, verify performance, and account for other contractual activities. Thus, smart contracts can reduce transaction costs associated with

middlemen while also maintaining a transaction's risk levels. Smart contracts can be used for transactions in a variety of contexts, such as the transfer of goods and even the execution of legal documents.

As the adoption of blockchain technology expands, states are enacting legislation to define its interaction with existing laws and regulations. Below are summaries of five significant legislative developments at the state level.

Delaware

On July 21, 2017, the governor of Delaware signed Senate Bill 69, ushering in the era of distributed ledger technology in corporate governance. Bill 69 amends sections of the Delaware General Corporation Law to allow corporations to utilize electronic networks and databases, including distributed ledger technology, to store and maintain all corporate records and transmit notices to stockholders. In particular, Delaware corporations now may use blockchain technology to maintain stock ledgers. The previous version of the statute envisioned a corporation itself having direct control and maintenance of the information contained in its stock ledger. See DGCL § 219(a) ("The officer *who has charge of the stock ledger* . . . .") (emphasis added). The new version of the statute, however, specifically permits corporate stock ledgers to be maintained by peer-to-peer networks. See DGCL § 219(c) ("For purposes of this chapter, "stock ledger" means 1 or more records *administered by or on behalf of the corporation* . . . .") (emphasis added). Any blockchain technology used by corporations to maintain stock ledgers must be able to prepare and record certain information specified under the DGCL and be able to record stock transfers. These digital changes to the DGCL come with a hardcopy caveat: corporations maintaining records using blockchain technology must be able to convert the records into a legible paper format.

Vermont

Recognizing the significant economic development impact potential of blockchain technology, the Vermont General Assembly enacted and the Vermont governor signed Senate Bill 135 (Act 69), S.B. 135, 2017-2018 Gen. Ass., Reg. Sess. (Vt. 2017), which, in part, calls upon the Center for Legal Innovation at the Vermont Law School, in conjunction with the Vermont Commissioner of Financial Regulation, the Vermont Secretary of Commerce and Community Development, and the Vermont Attorney General, to issue a report to the Vermont General Assembly assessing developing financial applications of blockchain and other technology. The legislation specifically tasks the Center for Legal Innovation to study the opportunities and risks presented by financial technology, including distributed ledger technology, and provide legislative suggestions and metrics for implementing financial technology policies. On December 7, 2017, the Center for Legal Innovation released its report titled the "Financial Technology Report" framing and issuing recommendations for Vermont to pursue financial technology initiatives including blockchain technology.

Arizona

Arizona became one of the first states to address the issues surrounding the enforceability of electronic transactions created, executed, or validated by blockchain technology, thus legitimizing its use in this context. In March 2017, Arizona passed House Bill 2417, which officially recognizes electronic signatures and contracts (i.e., smart contracts) secured through blockchain. Interestingly, the law specifically defines blockchain technology as a "distributed ledger technology. . . . [where] [t]he data on the ledger is protected with cryptography, is immutable and auditable and provides an uncensored truth."

House Bill 2417 amends the Arizona Electronic Transactions Act (AETA) to provide that electronic records, electronic signatures on contracts, and smart contracts secured through blockchain technology and used for

transactions relating to the sales of goods, leases, and documents of title governed by UCC Articles 2, 2A and 7, are considered to be an electronic record and enforceable under the AETA. The law specifically defines a smart contract as an event-driven program that runs on a blockchain technology ledger and can instruct the transfer of assets on that ledger. These revisions give smart contracts and blockchain signatures the same legal effect, validity, and enforceability as their hard copy counterparts.

Nevada

Nevada joined these other states in introducing its own groundwork legislation. On June 5, 2017, the governor of Nevada signed Senate Bill 398, which provides a framework for the use and enforceability of blockchain technology in contracts and as signatures in such electronic records. The law amends the Nevada Uniform Electronic Transactions Act, which gives legal recognition to electronic records, signatures, and contracts that comply with certain requirements. Similar to Arizona's legislation, the new law, which was passed unanimously by the state Assembly and Senate, recognizes certain blockchain documentation as an electronic record, satisfying a requirement for a written record or signature in certain circumstances. The Nevada law generally mirrors its Arizona counterpart; however, it takes blockchain's applications a step further than its Arizona counterpart and restricts taxes and licensing with regard to blockchain. The law prohibits local governments from: (1) imposing a tax or fee on the use of a blockchain; (2) requiring a certificate, license, or permit to use a blockchain; and (3) imposing any other requirement related to the use of a blockchain.

Wyoming

Wyoming is in the process of passing extensive cryptocurrency and blockchain-related legislation. In February, the first two of five blockchain bills unanimously passed the Wyoming House of Representatives and have now been sent to the Senate, where the same result is expected. The first bill, House Bill 19, exempts cryptocurrency from the Wyoming Money Transmitter Act, which requires licenses for professionals and businesses using electronic money transmissions. The second bill, House Bill 70, exempts certain blockchain tokens from traditional securities regulations. If these blockchain tokens meet certain criteria, they are not classified as securities and do not need to be registered as securities in the state. Under the bill, some entities and token exchanges involved in token sales are exempt from a broker-dealer classification. Additionally, House Bill 70 also exempts developers, issuers, and brokers from the Wyoming Money Transmitters Act. There are three remaining bills, including House Bill 101, the "blockchain filings bill," House Bill 126, the "series LLC bill," and Senate Bill 111, "the crypto property tax exemption bill" that will soon be introduced and voted on as well. The Wyoming legislature, with the help and support of the Wyoming Blockchain Coalition, believe that these laws will bring revenue to the state and continue to grow their blockchain technology sector.

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[1] Satoshi Nakamoto has never been positively identified, and his/her true identity is the subject of much debate. Satoshi Nakamoto may very well be the pen name of a currently unidentified person. Many argue that Satoshi Nakamoto does not actually exist but is instead the pseudonym used by a group of blockchain technologists.