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Part I — The smartest securities on the block: Blockchain-based digital securities look to disrupt securities offerings and the capital markets

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Part I — Digital securities

This is the first part of a two-part article that examines the key considerations associated with Digital Securities Offerings. This Part I provides a high-level overview of Digital Securities and Digital Securities Offerings. Part II will provide an overview of Regulation D of the Securities Act of 1933, as amended, and why it has emerged as a preferred vehicle for Digital Securities Offerings.

Introduction

Though offering securities in digital form is not new, offering blockchain-based digital securities ("Digital Securities")[1] marks a pivotal point in the financial and Digital Securities markets evolution. When compared with the capabilities provided by blockchain technology, the methods that securityholders have been employing to document, track, and access information about their securities seem complicated, burdensome, expensive and increasingly archaic.

Digital Securities derive benefits inherent in their blockchain-based nature, such as transparency and traceability.

The prevailing practice in public securities markets is for record or beneficial ownership to be recorded in electronic book-entry form, where an issuer, broker (if held in "street name")[2] or transfer agent holds the ownership records on electronic media.

With hundreds of billions of dollars of securities changing hands every day, the book-entry system is fairly entrenched, but neither efficient nor cost-effective for issuers or investors. As blockchain technologies continue to develop, issuers are being presented with opportunities to capitalize on emerging platforms through, among other things, digital securities offerings ("Digital Securities Offerings"), also commonly referred to as security token offerings, or STOs.

Digital Securities Offerings have the potential to significantly transform the capital raising process and the operations of U.S. capital markets participants by redefining the mechanisms by which securities are issued, traded, held and serviced (e.g., distributions of Payment-In-Kind ("PIK") dividends) and regulated. Through a Digital Securities Offering, an issuer offers securities to prospective purchasers, subject to the same state and federal rules and regulations imposed upon traditional securities offerings.

Smart contracts can define the rules for how digital securities are issued and settled.

However, rather than rely on the traditional book-entry systems monitored by third parties, security holders obtain ownership interests in Digital Securities some of which are programmed via smart contracts to comply with applicable rules and regulations governing the issuance and ongoing servicing (e.g., PIK dividend payments) of the securities throughout the life of the securities.

Blockchain-based security transactions have generated significant interest, including among institutional investors.[3] In a 2021 survey of asset managers conducted by BNY Mellon, 84% of the respondents indicated that they were planning to develop blockchain and distributed ledger technologies to synchronize data and processes as part of their long-term strategy, and 72% of respondents indicated that they planned to develop digital assets over the next three years.[4]

In light of growing interest, issuers stand to gain from using Digital Securities Offerings as a vehicle for their capital raising activity, including through the promised benefits of faster transactions, heightened transparency and cost efficiency throughout the life of the Digital Asset (as described in further detail below).[5]

Understanding digital securities offerings: What they are, what they are not, and what they might be

Digital securities

Digital Securities, as defined for purposes of this article, are blockchain-native digital assets that do not exist outside of the

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blockchain and that satisfy the applicable regulatory definition of a security under federal securities law.[6]

Among other things, Digital Securities can represent common stock, preferred stock, or debt instruments and typically entitle owners with the same bundle of rights as conventional securities.[7] These rights can include cashflow and voting rights, all of which can be encoded and automated as applicable through smart contracts coded into the Digital Securities.[8]

Digital Securities derive benefits inherent in their blockchain-based nature, such as transparency and traceability, among others, and also derive benefits from the implementation of programmable functionality through smart contracts (as explored more fully below) and the use of off-chain sources through third-party data bridges, known as oracles,[9] to automate security features such as corporate actions that govern the security (e.g., automated dividend calculation that relies on off-chain data, such as one-month term Secured Overnight Financing Rate ("SOFR"), and the automated distributions of PIK dividends to holders).

Digital securities are, well, securities

Blockchain-based digital asset offerings are still in the early stages and continue to evolve and take on many different forms, which present new definitional and regulatory challenges.

Unlike current conventional wisdom, Digital Securities actually facilitate an issuer's ability to comply with applicable regulations.

However, "Digital Securities", as defined for this article, are securities subject to related state and federal regulations of securities. Securities are broadly defined by the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, to include stock, bonds, notes, debentures, partnership interest and investment contracts.

Accordingly, a broad range of interests or instruments typically offered in connection with capital raising efforts are all captured by this broad definition.

Smart contracts supercharge the life of digital securities

The use of digital advancements in the capital markets, such as the book-entry system, has been prevalent for decades. While traditional ownership records have been digitized for many years, key aspects of the issuance, settlement and the operations of securities has remained part and parcel of an analog world.

Smart contracts, however, allow for the implementation of self-executing smart code to secure the performance of the Digital Securities' features throughout the life of securities, carrying the potential to revolutionize securities transactions.

A smart contract, in its basic form, is computer code or computer program that can automatically carry out contractual obligations based on triggering events written into the code.[10]

Smart contracts can define the rules for how digital securities are issued and settled, including rules defining how security-owners and counterparties can store and exchange the value of securities.

Smart contracts can handle a range of scenarios, from the agreement between a buyer and seller on settlement terms to error-checking and compliance with ongoing regulatory and legal obligations throughout the life of the securities.[11]

ERC-20 was initially the only, and continues to be the most common, smart contract coding standard, but ERC-1400 and ERC-3643 have recently emerged and, among other things, improve on the earlier standards by providing a standard interface to operate Digital Securities by all relevant parties in a securities transaction (e.g., issuers, investors and, importantly, regulators).[12]

ERC-1400, for example, includes standardized interfaces for issuing and redeeming digital securities, managing ownership and transfer restrictions, and informing holders about their securities and associated rights.[13] Though the mechanics for coding smart contracts are outside of the scope of this article, we note these developments as examples that smart contract technology is still evolving, which poses challenges but also highlights the potential for Digital Securities Offerings to disrupt the capital markets in a positive way.

