

# Security Token Offerings

## Regulatory Approaches and Lessons from Global Case Studies

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# 1. BACKGROUND

Security token offerings (STOs) recently have gained attention as an alternative mechanism for funding. By leveraging blockchain technology, STOs facilitate the issuance of tokens that are backed by tangible assets and adhere to regulatory frameworks, presenting a more secure and regulated option than that provided by initial coin offerings (ICOs), which often operate in ambiguous legal environments. This enhanced security and regulatory compliance ensures greater investor protection and transparency. The growing adoption of STOs is driven by their potential to democratize access to capital markets and improve liquidity for assets that have traditionally been illiquid. This innovative financial instrument has the potential to affect developing countries by providing an inclusive and efficient means of gaining access to capital.

Although STOs are a relatively new market and are still in the early stages of development, presenting inherent risks and challenges for future development, they show promise in the entrepreneurial finance landscape.<sup>3</sup> By 2030, institutions like Citigroup and PwC expect tokenization of financial and real-world assets to grow 80 times in private markets, reaching nearly \$4 trillion and driving blockchain advancements.<sup>4</sup>

Accordingly, governments are exploring and establishing governance systems for this emerging market. Countries such as Germany, Singapore, and the United States are progressively refining regulations related to STOs.

Recognizing the rapid development and potential of STOs to introduce new methods of capital aggregation and to drive industry innovation, this primer aims to clarify the definition of STOs, outline their benefits and risks, and capture regulatory approaches and lessons from global case studies. By analyzing the experiences of six economies—the Republic of Korea, Singapore, Germany, Japan, the United States, and Taiwan, China—this primer provides insights that other countries and developing economies can use to inform their own regulatory strategies and to harness the potential of STOs.

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<sup>3</sup> According to Kiwoom Securities Company, Korea, the global STO market recorded \$300 billion in 2022. Also, a German financial service platform, Finoa, predicted that the market capitalization of the security token market would reach \$24 trillion by 2027.

<sup>4</sup> Citigroup, *Money, Tokens, and Games: Blockchain's Next Billion Users and Trillions in Value* (Citi GPS: Global Perspectives & Solutions report, 2023), <https://www.citigroup.com/global/insights/citigps/money-tokens-and-games>; PwC Korea, "Understanding Fractional Investment and STO" (Samil PricewaterhouseCoopers, 2023), <https://www.pwc.com/kr/ko/insights/issue-brief/samilpwc-understanding-fractional-investment-and-sto.pdf>.

## 2. UNDERSTANDING STOs

Since the advent of Bitcoin in 2009, the profile of blockchain has gained significant attention, opening new ways to issue and transact investments and assets. There has been volatility and speculation in virtual assets and blockchain-related financing, and now there is a broader consensus on the value of blockchain and other forms of distributed ledger technology (DLT)<sup>5</sup> in finance. DLT can enhance transparency and real-time access to information for all the stakeholders. In addition, by using smart contract technology, DLT can automate compliance and functions to ensure that all participants follow the same rules, which will never change. This reliability is a key reason most digital tokens are built on DLT.

As mentioned, STOs are a way for companies to raise capital by selling digital tokens that represent ownership or investment in their business. These tokens are regulated and stored on a blockchain, providing transparency and security for investors. In contrast to the conventional stock purchase process, in which an investor's ownership particulars are documented and issued on a physical certificate, STOs operate in a digital realm, leveraging tokens as representations of ownership.

STOs are digital representations of assets, instruments, and economic rights, such as real estate, intellectual property, or share of revenue, wrapped in a digital tokenized form. Therefore, these security tokens can be used like traditional securities to pay dividends, share profits, or grant voting rights. Whereas traditional electronic securities have all data recorded and managed on the central server of securities companies, tokenized securities have their transaction ledgers shared among participants on a blockchain network. The technical background is like that of virtual currencies such as Bitcoin, but tokenized securities differ in that they are based on tangible assets. These tokens can be created and exchanged for transactions using the rules of their blockchain, and they comply with the legal and regulatory requirements, including securities laws, in the applicable jurisdictions.

The STO allows the original owner of the illiquid assets to tokenize and monetize all or part of those assets through an STO under strict regulations. As a real-world example, the US investment platform company Masterworks enabled individuals to invest as little as

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<sup>5</sup> DLT is a type of database that is spread across multiple sites, countries, or institutions and is typically public. Government Office for Science, United Kingdom, "Distributed Ledger Technology: Beyond Block Chain," 2016, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/492972/gs-16-1-distributed-ledger-technology.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf).

\$20 to purchase Andy Warhol artwork by securitizing the artwork and allowing investors to buy and trade shares.<sup>6</sup>

From the lifecycle perspective, STOs begin with token issuance in the primary market, where companies create and distribute tokens using blockchain standards, ensuring compliance through automated smart contracts. This approach provides global investor access, fractional ownership, and increased transparency. In the secondary market, tokens are traded on specialized and decentralized exchanges, which enable trading, enhanced liquidity, and global reach. Post-trade processes, including clearing and settlement, are automated with blockchain technology for prompt settlement and reduced costs.

