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# Security Token Offerings (STOs)

## Introduction

Security Token Offerings, or STOs, represent a category of public offerings in which tokenized digital securities (i.e., security tokens) are initially offered to consumers looking to invest in the underlying issuing company and its security token. The purpose of this report is to provide insight into what fundamentally constitutes security tokens/STOs, the mechanics of their offerings, as well as some security token/STO companies in the blockchain industry today.

## STO Fundamentals

### Security Tokens vs. Utility Tokens

To provide context for the offerings, it's important to understand what a security token represents. Currently, there are two primary types of tokens in the cryptocurrency industry: utility tokens and security tokens.

Utility tokens tend to serve a specific purpose within the underlying platform's functionality and don't tend to pay investors dividends/revenue share for explicitly holding the coin. A widely-known example of this is Ether, which is a utility token used ubiquitously across application transactions on the Ethereum network. Initial coin offerings, or ICOs, which serve as counterparts to STOs for non-security tokens, predominantly deal with the issuance of utility tokens.

Security tokens, however, differ in that they explicitly and fundamentally function as investment contracts in which the buyer specifically anticipates future profits from dividends, revenue share, and capital appreciation of the given token.

While varying across jurisdictions and with greater regulatory consideration, the delineating line between these two forms of tokens is determined in the United States via The Howie Test. In essence, the fundamental questions to consider as an investor in this regard as per the test is:



- Is an investment of money involved in the transaction?
- Is there an expectation of profits in return for the investment?
- Does the investment involve a common enterprise?
  - A common enterprise is one in which the fortunes of the investor are interwoven with and dependent upon the efforts and successes of those offering or selling the investment or of third parties
- Will profits come from the efforts of a third party/promoted?

If the answer to each of these questions concerning the token in question is affirmative, then this would suggest that the token could be deemed a security token under the Howey Test as per Securities and Exchange Commission (SEC) regulation. It's worth noting that there is a significant amount of nuance that goes into the assessment of each of these questions for tokens at their individual levels, as well as that not all tokens can be precisely defined using this technique given tokens' dynamic nature. In light of this distinction, it's worth considering some of the relative advantages and disadvantages of security tokens.

With respect to advantages, first, security tokens generally imbue a more transparent experience for investors. The issuers of security tokens, under securities regulations, are mandated with providing investors with information regarding financial statements, business objectives, the company's location, management background, and other important data that are typically associated with investors' decision-making across asset classes..

Second, extending from these regulations, security token issuers are directly subject to ramifications involving breaches of securities regulation, unlike with utility token providers who may not be subject to legal punishment for consumer/investor wrongdoings. In this way, security tokens are widely believed to be an integral component of deterring fraud within the cryptocurrency industry.

Third and stemming from the second point, security tokens may be seen as the drivers of wider-scale adoption of cryptocurrencies. Consider that security tokens attract greater large-scale investment due to their associated legislation, which adds a layer of security and assurance for investors. Moreover, corporations looking to use blockchain-based fundraising mechanisms gain as well due to confidence knowing that their issuances are SEC compliant/regulated and thus that they won't be subject to future legal or financial damages in this regard.

That being said, security tokens do have some disadvantages associated with them. First, there may be reduced liquidity with many types of such tokens due to the fact that sending them requires strict compliance with KYC protocols. Moreover, companies are required to provide essentially full transparency to conduct their offerings, which involves a huge swathe of information, including detailed financial statements, that earlier-stage

companies may not even feasibly be able to provide; the SEC only approving companies that meet these strict requirements in their entirety.

### Security Tokens vs Tokenized Securities

An additional fundamental distinction should be made between security tokens and tokenized securities. Security tokens represent newly issued securities in and of themselves that exist on distributed ledger technology, while tokenized securities are token-based representations of pre-existing financial products (e.g., equity/debt securities, real estate, commodities, etc.).

If one issued an existing asset/security and “wrapped” it in a token, it would be a tokenized security. On the other hand, if one issued a new financial product with features of a security, that would represent a security token. Effectively, despite the similarity, security tokens and tokenized securities represent two somewhat distinct concepts in the world of cryptocurrency.

