

Today's GENERAL COUNSEL

Maryland a Leader in Embracing Blockchain Technology

By Tracy Bacigalupo

There is widespread consensus that blockchain is the technology with the most disruptive potential since the Internet, with broad applications that could transform businesses and government. The World Economic Forum estimated that 10 percent of global gross domestic product would be stored on blockchain technology by 2027. Goldman Sachs stated, “From Silicon Valley to Wall Street, technologists and investors alike are buzzing about the potential for the Blockchain to revolutionize ...well, everything.”

Delaware has adopted similar amendments, and California allows privately held companies to use blockchain technology for certain corporate records.

The State of Maryland is now at the forefront of this development. On April 30, 2019, Maryland Governor Hogan signed Senate Bill 136, which provides explicit statutory authority for Maryland companies to use electronic networks or databases, including distributed ledgers and blockchain technology, for the creation and maintenance of corporate records, including a company's stock ledger. The new legislation also recognizes that a stock ledger does not

need to be maintained directly by a company through an individual, such as a corporate officer or a transfer agent (as was previously required by the statute). Instead, it may be administered “on its behalf,” again creating a path forward to use blockchain technology for corporate records.

This new legislation provides Maryland companies with the statutory framework to migrate to a blockchain-enabled platform, reinforcing Maryland as a “go to” state for those seeking a pro-business, pro-future statutory framework for their companies.

These amendments to the Maryland General Corporation Law (MGCL) went into effect on October 1, 2019.

The new legislation also specifically permits Maryland companies to transmit communications, such as stockholder notices, using blockchain technology. Additional amendments clarify that corporate written consents and requests may be provided

by “electronic transmission,” including through blockchain technology.

The amendments to the MGCL benefit Maryland corporations in many significant ways:

- Maryland corporations are now able to issue and track shares electronically on a real-time basis, meaning that delays, inconsistencies and uncertainty caused by manually recording an issuance or a transfer of shares may be reduced or eliminated.
 - The distinction between record holder and beneficial owner may be eliminated. Consequently, the complexities, confusion and ensuing inefficiencies caused by the nominee system may be eliminated.
 - Transactions may be settled instantaneously, especially when coupled with smart contracts.
 - Transaction costs may be reduced or eliminated.
 - Maryland corporations may communicate directly with investors. By allowing both issuers and stockholders to interact directly with each other, the need for third-party intermediaries — such as brokers, custodians and clearinghouses — along with their related costs, may be reduced or eliminated.
- As Maryland is the forum of choice for investment companies, it should be noted that asset managers, in particular, may implement blockchain technology to:
- Reduce costs across front, middle and back-office activities through a reduction in data management and manual intervention;
 - Streamline the client on-boarding process by reducing the time normally required to collect and verify data;
 - Increase the speed of settlement of trades;
 - Offer clients real-time reporting; and
 - Offer advanced solutions with respect to AML or KYC.



TECH ADVANTAGES

Many companies are harnessing this new technology in small, incremental steps by first working to develop and use blockchain technology internally.

Blockchain provides a shared, immutable record — or an unchangeable record that is written once and can only be read — of any currency or asset, including tangible assets like real estate. It includes a tamper-proof audit trail of the transfer of any such asset without relying on a traditional, trusted third party. With blockchain, companies can share, store and record valuable data through a secure chain of time-stamped and connected blocks of data.

A blockchain is operated in a peer-to-peer network of unaffiliated parties that use the Internet as a network for connecting the individual data records through predefined consensus mechanisms, and by employing cryptography in order to prevent editing or tampering with the recorded information. Informa-

tion is permanently stored and can be tracked or authenticated by anyone with access to the data.

Technologies involved in blockchain include cryptography, distributed network (also called peer-to-peer ledger systems), and incentive mechanisms to provide a value proposition to service the network. Examples are transaction fee-setting mechanisms or rewards for miners who secure and extend the blockchain.

Blockchains are structured to be public, permissioned or private, as determined by a given project's objectives. Public blockchains are large, distributed networks based on open-source code that is developed and maintained by their respective communities. They are open to everyone to participate at any level to read or validate (i.e., mine) a transaction, or write data in exchange for cryptocurrency without identification or permission. Anyone can audit the public blockchain ecosystem.