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<sup>6</sup> Oscar Holland, "How Art 'Shares' Could Make You a Warhol Collector for Just \$20," CNN, August 21, 2018, <https://edition.cnn.com/style/article/shares-art-collecting/index.html>.

## 3. MOTIVATIONS AND POTENTIALS OF STOs

### STO AS A NEW FUNDRAISING METHOD

In addition to STOs, initial public offerings (IPOs), ICOs, and initial exchange offerings (IEOs) all are methods of raising funds. Token offerings are emerging as an attractive way to raise capital, primarily owing to the reduced costs compared to traditional methods like IPOs.<sup>7</sup> Additionally, a spectrum of investors demonstrates perpetual interest in opportunities that pledge elevated returns, a characteristic often linked with ICOs.<sup>8</sup>

Since the Dutch East India Company's first IPO in the 17th century to raise money by issuing shares, IPOs have continued to play a significant role in raising funds for companies today. Meanwhile, ICOs began to become popular in 2017 to raise funds, with ICOs on the Ethereum blockchain growing rapidly and raising more than \$14 billion in 2018.<sup>9</sup> However, the problem with raising funds through ICOs is that investors receive newly issued tokens from the company and can make a profit only if the token is listed on a cryptocurrency exchange.

That is why IEO, an exchange-traded fundraising method with an immediate listing on a cryptocurrency exchange, became popular in 2019. Investors have the advantage of realizing profits immediately on a cryptocurrency exchange. The fraud rate is lower than for ICOs because the cryptocurrency exchange directly verifies and screens the project and the company issuing the token. However, there were concerns that IEOs could be conducted in a way that risked a conflict of interest with the exchange or that prioritized the interests of the exchange, and regulatory and legal issues were not well developed. The exchange is responsible for screening and selecting the projects that can conduct their token offerings on the platform. However, there is a risk that the exchange might

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- 7 Bruce Petersen and Robert Carpenter, "Is the Growth of Small Firms Constrained by Internal Finance?," *Review of Economics and Statistics* 84, no. 2 (2002): 298–309, <https://doi.org/10.1162/003465302317411541>; Florie Mazzorana-Kremer, "Blockchain-Based Equity and STOs: Towards a Liquid Market for SME Financing?," *Theoretical Economics Letters* 9, no. 5 (June 2019), <https://doi.org/10.4236/tel.2019.95099>.
  - 8 Julianna Debler, "Foreign Initial Coin Offering Issuers Beware: The Securities and Exchange Commission Is Watching," *Cornell International Law Journal* 51, no. 1 (2018): 245–65.
  - 9 Mathias Fromberger and Lars Haffke, "ICO Market Report 2018/2019—Performance Analysis of 2018's Initial Coin Offerings," Technische Universität München, TUM School of Management, Munich, December 31, 2019, <https://doi.org/10.2139/ssrn.3512125>.

prioritize its own interests over those of the investors or of the project itself. For example, the exchange could select projects on the basis of the potential fees or commissions it could earn rather than on the quality or viability of the project. Additionally, the exchange might have its own stakes or investments in certain projects, leading to a bias in the selection process. Because of these issues, a new funding method called STO has recently attracted attention. Table 1 outlines the different attributes of the various methods.

**Table 1.** Comparison Table of Each Fundraising Method

	IPO	ICO	IEO	STO
<b>Sale location</b>	Stock exchange	Token issuer's website	Cryptocurrency exchange	Security token (ST) exchange platform
<b>Regulation</b>	Required	Not required	Required by exchange	Required
<b>Investor</b>	General public	General public (crypto wallet holders)	Users of exchange	General public (platform users)
<b>Offering</b>	Equity	Utility token	Utility token	Security token
<b>Investment type</b>	Fiat currency	Cryptocurrencies	Cryptocurrencies	Cryptocurrencies/ fiat currency
<b>Investor protection</b>	High	Low	Low	Moderate to high

Sources: Adapted from European Digital Assets Exchange, "The Key Distinctions between IPOs and STOs," 2019, <https://www.edsx.ch/the-key-distinctions-between-an-ipo-and-sto/>; ROKKEX, "What Is the Difference between IPO, ICO, IEO, and STO," Altcoin Academy, July 16, 2019, <https://medium.com/the-capital/what-is-the-difference-between-ipo-ico-ieo-and-sto-8dc6491b0db0>.

Note: ICO = initial coin offering; IEO = initial exchange offering; IPO = initial public offering; STO = security token offering.

