

# What are Digital Securities and What are Their Benefits?

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## What are digital securities?

Digital securities are digital representations of ownership interests in "all types of assets including investment contracts, shares of a corporation, a portion of a note, debt security, or even a fractionalized interest."<sup>1</sup> Basically, any electronically registered and transferable debt, equity, or asset that issues or trades using blockchain technology is a [security token](#).

Digital securities share the [same legal constructs](#) as traditional securities. By virtue of being on the blockchain, they are able to be programmed with features that traditional securities are not. This can mean anything from automatic payments to transparent/immutable ownership records.<sup>2</sup>

## Benefits of Digital Securities

### Increased Efficiency, Cost Reduction, and Barrier Removal

The circulation of digital securities (backed by blockchain technology) increases trade efficiency and reduces transaction costs through a paperless process, rapid settlement, automated verification, and real-time, transparent ownership recording.

For example, the adoption of digital securities could reduce administration costs around [ownership reconciliation](#). The process of reconciling the capitalization table when startups are acquired is costly. However, when all the ownerships are tokenized and contractual features are baked into securities, cap tables could be reconciled in real time by code.<sup>3</sup>

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<sup>1</sup>Hamilton, David. "What Are Digital Securities?" *Securities.io*, 5 June 2020, [www.securities.io/what-are-digital-securities/](http://www.securities.io/what-are-digital-securities/).

<sup>2</sup> Van Der Loo et al. "Tokenised Securities A Roadmap for Market Participants and Regulators" *asifma.org*, November 2019, <https://www.asifma.org/wp-content/uploads/2019/11/tokenised-securities-a-roadmap-for-market-participants-final.pdf>.

<sup>3</sup> Originally published by Stephen McKeon on. "The Security Token Thesis." *Hacker Noon*, 19 July 2020, [hackernoon.com/the-security-token-thesis-4c5904761063](https://hackernoon.com/the-security-token-thesis-4c5904761063).

Currently, the capital market is seriously inefficient, with high barriers between venture capital and investors. Millions of investors around the world are deprived of opportunities for fair investment and trading, and small companies lack efficient financing channels. In addition, due to the centralized nature of the existing financial system, it is prone to transaction loopholes and illegal operations, and there is a lack of new asset classes globally under the regulatory framework. Security tokenization and the decentralized ledger will break through the geographical boundaries of the regulated market, achieve a higher level of liquidity, make investment/fundraising more efficient, and involve more democratic participation.<sup>4</sup>

## Fractional ownership

[Fractional ownership](#) is a “percentage ownership in an asset. Fractional ownership shares in the asset are sold to individual shareholders who share the benefits of the asset such as usage rights, income sharing, priority access, and reduced rates.”<sup>5</sup> As the definition of digital securities says, it covers all types of assets which includes any type of alternative assets, such as real estate, venture capital, private equity, real assets and hedge funds. Unlike the stock market, which is only open during business hours and does not allow trading of indivisible assets (such as real estate), the biggest benefit of tokenized securities should be the ability to trade instantly and without permission. Because of the divisibility of the security token and its ability to be traded at all times, these problems in the stock market will no longer exist. For the first time, a typical retail investor can own 0.01% of a Picasso work or a building, and can sell this 0.01% to others. Due to the unconventional nature and questionable liquidity of some alternative assets, valuing an investor’s holdings can be difficult.

Real estate is a classical and principal representative for the value of fractional ownership. Digital securities give investors the opportunity to own much less assets than in the traditional world, because the ownership of real estate assets can be partitioned in a simple, fast and safe way. Tal Elyashiv cited the example of AspenCoin tokenized real estate in his article *Digital Securities — the future of Capital Markets?*. The first tokenized real estate offering, issued by AspenCoin in October 2018, offered clients the opportunity to hold indirect fractional ownership shares in the iconic St. Regis Aspen resort, in Aspen Colorado.<sup>6</sup>

## Programmability

A key feature of digital securities is programmability. Elements of the contract environment, regulations and compliance can be baked into smart contracts. This feature facilitates the circulation

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<sup>4</sup> IDHub. “数字证券引领金融‘范式革命’ 未来万亿数字金融市场雏形初显.” *Medium*, Medium, 5 Sept. 2019, <https://link.medium.com/F6fHpHnei8>.

<sup>5</sup> Chen, James. “Fractional Ownership.” Investopedia, Investopedia, 28 June 2020, [www.investopedia.com/terms/f/fractionalownership.asp](http://www.investopedia.com/terms/f/fractionalownership.asp).

<sup>6</sup> Elyashiv, Tal. “Digital Securities - The Future Of Capital Markets?” *Medium*, SpiceVC, 6 Dec. 2019, [medium.com/spicevc/digital-securities-the-future-of-capital-markets-163d4674366](https://medium.com/spicevc/digital-securities-the-future-of-capital-markets-163d4674366).

of different types of assets and fiat.<sup>7</sup> By allowing a third party to build Dapps (decentralized applications) on smart protocols, blockchain technology establishes a cross-platform, cross-market and cross-jurisdiction investment environment, as well as improves series of inefficiencies of traditional financial assets such as the complexities in KYC/AML processes and high costs from identity authentication.<sup>8</sup>

When relevant regulations are coded into the smart protocol and compliance is automated, the non-compliant transaction won't be executed.<sup>9</sup> Smart protocols could regulate the parties between which transactions are allowed to take place, and the traders by whom tokens are allowed to be held.<sup>10</sup>