Critical to a blockchain's infrastructure are nodes, such as computers or

servers, which store blocks of data comprising a blockchain and are connected to other nodes with which they exchange the most current data and authenticate a block's legitimacy.

Permissioned blockchains are built so they require permission to read the blockchain or limit the parties that transact on the blockchain. They may or may not be based on open-source code. These may operate under a known entity that determines the role that given nodes will play in a network. They may or may not use cryptocurrencies as incentives for participants to serve the network.

Private blockchains are smaller, limited-membership, centralized networks controlled and operated by a single entity or enterprise where cryptocurrency is not warranted. Only permissioned users are allowed to read, write or audit a private blockchain. The private blockchain owner can override or delete commands on a blockchain at any time. Consequently, private blockchains are not a decentralized software architecture but a distributed database with cryptography to secure it.

In fact, cryptography validates these systems and helps protect information and communications from being accessed by unauthorized users through encryption. Thus, they allow only the sender and intended recipient to view or decrypt the contents of a message.

Blockchain specifically uses asymmetric cryptography, also known as public key cryptography, which always uses two complementary keys — sometimes referred to as a public key and a private key. One might encrypt a message, while the opposite key can be used to decrypt the other key's encoded text, and vice versa. In other words, the key that was used to create the ciphered text cannot decrypt it. Only its complement can.

HEIGHTENED DATA SECURITY

In today's environment of chronic data security attacks, blockchain technology's trusted system allows companies to share, store and record sensitive data through a protected,

participant-visible and unchangeable network. Blockchain is thus a valuable and necessary tool, especially with respect to corporate record keeping and stockholder notices. Being able to look up an audit trail of a given asset or data with certainty verifies the accuracy of the data.

Maryland's new statutory amendments will allow Maryland corporations to maintain more accurate records. Stock ledgers in smaller, closely held corporations are often maintained in a spreadsheet. Individuals tasked with updating the ledgers often fail to consistently do so in a timely manner and may sometimes make mistakes in data entry, leading to inaccurate stockholder records. An automated stock ledger recorded and verified in a distributed ledger would enable these companies to easily maintain an up-to-date stock ledger.

Recording shares on a blockchain would also enable stockholders and corporations to interact directly, thereby decreasing and even eliminating the need for intermediaries, including brokers, custodians and clearinghouses. Eliminating the need to register shares in "street names" and, instead, allowing shares to be registered to the actual beneficial owners could improve stockholder voting practices and prevent mistakes made by intermediaries, whether due to misunderstood stockholder instructions or inaccurate stockholder records.

In addition, corporations can also use distributed ledgers and digital tokens, representing voting power, to form an electronic platform for stockholder voting. This could help improve the ease of voting, and the accuracy and speed of vote counts, thus incentivizing greater stockholder participation in corporate actions.

The new amendments specifically permit Maryland companies to transmit communications using blockchain technology. This could allow for quicker, more secure and more transparent transactions and stockholder communication.

Maryland is not the only state to allow companies to use blockchain technology for corporate record keeping. For example, Delaware has adopted similar amendments, and California allows privately held companies and social purpose organizations to use blockchain technology for certain corporate records.

As companies take advantage of the new legislation, some challenges and complexities are to be expected. For example, when companies experiment with issuing and transferring shares using blockchain technology, compliance with applicable securities laws will be necessary and new issues will need to be addressed in the process.

In addition, even though a blockchain can share records and transfers more securely, its security often depends on the actual application of the technology.

For example, Maryland's new amendments do not restrict the distributed electronic network and database to public blockchains, so corporations may choose to encrypt data in a private blockchain network and set permissions as they desire. The level of security will depend on the permissions set, which need to be balanced with other factors such as the company's need for privacy and ease of use.

Given the quickly evolving use of blockchain for corporate record keeping, stockholder communications and share transfers, it is recommended that newly formed companies include authorization to use blockchain technology in their governing documents. This will preserve the opportunity to adopt this technology when the company is ready to embrace all that it can offer in our rapidly changing economy. ■



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