Benefits of digital securities offerings

The promise of Digital Securities Offerings is not less regulation, but rather technological innovation that will improve the process for issuing securities and reduce the cost of maintenance (including as related to ongoing regulatory compliance) throughout the life of the securities. Unlike current conventional wisdom, Digital Securities actually facilitate an issuer's ability to comply with applicable regulations.

For example, transfer restrictions applicable to restricted securities can be implemented by coding such restrictions into a Digital Security's smart contract.

Digital Securities Offerings will be able to disrupt the capital markets infrastructure and, in particular, the back-office operations, if they can deliver on the promised benefits over their traditional analogue counterparts.

The most frequently mentioned transformative benefits of Digital Securities Offerings are:

- **Speed and efficiency of clearance and settlement of securities.** Blockchain transactions can eliminate settlement lags inherent in existing processes through the coding of smart contracts that automatically address ownership confirmation, delivery of newly issued securities, and continued operations, including, but not limited to, transfers, sales, and administration of rights associated with the securities (e.g., geo-fencing (i.e., geographical ownership restrictions),

timing restrictions, investor-eligibility, etc.). They are capable of executing the settlement process through a variety of models including atomic settlement (i.e., when settlement elements of the deal (the transfer of ownership and payment) all take place at exactly the same time), deferred settlement and deferred net settlement (i.e., when final settlement occurs on a net basis at the end of a predefined settlement cycle).

- **Disassociation of intermediaries: Increased speeds and reduced costs.** Reducing dependence on intermediaries,[14] such as transfer agents and clearing agencies, through the automation of back office processes by using smart contracts increases the speed associated with securities transactions, and automation of record-keeping and operations can significantly reduce costs throughout the life of the securities.
- **Facilitating ongoing compliance.** Share ownership information and transaction records are stored on the blockchain in a permanent, secure and transparent manner, providing issuers with real time ownership records and enhanced efficiency for compliance with applicable regulations.[15]

What the future may hold

The promise of increased speed, reduced costs of both the initial offering and maintenance of securities throughout the life of the securities is a worthwhile "disruptive" pursuit. It promises to increase benefits for investors and increase profitability for issuers. It will also allow new companies to access capital earlier due to reduced barriers for accessing the capital markets. However, the broad acceptance and implementation of Digital Securities and Digital Securities Offerings will depend in large part on existing and future rules and regulations facilitating well-regulated transactions.

Notes

[1] Digital assets are represented on the blockchain in a number of ways, including as "Digital Securities." Digital Securities are blockchain-native digital assets that do not exist outside of the blockchain and that satisfy regulatory definitions of "securities" under applicable law. Whether represented as common stock, preferred stock, debt instruments or other securities, Digital Securities entitle their owners to the same rights as conventional securities. Such rights can include cashflow and voting rights, all of which can be encoded and automated as desired. Digital Securities derive benefits inherent in their blockchain.

[2] *See* http://bit.ly/3yf4tpa.

[3] "Institutional investors" includes traditional buy-side entities, including asset owners (pension funds, sovereign wealth funds, etc.), institutional asset management, and hedge funds (excluding crypto-specific funds or alternative fund managers). *See* https://bit.ly/3Ym492r.

[4] https://bit.ly/3YosFQr.

[5] In a global survey of senior executives conducted by Deloitte in 2021, 80% indicated that they consider blockchain as a top 5 strategic priority. *See* http://bit.ly/3JhjVaL.

[6] https://bit.ly/3EZvLUg.

[7] Whether a security interests has been created and perfected must be evaluated under the relevant state and commercial laws. *See, e.g.*, http://bit.ly/3lVmrSo; *see also generally* Marek Dubovec, "Toward Decentralized Commercial Law for Digital Assets," 19 Nw. U. J. of Tech. & Intell. Prop. 239 (Apr. 2022).

[8] Paul P. Momtaz, "Security Tokens" in Baker et. al (eds.), *The Emerald Handbook of Cryptoassets: Investment Opportunities and Challenges* (2021).

[9] *See generally*, Kenny Terrero & Eric Ubias, "Separating the Smart Code from the Smart Contract: Legal and Regulatory Implications of Smart Contracts Require Their Clear Distinction from Smart Code," 39 Futures & Derivatives Law Report 5-9 (June 2019).

[10] Dickson Chin, Smart Code and Smart Contracts, in 87 Blockchain For Business Lawyers (Mark W. Rasmussen & James A. Cox, eds., 2018). The coding underlying smart contracts represents the oft-discussed "if, then" logic sequence capable of coding commands (e.g., if a specified condition is true, then return one output and, if false, return another). For example, consider the payment of dividends programmed into a smart contract. A typical command to make a dividend payment programmed into the smart contract could be something like, if the date is "X," then issue a dividend of "Y" to holders of any Security Token carrying the smart contract. The promise of Smart Contracts is therefore not in "digitizing" securities but rather in enhancing the functionality of securities from initial issuance throughout the life of the securities.

[11] http://bit.ly/3ZJcxKE.

[12] Momtaz, *supra* note 8.

[13] *Id*.

[14] It should be noted, however, that while the technology may be able to perform task performed by intermediaries, many state and federal regulators still see the benefits of intermediaries, particularly when they act in a gatekeeper capacity. Developers and operators of the technologies that perform these tasks must evaluate if they need to register with the SEC as a transfer agent, clearing agency, broker-dealer, or a national securities exchange, depending on what regulated functions are being performed automatically by the code.

[15] https://bit.ly/3SP8pq2.

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