### STO Advantages & Disadvantages

As alluded to in the *Introduction*, security token offerings (STOs) represent the initial offering of security tokens by a company to investors via an exchange of money for the company’s tokens. It’s important to note that security tokens are not typically offered or traded on typical token exchanges, as the specialized exchanges that offer trading of these tokens need to be fully compliant with regulations, which include:

- Mandated token data sharing
- Extensive token listing investigations
- Stringent investor onboarding procedures

One might ask, given these stringent requirements what the benefits are of an STO relative to its more widely-known counterpart, initial coin offerings (ICOs). Recall the 2017-2018 ICO frenzy, in which many entities issued investors utility/non-security tokens devoid of any economic rights, value, and scope within existing securities laws. As alluded to previously, STOs are meant to provide a more regulatory compliant alternative to these traditional token sales conducted via ICOs. They also correct some inefficiencies around ICOs, such as granting investors the rights to dividends or other predefined revenue streams, and granting issuers a form of intrinsic economic value with clearly defined obligations surrounding distribution, issuance procedures/logistics, and secondary trading. Additional advantages of STOs include:

- **Enhancing traditional finance:** Traditional securities are slow and costly due to archaic infrastructure and multiple intermediaries. Compared with IPOs, STOs are also a faster and cheaper form of raising capital due to the removal of bank/brokerage

intermediaries, as well as through reducing the reliance of lawyers and paperwork due to smart contracts.

- **Reduced institutional tampering:** STOs/security tokens catalyze free/open markets with fewer mediators, which in turn reduces manipulation.
- **Cross-border/markets:** International borders and local regulations generally do not limit the existence and of security tokens via STOs.
- **Credibility:** STOs derive greater credibility and investor confidence from their regulatory compliance and provide investors with alternatives to ICOs, which harbored scams, undelivered on projects, and issued baseless tokens. This will ultimately serve to increase institutional investment and further mainstream blockchain adoption while also reducing market volatility.
- **Expanding investor base:** Traditional securities often exclude parties due to geography and related factors, but STOs make security tokens available to virtually anyone with internet access.
- **Permitting programmability:** STOs enable the issuance of tokens that are inherently programmable and enforced by smart contracts.
- **Liquidity:** The trading of security tokens on specialized security exchanges means that investors have a convenient and reliable way to liquidate their security token assets. This is bolstered by fractional ownership and the ability to trade 24/7; particularly useful for traditionally illiquid assets.
- **Improved asset valuations:** The status tokens hold as securities, particularly if tied to existing asset classes in some way (e.g., stocks, bonds, real estate, art collections, etc.), may make them easier to value relative to more nebulously-valued utility tokens and therefore less speculative in nature.

While there are evidently an abundance of advantages to STOs, they are not without some downside as foreshadowed previously. Analogous to a double-edged sword, the biggest challenges faced by STOs stem from their increased regulation itself.

Companies will have to assume the burden of implementing processes to set up custodianship, exchange approval, ownership monitoring, KYC/AML, and more in order to adhere to associated securities laws, which can be particularly cumbersome due to the previously mentioned exclusion of middlemen including banks, lawyers, and brokerages that traditionally perform these functions.

Moreover, while certainly less cost-intensive than a traditional IPO, this aforementioned burden may make STOs a more costly and prohibitive alternative to ICOs in this regard.

Lastly, though intrinsically designed to service a much wider/dispersed investor base, regulations across certain jurisdictions may limit who can invest in STOs, thus limiting the overall investor pool. For instance, in the United States, STOs have historically only been accessible to SEC-deemed accredited investors (i.e., at least \$1,000,000 in assets or \$200,000 in annual salary over the last two years).

### Cross-Jurisdiction Regulation & Perspective

The regulatory treatment of STOs and security tokens more generally varies considerably around the world and across jurisdictions. For example, consider the cases of the United States, United Kingdom, and Switzerland.

The United States' SEC, among the most vocal regulatory bodies on the matter, indicated in the July 2017 Decentralized Autonomous Organization (DAO) report that many ICOs and STOs qualify as security offerings under the qualification of an investment contract as established by the previously described Howey Test. The report also explicitly indicated that the "investment of money" tenet of the Howey Test (see *Security Tokens vs. Utility Tokens* above) doesn't necessarily need to take the form of cash, further broadening the scope of what may be subject to securities treatment in the cryptocurrency industry. It's worth noting that there have also been U.S. congressional bills seeking to exempt digital tokens from securities law and taxes, such as those relating to Rep. Soto and Rep. Davidson's Token Taxonomy Act of 2019.

The Swiss Financial Market Supervisory Authority (FINMA) published its own offering guidelines in early 2018, indicating that each token should be evaluated idiosyncratically though with three overarching classifications:

- **Asset tokens:** These refer to assets including claims in tangible/physical underlyings, companies and associated earning streams, owed dividend/interest payments, and more. Asset tokens are deemed securities under FINMA, and as such there are securities law mandates for engaging in the trade of such tokens.
- **Utility tokens:** These tokens, with the sole purpose of allocating digital access use rights to an application/service and can already be used in this form at point of issue, do not fall under FINMA's securities treatment.
- **Payment tokens:** These tokens, which may only develop functionality and utility as a means of payment over time, will not receive securities treatment from FINMA. However, they may still be required to comply with AML regulations.