## BENEFITS AND CHALLENGES OF STOs

STOs exhibit notable structural distinctions when compared to conventional fundraising methods. These disparities confer a range of benefits, such as the expansive global outreach enabled by the digital dissemination of tokens, as well as the expeditious realization of funding facilitated by STOs. However, this innovative approach also presents certain drawbacks, including uncertainties stemming from legal and regulatory frameworks and concerns about the reliability of nascent ventures.

STOs, which are ICOs with the characteristics of securities, can be tokenized regardless of the form of the asset. The token-issuing entity can raise funds under regulations such as the securities exchange laws of the relevant countries. STOs introduce numerous opportunities, bringing the potential for enhanced organization, standardization, and operational efficiency.

First, the implementation of smart contracts on the blockchain enables the execution of security tokens, allowing automated processes such as the exercise of management rights and the distribution of dividends to token holders. Therefore, all data and transmission processes are recorded on the blockchain, enabling transparent transactions.

In addition, the process of STOs also streamlines documentation and compliance procedures, including anti-money laundering (AML) and know your customer (KYC) checks. This process results in transparent information sharing with regulators and enables swift user identification. In the case of fundraising through ICOs and IEOs,<sup>10</sup> on the one hand, there is no legal protection for investors if problems arise. On the other hand, STOs comply with the country's securities exchange laws from the token issuance stage, so securities exchange laws protect investors in case of issues.

Furthermore, the time and cost required to launch new securities in the primary market can be significantly reduced with STOs, accompanied by an improved compliance framework. When funds are Raised through a traditional IPO, the arrangement takes a lot of time to pass the country's review and meet the necessary conditions. STOs enable the tokenization of various assets and allow tokenized assets to be traded in tiny units, ranging from traditional debt securities and equities to real estate, art, and intellectual property. STOs will increase the liquidity of the assets and broaden investment possibilities. However, despite the potential benefits, STOs also carry specific risks and limitations that

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<sup>10</sup> IEOs are like ICOs in that they are initial offerings of digital assets (such as coins or tokens) to raise capital. However, IEOs are being touted as an innovation to ICOs because they are offered directly by online trading platforms on behalf of companies—usually for a fee—to provide immediate trading opportunities for the digital assets. (See US Securities and Exchange Commission, “Initial Exchange Offerings (IEOs)—Investor Alert,” January 14, 2020, [https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia\\_initialexchangeofferings](https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia_initialexchangeofferings).)

issuers and investors need to consider. One of the main risks of STOs is the regulatory uncertainty that surrounds them. Whereas STOs are generally considered to be more secure and compliant than ICOs, the regulatory landscape around them is still evolving. The challenge revolves around the absence of a unified legal framework for safekeeping and custody services. Different economies have different regulations and requirements for STOs, a situation that can make it difficult for companies to issue them in a compliant manner. Across various jurisdictions, differing legal structures lead to varied interpretations of asset services, custody, and safekeeping within the DLT. Additionally, the legal and compliance requirements for STOs can be complex and expensive, which may deter some companies from using this fundraising mechanism.

For assets with high information asymmetries, such as early-stage small and medium enterprises (SMEs), investors may have difficulty assessing risk. To protect these investors, regulators may consider measures such as setting investment limits and ensuring access to information or educational materials for these SMEs. Regulators also should establish clear guidelines for the coexistence of tokenized offerings and listed securities.<sup>11</sup>

Another limitation of STOs is their liquidity. Whereas blockchain technology can facilitate the transfer of tokens, the market may not have enough liquidity for investors to easily buy and sell tokens. When this is true, investors may find it difficult to exit their positions, which then could reduce the value of the tokens. Additionally, the tokenization process itself can be complex and expensive, which may limit the number of assets that can be tokenized and the types of investors that can participate in STOs.

STOs carry the risk of cyberattacks and hacking. If the blockchain network supporting the STO is compromised, it could result in the loss of investor funds and damage to the issuing company's reputation. Whereas blockchain technology is generally considered secure, it is still vulnerable to attacks and exploits. Companies issuing STOs need to take steps to ensure that their blockchain network is secure and that investor funds are protected.

Finally, STOs may not be suitable for all types of companies or assets, particularly for some SMEs. Although STOs offer more flexibility in terms of the types of assets that can be tokenized, not all assets may be suitable for this fundraising mechanism. For example, assets that are illiquid or difficult to value may not be suitable for tokenization. Additionally, SMEs that are not well established or that do not have a track record of success may have difficulties attracting investors through an STO, because investors may perceive that higher risks will be associated with investing in smaller, less-established companies. However, SMEs with a solid business model, a good use

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<sup>11</sup> Steven Ayres and Paddy Carter, "How and Why We Finance SMEs" (report, British International Investment, January 2024), <https://www.bii.co.uk/en/news-insight/insight/articles/how-and-why-we-finance-smes/>.

case for tokenization, and a clear path to growth may still find success with an STO. In summary, while STOs offer many benefits, they also come with risks and limitations that need to be considered. To ensure a well-functioning STO, several prerequisites need to be in place, including compliance with applicable regulations, a robust digital asset infrastructure, strong investor protection measures, legal and regulatory support, market liquidity, and investor education. As the regulatory landscape for STOs continues to evolve, it is essential for participants to stay informed of the latest developments and ensure that STOs are compliant with applicable regulations to protect both issuers and investors.