## Increased Liquidity

The liquidity of digital securities is achieved mainly through blockchain technology. Backed by distributed ledger technology, markets of tokenized securities offer the experience of 24/7 direct transfer of ownership, rapid settlement, and borderless transaction. The option to fractionalize illiquid assets facilitates transactions among a wider range of buyers and sellers through eliminating frictions and reducing costs, thus relaxing restrictions on liquidity of more diversified assets. Finally, the programmability of digital contracts and automated compliance protocols allows transfers to take place directly without manually approving trades, which ultimately facilitates the unlocking of liquidity premiums in a majority of assets.<sup>11</sup> "Tokenized funds would allow fund managers to invest in illiquid assets without fear of redemptions", and investors can access liquidity in secondary markets.<sup>7</sup>

For example, illiquidity is usually cited as the number one issue related to venture capital investments. Though some VC funds allow the secondary trading of LP interests, these secondary market trades take months to complete and usually involve a 25%-30% discount in value. However, by issuing LP interests as digital securities, LPs can find appropriate time to liquidate their investment on the secondary market, instead of holding it for 10-15 years.<sup>9</sup>

Security tokens offer higher liquidity in private securities such as real estate and early stage equity; asset classes that traditionally suffer from low liquidity.<sup>7</sup>

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<sup>7</sup> McKeon, Stephen. "The Security Token Thesis." *Medium*, HackerNoon.com, 6 Oct. 2018, [medium.com/hackernoon/the-security-token-thesis-4c5904761063](https://medium.com/hackernoon/the-security-token-thesis-4c5904761063).

<sup>8</sup> IDHub. "数字证券引领金融'范式革命' 未来万亿数字金融市场雏形初显." *Medium*, Medium, 5 Sept. 2019, <https://link.medium.com/F6fHpHnei8>.

<sup>9</sup> Elyashiv, Tal. "DIGITAL SECURITIES - THE FUTURE OF CAPITAL MARKETS?" *Medium*, SpiceVC, 6 Dec. 2019, [medium.com/spicevc/digital-securities-the-future-of-capital-markets-163d4674366](https://medium.com/spicevc/digital-securities-the-future-of-capital-markets-163d4674366).

<sup>10</sup> 币乎 - 好文有好报!, [bihu.com/article/1209914391](http://bihu.com/article/1209914391).

<sup>11</sup> Obratsov, Iliia. "Unlocking Global Liquidity In The Age Of Blockchain: What, How, Why?" *Benzinga*, Benzinga, 4 Nov. 2019, [www.benzinga.com/fintech/19/11/14723692/unlocking-global-liquidity-in-the-age-of-blockchain-what-how-why](http://www.benzinga.com/fintech/19/11/14723692/unlocking-global-liquidity-in-the-age-of-blockchain-what-how-why).

## Asset Interoperability

Interoperability is, broadly put, the ability of different systems to exchange and use information. In *The Security Token Thesis*, Stephen McKeon said, “The arc of technological evolution bends towards interoperability and interoperability is facilitated by standards. By definition, standards must have widespread buy-in to be effective.”<sup>12</sup> We can conclude that, due to the function and characteristics of the distributed ledger and the foundation of current blockchain technology, blockchain can provide protocol standards upon which everyone can build. Therefore, this technology can be widely recognized by the public, thereby ultimately promoting interoperability among digital securities assets.

Stephen McKeon took the ERC-20 token standard that promotes interoperability within the Ethereum protocol as an example to prove the feasibility and prospect of asset interoperability. “Interoperability within the Ethereum protocol is facilitated by the ERC-20 token standard, which allows a wallet to hold any token that adheres to the standard. It makes distributions easy. For example, let’s say I own some ERC-20 tokens that represent ownership in an apartment building. Each month the lease payments from the tenants are converted to a ERC-20 stablecoin by the building manager and pushed to all the owners’ wallets in the corresponding proportions. Regardless of which ERC-20 wallet the owner uses, it can hold both the ownership and distribution tokens.”

As it stands, interoperability [has two main uses](#) when it comes to working with assets on different blockchains: “one is trading an asset on one chain for another asset on another chain; the other is representing an asset on several chains and moving instances from one chain to another” as Stefan Beyer puts it in his Medium article, *Blockchain Interoperability- Moving Assets Across Chains*.<sup>13</sup> In order to achieve these interoperability scenarios faster, more securely and more consistently, there are currently three main interoperable blockchain frameworks: multi-chain solutions, chain relays and connecting external chains. With the improvement of blockchain technology, more frameworks will be set up in the future.

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<sup>12</sup> McKeon, Stephen. “The Security Token Thesis.” *Medium*, HackerNoon.com, 6 Oct. 2018, [medium.com/hackernoon/the-security-token-thesis-4c5904761063](https://medium.com/hackernoon/the-security-token-thesis-4c5904761063).

<sup>13</sup> Beyer, Stefan. “Blockchain Interoperability - Moving Assets Across Chains.” *Medium*, Cryptonics, 5 Nov. 2018, [medium.com/cryptonics/blockchain-interoperability-moving-assets-across-chains-e5203357d949](https://medium.com/cryptonics/blockchain-interoperability-moving-assets-across-chains-e5203357d949).

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