Early in 2019, the U.K.'s Financial Conduct Authority (FCA) released a consultation paper known as a "Guidance on Cryptoassets", in which they highlighted the importance of distinguishing between different types of cryptocurrency in the application of regulatory treatment (similar to Switzerland's FINMA approach). These principal token distinctions included:

- **Security Tokens:** These tokens would be fully encompassed by FCA regulation given that they meet their definition of a "Specified Investment", akin to the SEC's Howey Test in the U.S..
- **Utility Tokens:** These tokens would only be encompassed within FCA regulation if they meet the regulator's criteria of the definition of "e-money".
- **Exchange Tokens:** These are tokens that are not issued/backed by any central authority and are functionally intended to be used as a medium of exchange. As such, they fall outside the FCA's purview.

Aside from the regulatory treatment of STOs and related features/offerings, it's worth noting the general government stance on them across countries and jurisdictions as well.

While some countries like the ones described above in addition to Singapore, Estonia, and Malta have a more inclusive view of STOs regulated under securities laws, many governments are not open to the idea in the status quo. In fact, some countries, including some of the following, have banned STOs in their entirety: China, Pakistan, South Korea, Bangladesh, Vietnam, Nepal, Algeria, Lebanon, Morocco, India, Namibia, Bolivia and Zimbabwe.

In addition, there are other countries in which the treatment of STOs at present is not as clear, as governments are still uncertain of their regulatory treatment. One such country is Thailand: while the Thai Securities and Exchange Commission (Thai SEC) did indicate that Thai-related STOs that were issued in an international market may be in violation of Thai securities law, the commission's deputy secretary, Tipsuda Thavaramara, indicated that the commission still has to decide how STOs will be regulated in aggregate. At present, like many other countries in which STOs operate in a grey legal area, he indicated that each token will be treated differently depending on its idiosyncratic features. The table below illustrates a brief breakdown of the status of STOs across a sample of countries and jurisdictions.

### STO Regulation Among Jurisdictions/Countries

<b>Regulated</b>	E.U., Germany, U.K., Switzerland, U.S., Canada, Brazil, Australia, Israel, Singapore, Japan, Hong Kong, Malaysia
<b>No Regulation</b>	Russia, U.A.E., Thailand
<b>Banned</b>	China, Pakistan, South Korea, Bangladesh, Vietnam, Nepal, Algeria, Lebanon, Morocco, India, Namibia, Bolivia, Zimbabwe

#### Timeline

One of the previously mentioned downsides of STOs was their relatively longer implementation time, specifically relative to ICOs. In this vein, it is worth going over a rough timeline of the implementation process for STOs.

#### **1. Assembling a team**

Forming a competent team to be able to handle the technical, regulatory, and commercial challenges of the STO is a crucial part of the process. This component of the process can take around six months in order to draw upon a team of experts across disciplines (i.e., sales, marketing, accounting, law, software development, project management, etc.) that will be able to ensure smooth execution in all the different regards (i.e., legal professionals to ensure regulatory compliance, developers to actually create the security token, etc.).

#### **2. Pre-listing preparation**

This stage involves the completion of all initial preparation work on the structure of offerings and services, with advice from all internal and external consultants to streamline the offering/services process. All the marketing materials of the offering are typically prepared during this time. This component of the process can take around one month.

#### **3. Marketing campaign**

This is another critical element of the STO process that involves developing the core pitch for the project and the associated tokens for both prospective investors and clients. Background information about the team, token functionality and structure, as well as detailed project information outlined in a whitepaper are all produced in this step. The channels involved in these campaigns may include social media, roadshows, mail marketing, informational interviews, and more. The key thread that underlies each of these activities is that of promoting the

project's brand and establishing trust among potential clients/investors. This segment of the STO issuance process can take about three months.

#### **4. Creation and KYC/AML**

Throughout or shortly after the preparation of marketing materials, the legal team works on the relevant legal documentation, particularly in relation to KYC/AML. Moreover, the development team focuses on the actual creation of the token. In its entirety, this component of the process takes about one month for both the legal and development teams.