## 4. GLOBAL APPROACHES TO STO REGULATIONS

### 4.1 REPUBLIC OF KOREA

In Korea, the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS) are the main regulatory bodies overseeing financial markets. The Act on Reporting and Use of Specific Financial Transaction Information, enforced starting in March 2021,<sup>12</sup> mandates that cryptocurrency businesses comply with AML and KYC requirements. This act provides a regulatory framework for crypto assets, including security tokens. Korea's FSC outlined new criteria for classifying a token as a security token that share some similarities with the Howey test;<sup>13</sup> the Act on Reporting and Use of Specific Financial Transaction Information does not specifically address these criteria. Instead, the act establishes a regulatory framework for virtual asset service providers, including those dealing with security tokens.

The new plan that Korea's FSC unveiled on February 6, 2023, aims to revamp the existing regulatory system governing the issuance and distribution of securities tokens. This ambitious plan seeks to strike a balance between embracing the cutting-edge potential of securities tokens and ensuring robust safeguards for investors in line with the provisions of the Capital Markets Act. The FSC's comprehensive strategy entails amendments to key laws, including the Act on Electronic Registration (Electronic Securities Act) and the Capital Market and Financial Investment Business Act (Capital Market Act). These legislative changes will serve to enshrine the issuance and distribution of securities tokens within a coherent and well-regulated framework.

The envisaged regulatory framework for securities tokens in Korea is designed to shape an innovative token securities ecosystem, backed by a strong commitment to maintaining investor protection and fair market practices. Securities tokens meeting the prescribed

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<sup>12</sup> Act on Reporting and Using Specified Financial Transaction Information, [https://elaw.klri.re.kr/eng\\_mobile/viewer.do?hseq=49601&type=part&key=23](https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=49601&type=part&key=23).

<sup>13</sup> The Howey test is four criteria an asset must meet to qualify as an "investment contract." If the asset is an "[1] investment of money [2] in a common enterprise, with [3] a reasonable expectation of profits to be [4] derived from the efforts of others," it is considered a security. It is then subject to disclosure and registration requirements under the Securities Act of 1933 and the Securities Exchange Act of 1934. See US Securities and Exchange Commission, "Framework for 'Investment Contract' Analysis of Digital Assets," last reviewed or updated July 5, 2024, <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>.

distributed ledger requirements will be acknowledged as electronic registration of securities under the Electronic Securities Act. This provision aims to establish a seamless and efficient system for dealing with tokenized securities. Under the Capital Markets Act, token securities will be subject to the same investor protection regulations as traditional electronic securities. To ensure compliance and oversight, the electronic registrar (e-registrar) will conduct thorough examinations of the securities' external requirements and will manage the total issuance amounts.

Furthermore, issuers of token securities that meet certain requirements will be permitted to input information into the distributed ledger about the rights associated with the directly issued securities and the rights holders. This provision is crucial for enhancing transparency and accountability in the STO landscape. In parallel with these developments, the introduction of an over-the-counter (OTC) brokerage license is on the horizon. Such a license will empower the establishment of a platform facilitating multiparty counterparty transactions of investment contract securities and nonmonetary trust income securities. The proposed OTC brokers will be subject to rigorous examination to ensure compliance with equity capital, personnel, and material requirements. To maintain the separation of issuance and distribution, the OTC brokers will be prohibited from distributing securities that they have issued, acquired, or arranged.

## 4.2 SINGAPORE

Singapore takes a pragmatic approach to the regulation of security tokens. By applying existing capital market legislation through the Monetary Authority of Singapore (MAS) guidelines—specifically, “A Guide to Digital Token Offerings”—Singapore is establishing a robust regulatory framework for the issuance and trading of security tokens.<sup>14</sup> Under the guidelines, security tokens are categorized as digital tokens that fall within the scope of capital market products, which include various instruments such as stocks, debt securities, business trust securities, securities-based derivatives, and collective investment securities. By treating security tokens within this framework, Singapore ensures that they are subject to the appropriate level of scrutiny and regulation, balancing innovation with investor protection.

The regulatory framework for security tokens in Singapore follows the principles of prospectus registration and licensing. Security tokens, classified as capital market products under the Securities and Futures Act, can be offered only if they meet the stringent requirements for prospectus registration, which vary depending on the offering size and

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<sup>14</sup> Monetary Authority of Singapore, “A Guide to Digital Token Offerings,” issued November 2018 and last updated May 26, 2020, <https://www.mas.gov.sg/-/media/MAS/Sectors/Guidance/Guide-to-Digital-Token-Offerings-26-May-2020.pdf>.

investor type. Furthermore, security tokens that qualify as collective investment securities must also obtain the necessary licenses. In certain circumstances, such as small private placements or solicitations targeting institutional investors, exemptions from the prospectus requirement and collective investment securities licensing may be granted.

Intermediaries involved in facilitating the solicitation or issuance of security tokens must obtain a Capital Market Service License under the Securities and Futures Act. Additionally, individuals providing financial advice on security tokens must be licensed as financial advisers or qualify as exempt financial professionals under the Financial Advisers Act. Moreover, parties intending to establish or operate security token-related exchanges are required to obtain a license from the MAS as a recognized market operator. Singapore's comprehensive regulatory system ensures that security tokens adhere to robust market conduct standards, and safeguards the interests of investors while promoting responsible innovation in the financial sector. The MAS guidelines serve as an important framework to foster a secure and conducive environment for the growth of security tokens in Singapore.

## 4.3 GERMANY

Germany introduced a landmark draft to regulate STOs in 2021. As part of its overarching strategy, the German Federal Government enacted the Electronic Securities Act, which came into effect on June 10, 2021. Under this legislation, electronic securities are classified into two categories: centrally registered securities, which are registered in the central register, and crypto securities, which are registered in the crypto securities registry. The latter category specifically corresponds to security tokens.

The application of the Electronic Securities Act is limited to the issuance of bearer bonds under the Civil Code, which are primarily used as a financing mechanism in the capital market. This strategic selection allows Germany to address key areas of concern while fostering innovation in tokenized securities. A notable feature of the regulatory framework is the crypto securities registry, which enables issuers to manage crypto securities directly or through authorized service providers. The custodians of the crypto securities registry are not restricted to traditional securities depository and custodians. Instead, the issuer itself may act as the administrator of the crypto securities registry or delegate this role to a service provider. To increase transparency and accountability, the issuer must explicitly identify the custodian responsible for managing the crypto securities registry to ensure seamless administration and secure storage of crypto securities.

## 4.4 JAPAN

Japan implemented comprehensive regulations for electronically recorded transferable rights (security tokens) through an amendment to the Financial Instruments and Exchange Act (FIEA) in May 2019, effective from May 2020. Under the amended FIEA, security tokens are treated similarly to traditional securities and are subject to regulation by the Financial Services Agency (FSA).<sup>15</sup> While not identical to the Howey test in the United States, the electronically recorded transferable rights definition considers the following similar factors:

1. Investors invest or contribute cash or other assets to a business.
2. The cash or assets contributed by investors are invested in the business.
3. Investors have the right to receive dividends of profits or assets generated from investments in the business.

If a digital asset meets this definition, it would be subject to the same regulations as traditional securities under the FIEA.

Japan established self-regulatory bodies such as the Japan STO Association (JSTOA) to complement and enhance regulatory efficacy. The JSTOA has also established basic guidelines on electronic issuance of record transfer rights, enabling self-regulation of the issuance market. The JSTOA aims to ensure the fair and smooth trading of electronically recorded transferable rights and other transactions, and to promote the sound development of the financial products trading industry. The JSTOA, established in Tokyo, brings together numerous major investment banks and was recognized by the FSA under the FIEA on April 30, 2020. As of May 2023, the JSTOA had 75 member companies.

Under the FIEA, securities are classified into Paragraph 1 Securities (stocks and bonds) and Paragraph 2 Securities (investment trust beneficiary interests and association equity interests, and so on). Paragraph 1 Securities are highly liquid and require strict disclosure regulations and authorization requirements owing to the great need for investor protection. On the other hand, Paragraph 2 Securities are relatively illiquid and have a lower demand for investor protection, so they are subject to somewhat lighter disclosure regulations and authorization requirements.

Securities (electronically recorded transferable rights) issued through blockchain technology are as liquid as Paragraph 1 Securities and have a strong need for investor protection. Therefore, they are included in the regulatory scope of Paragraph 1 Securities under the FIEA. Accordingly, financial product traders engaged in the sale and solicitation of

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<sup>15</sup> Financial Services Agency, "Financial Instruments and Exchange Act," n.d., <https://www.fsa.go.jp/en/policy/fiel/>.

electronic record transfer rights are subject to entry regulations (registration as a financial product trader), sales regulations (examination of issuers, prohibition of solicitation to general individuals, and so on), and conduct regulations (regulations under the FIEA and self-regulation by the JSTOA).

## 4.5 UNITED STATES

In 2017, the Securities and Exchange Commission (SEC) released a report on The DAO (a decentralized autonomous organization), which is a virtual organization embodied in computer code and executed on a distributed ledger or blockchain.<sup>16</sup> The DAO Report contains the result of the Howey test to analyze the token DAO issued by Slock.it, a German company rooted in the original development of the Ethereum blockchain technology.<sup>17</sup> The result concluded that under the Federal Securities Act, The DAO qualifies as a “security token” that meets the comprehensive securities concept of “investment contract.” The DAO Report is not binding on the courts, but most of the SEC’s STO-related judgments and administrative orders follow the same legal principles as the DAO Report.

In April 2019, the SEC released the “Framework for ‘Investment Contract’ Analysis for Digital Assets.” The framework is a guideline for determining whether a digital asset (currently issued or planned for use) is an investment contract under the Federal Securities Act based on the Howey test. Box 1 quotes the key points of the framework.

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<sup>16</sup> US Securities and Exchange Commission, “Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO” (Release 81207, July 25, 2017), <https://www.sec.gov/files/litigation/investreport/34-81207.pdf>.

<sup>17</sup> Blockchains, Inc. acquired Slock.it in 2019.

**Box 1. Key Points of the Framework for “Investment Contract” Analysis of Digital Assets****A. The Investment of Money**

The first prong of the Howey test is typically satisfied in an offer and sale of a digital asset because the digital asset is purchased or otherwise acquired in exchange for value, whether in the form of real (or fiat) currency, another digital asset, or other types of consideration.

**B. Common Enterprise**

Courts generally have analyzed a “common enterprise” as a distinct element of an investment contract. In evaluating digital assets, [the SEC has] found that a “common enterprise” typically exists.

**C. Reasonable Expectation of Profits Derived from Efforts of Others**

Usually, the main issue in analyzing a digital asset under the Howey test is whether a purchaser has a reasonable expectation of profits (or other financial returns) derived from the efforts of others. A purchaser may expect to realize a return through participating in distributions or through other methods of realizing appreciation on the asset, such as selling at a gain in a secondary market. When a promoter, sponsor, or other third party (or affiliated group of third parties) (each, an “Active Participant” or “AP”) provides essential managerial efforts that affect the success of the enterprise, and investors reasonably expect to derive profit from those efforts, then this prong of the test is met. Relevant to this inquiry is the “economic reality” of the transaction and “what character the instrument is given in commerce by the terms of the offer, the plan of distribution, and the economic inducements held out to the prospect.” The inquiry, therefore, is an objective one, focused on the transaction itself and the manner in which the digital asset is offered and sold.

Source: US Securities and Exchange Commission, “Framework for ‘Investment Contract’ Analysis of Digital Assets,” last reviewed or updated July 5, 2024, <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>.

However, the SEC recommends that one inquire individually with staff members through FinHub, [www.sec.gov/finhub](http://www.sec.gov/finhub), since this regulatory framework only partially suggests some of the criteria necessary to determine whether a token qualifies as an investment contract. Additionally, some states, such as Delaware, have permitted the application of distributed ledger technology in the registration of shareholder lists through amendments to state law. Section 224 of the Delaware State Act explicitly recognized the management of a block-chain-based shareholder registry, as seen in table 2.

**Table 2. Changes to Delaware Corporation Law to Accommodate Distributed Ledger Technology**

BEFORE REVISION	AFTER REVISION
Records “maintained” by the corporation may be kept on, by means of, or in the form of any information storage device or method, subject to specified requirements.	Any records administered by or on behalf of the corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or by means of, or be in the form of, any information storage device, method, or one or more electronic networks or databases (including one or more distributed electronic networks or databases).

Source: Richards, Layton & Finger, “2017 Proposed Amendments to the General Corporation Law of the State of Delaware,” March 14, 2017, <https://www.rlf.com/2017-proposed-amendments-to-the-general-corporation-law-of-the-state-of-delaware>.

In the case of uncertificated securities under the Unified Commercial Act, it is required for a contractor to transcribe a shareholder registry. This revision of the state law allows for the transfer of security tokens while recognizing the distributed ledger registry of shareholders. In the case of a security token, the token is the equivalent of an investment contract, the Federal Securities Act of 1933 applies to the token, and the token is subject to disclosure regulations that require submitting a securities report for issuance. To be exempt or relieved from submitting a registration statement, the issuer must use the provisions related to private placement or crowdfunding. In addition, if the security token of a specific size or larger is distributed to an unspecified number of people, the issuer should be obliged to report the distribution disclosure, such as regular disclosure. A trader should not use inside information, market price manipulation, or other fraudulent methods in trading security tokens, or the trader must be punished following the Federal Securities Acts.

## 4.6 TAIWAN, CHINA

In July 2019, Taiwan, China’s Financial Supervisory Commission (FSC) approved security tokens as securities under the Securities and Exchange Act through a notice: the order of approval of the virtual currencies (No.1080321164 on July 3, 2019). Subsequently, the FSC announced in the STO regulation that it entrusts the Taipei Exchange (TPEX) with the issuance, investors, dealers, and regulation of security tokens. Therefore, the TPEX rules govern the operation of the business of proprietary trading of securities tokens by securities firms.

The FSC announced that a security token must satisfy these three conditions: First, to represent value that can be digitally stored, exchanged, or transferred, the token must have used encryption and distributed ledger technologies or technologies analogous to

them. Second, it must be transferable. Third, it should meet Howey requirements that include financial contribution, joint venture, expectation of profit, and revenue generation through the efforts of the issuer or others.

Regarding issuance, a security token is regulated under four categories. First, security tokens are limited to dividend and debt tokens as their target. Second, an issuer must report to the FSC and submit a sandbox application if it intends to raise more than NT\$30 million; otherwise, it is not required to do so. Third, regarding issuer qualification, only a company from Taiwan, China, can be an issuer not listed on the Taiwan Stock Exchange or Taipei Exchange and not classified as an emerging stock. Finally, on disclosure, an issuer must prepare a prospectus and submit it to the STO operator before issuing its token. After the token is issued, the issuer must disclose the issuance, such as by publishing financial information and materials related to the solicitation through the STO platform operator. However, the issuer may be exempted from complying with the investment prospectus and the authorization/permission of collective investment securities.

In terms of the investor regulation, investors must be qualified; they must have more than NT\$50 million, expertise, or relevant experience in security tokens. In addition, to prevent the risk of money laundering, investors must register their real names with a financial institution to open a token trading account. Moreover, an individual investor cannot invest more than NT\$300,000 in the same token. A vendor or dealer is also subject to the following regulations. Only an FSC-licensed dealer can transact security tokens. Also, the dealer must apply to the TPEX to operate the STO platform to qualify as a security token dealer. Additionally, the dealer must use blockchain technology for the platform, which manages the following four features: (1) the data query and modification function, (2) an automatic execution environment, (3) data disclosure in compliance with the principles, and (4) the mechanism for node participation. Moreover, an STO platform operator must send its current balance status and other secondary information to the Taiwan Depository and Clearing Corporation every trading day. Last, to manage the limit of solicitation and mitigate the risk factors of money laundering, only new Taiwan dollars can be used for fundraising and payment. This restriction is the same as for the processing of dividends and interest payments.

## 4.7 KEY LESSONS FROM THE SIX ECONOMIES

The regulatory approaches to security tokenization in Korea, Singapore, Germany, Japan, the United States, and Taiwan, China, offer valuable insights into effective frameworks. Korea's comprehensive system, overseen by the FSC and FSS, ensures a balance between innovation and investor protection through thorough examinations and clear guidelines.

Singapore's MAS adapts existing laws under the Securities and Futures Act, combining stringent prospectus registration with exemptions to foster responsible innovation. Germany simplifies regulation with the Electronic Securities Act, ensuring transparent

and secure management of crypto securities. Japan's FIEA framework, supported by the JSTOA, differentiates securities based on liquidity, enhancing regulatory efficacy and fair trading. The United States' SEC employs the Howey test for legal clarity, emphasizing disclosure and antifraud measures. Taiwan, China, implements detailed criteria through the FSC and TPEX, focusing on AML requirements and investor qualifications.

Table 3 summarizes the key regulatory bodies, laws, investor protection measures, and key lessons from each economy, providing a comprehensive comparison of their approaches to security tokenization.

**Table 3. Summary of STO Regulatory Approaches of Six Economies**

ECONOMY	REGULATORY BODY	KEY LAWS	INVESTOR PROTECTION AND MARKET PRACTICES	KEY LESSONS
Republic of Korea	Financial Services Commission (FSC)	Act on Reporting and Use of Specific Financial Transaction Information; Electronic Securities Act; Capital Market Act	<ul style="list-style-type: none"> <li>• Same protection as traditional securities, thorough examinations by e-registrar</li> <li>• Separation of issuance and distribution, distributed ledger transparency</li> </ul>	Balance innovation and protection; adopt clear token classification; implement regulatory amendments.
	Financial Supervisory Service (FSS)			
Singapore	Monetary Authority of Singapore (MAS)	Securities and Futures Act	<ul style="list-style-type: none"> <li>• Stringent prospectus registration, licensing for intermediaries and advisers</li> <li>• Exemptions for small private placements and institutional investors</li> </ul>	Adapt existing laws; adopt a comprehensive regulatory system; promote responsible innovation.
Germany	German Federal Government	Electronic Securities Act (eWpG)	<ul style="list-style-type: none"> <li>• Transparent administration, secure storage</li> <li>• Issuer or service provider-managed crypto securities registry</li> </ul>	Simplify regulation with clear categorization; increase transparency.
	Federal Financial Supervisory Authority (BaFin)			

ECONOMY	REGULATORY BODY	KEY LAWS	INVESTOR PROTECTION AND MARKET PRACTICES	KEY LESSONS
Japan	Financial Services Agency (FSA)  Japan STO Association (JSTOA)	Financial Instruments and Exchange Act (FIEA)	<ul style="list-style-type: none"> <li>• Strict disclosure for highly liquid securities, financial product trader registration</li> <li>• Fair trading, compliance with JSTOA self-regulation</li> </ul>	Differentiate by liquidity and investor protection needs; enhance regulatory efficacy with self-regulation.
United States	Securities and Exchange Commission (SEC)	Securities Exchange Act; Federal Securities Act; Howey test	<ul style="list-style-type: none"> <li>• Disclosure regulations; exemptions for private placements and crowdfunding</li> <li>• Prohibition of insider trading and market manipulation</li> </ul>	Provide legal clarity with established tests; emphasize disclosure and antifraud measures.
Taiwan, China	Financial Supervisory Commission (FSC)  Taipei Exchange (TPEX)	Securities and Exchange Act; STO Regulation	<ul style="list-style-type: none"> <li>• Investor qualifications, anti-money laundering (AML) requirements, disclosure obligations New Taiwan dollars for fundraising and payments; licensed dealers and platform operators</li> </ul>	Include detailed criteria for transparency, rigorous AML measures, and clear operational regulations for dealers.

## 5. IMPLICATIONS FOR DEVELOPING COUNTRIES

### **HARNESSING STOs IN DEVELOPING ECONOMIES: BALANCING INNOVATION AND REGULATION**

STOs are a form of fundraising that leverages blockchain technology to offer tokenized securities—representing ownership in real assets such as equity, debt, or real estate—and that is subject to federal securities regulations. STOs provide benefits such as improved investment protection, compliance with legal frameworks, and participation in company profits. Although STOs offer promising opportunities, their adoption in developing economies must be approached with caution.

Given the wide variations in regulatory, institutional, and market environments across developing countries, a one-size-fits-all approach to STO adoption is impractical. Not all developing countries may be ready to implement STOs or able to fully benefit from them in the near term. Therefore, it is essential to thoroughly evaluate each country's specific conditions and readiness, and to set appropriate criteria and preconditions to ensure successful implementation.

The blockchain technology underlying STOs offers enhanced transparency and administrative efficiency, and the possibility of fractional ownership can encourage greater retail investor participation. Despite these potential advantages, significant challenges remain. These include cybersecurity risks, potential market liquidity issues, and the unsuitability of STOs for certain companies or assets. Additionally, the need for solid legislation and consumer protection mechanisms can add regulatory burdens on developing countries.

Therefore, a balanced approach is essential to focus on fostering innovation while protecting investor interests through effective regulations. Compliance with securities regulations is crucial for building trust and confidence among regulators and investors.

Developing countries can leverage existing financial and securities laws to create a regulatory framework for security tokens. Clear classification and differentiation of various types of security tokens based on their unique risks are necessary for tailored regulations. Transparency and clear guidelines for the issuance, trading, and compliance of security tokens are vital. Ensuring that investors possess the necessary knowledge and financial capacity can also help safeguard the market.

Collaborative efforts among regulatory bodies, industry associations, and market participants are recommended to shape and refine security token regulations. Each developing country should consider its unique circumstances and regulatory capacity to establish a framework that fits its specific needs and goals.

## ENHANCING STO FRAMEWORK DEVELOPMENT BY ADAPTING INTERNATIONAL CASE STUDIES

In the future, as a country establishes and enforces regulations for STOs, it will anticipate that the emergence and offering of diverse investment products using STOs will follow. This development can lead to an expansion of the fractional investment market and a subsequent increase in competition with the active participation of new entrants.<sup>18</sup> In the case of Korea, where the STO framework is still in its early stages, the demand for fractional investments has surged, especially among investors familiar with the digital ecosystem. This trend has lowered entry barriers, allowing even small investments in a variety of asset classes.

With market expansion driven by an increase in business activity in the STO market, heightened competition requires the implementation of robust regulations that effectively balance innovation and investor protection. In developing countries, where comprehensive regulatory frameworks and infrastructure are still evolving, it is crucial to learn from international precedents as a foundational step toward establishing and enhancing regulatory frameworks.

As demonstrated in section 4.7, Key Lessons from the Six Economies, six economies are adopting nuanced approaches tailored to their respective capital market dynamics. During the initial phases of regulatory implementation, the scarcity of applicable precedents underscores the importance of leveraging complementary case studies. By drawing on similar cases and developmental stages as points of reference, authorities can craft regulatory frameworks tailored to the unique characteristics of each country. This approach can help mitigate risks and facilitate the introduction of new innovations.

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<sup>18</sup> Ahreum Han, “The Current Status and Implications of Security Token Offerings (STO) in Korea” [국내 증권토큰발행(STO) 현황 및 시사점] (report, Capital Market Focus, Korea Capital Market Institute, February 2023), [https://www.kcmi.re.kr/publications/pub\\_detail\\_view?year=2023&zcd=002001016&zno=1704&cno=6058](https://www.kcmi.re.kr/publications/pub_detail_view?year=2023&zcd=002001016&zno=1704&cno=6058).

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