Additional details that should be considered in this step include the structuring of the offering details. For instance, the offering start and end dates, in which prospective investors are made aware of the exact time period of the investment. The accepted payment must be made clear, in terms of if the token to be raised is in fiat (e.g., USD, EUR, etc.) or cryptocurrency (e.g., BTC, ETH, etc.). Moreover, the rate, or percentage of fiat/cryptocurrency that the token is valued at, should also be clearly stated. The hard cap, or maximum amount of money that is desired to be raised in the offering, should also be made clear.

With regards to the whitepaper, it's worth noting that this is among the most critical marketing components in the STO process in convincing prospective clients/investors about the success of the security token. The key features that are typically incorporated into white papers include:

- Legal Disclaimer
- Product Details
- Industry Overview
- Technical Architecture
- Business Model
- Go-to-Market Strategy
- List of assets/securities associated with the token
- Token Economics and Usage Specifics
- Team Members & Advisors

Through these and other features, a whitepaper provides prospective clients/investors with a clear image of the company and its associated security token. Technical whitepapers, which dive into very deep technological and mathematical detail about the companies and their underlying protocols, can be very hard to produce and can take upwards of 200+ hours among a designated team of people. Moreover, given the specificity and importance of the document, the whitepaper can't typically be easily outsourced in its creation (i.e., beyond editing), meaning that the founding team typically is responsible for writing/its creation. It's worth noting that once the whitepaper is published officially that it is illegal to change its terms in some jurisdictions. Following the completion and publication of the whitepaper, an STO's marketing can proceed.

## 5. Stages of Offerings

STO offerings can be divided into three general funding stages:

- Stage 1 - Private Sale: The private sale is often used to entice larger investors to get involved in a project. This stage typically provides investors with larger discounts in comparison to the following stages (e.g. 15-25%+) with higher minimum investment amounts. Deals in this stage may also come with lock-up periods during which investors are not permitted to resell their tokens. This stage incurs greater downside risk associated with the uncertainty of an STO's outcome (e.g., STO not reaching soft cap in later rounds, non-fully developed product, token illiquidity, etc.).
- Stage 2 - Pre-Sale: The pre-sale is often utilized as a form of social proof as well as for offering tokens to demographics that a project wants to specifically involve in their ecosystem. This stage still involves a discount to the final token price, though lower than that of the private sale stage. Effectively, the pre-sale offers a larger swathe of investors a chance to obtain company tokens at a discount while reducing the described downside risk associated with private sales.
- Stage 3 - Public Sale: This is the primary sale for the STO, wherein individuals who haven't engaged with the prior two stages have the option to join in the sale of tokens and support a company's project. The minimum buy-in amounts for investors are usually low, and anyone who passes the KYC/AML verifications may participate in this sale. If discounts are present, they are typically much lower than the preceding stages and there may be a lower maximum cap per investor. That said, the downside risk for investors in this stage is even lower than for the previous stages given greater token liquidity, greater clarity on the STO reaching its soft cap, greater product/roadmap development and clarity, and other such factors.

## STO-Related Companies

### Polymath

Polymath is a leading company in the security token vertical of the cryptocurrency industry, facilitating the process of creating, issuing, and managing digital securities for clients on blockchain networks. To date, they have deployed over 200 tokens, with 196 live tokens and over 360 reserved tickers. They have three primary service offerings for

stakeholders across the securities industry:

1) a white label solution that allows companies to use Polymath's foundational infrastructure to meet their clients' needs via security token creation, issuance, and direct management on blockchain networks.

2) their primary solution for security token issuers that allows them to create, issue, and manage their own regulation-aware security token based on smart contract technology.

3) a solution for service providers that allows them to access Polymath's user base via joining their ecosystem of KYC/AML, exchange, advisory, legal, and marketing service providers.

Polymath leverages these offerings to provide an end-to-end security token solution that is based on the principles of open source transparency, standardization via the ERC1400 Security Token Standard, company/client modularity, and programmatic regulatory compliance.

Recently, Polymath's technology was used to complete a \$2.2B tokenization of [RedSwan's](#) commercial real estate, and has finalized the development of a layer one blockchain optimized specifically for security tokens via their Polymesh Blockchain Initiative. Polymath was founded by CEO Trevor Koverko and COO Chris Housser in 2017 and is based out of Toronto.

Polymath's CEO/co-founder and blockchain veteran, Trevor Koverko, provided us with the following comments about the current state of the STO market and where he sees it going in the foreseeable future as well as Polymath's role in this evolution:

*"We're seeing the evolution of security tokens from general purpose infrastructure to purpose-built infrastructure. In the same way we saw the internet evolve from using the existing general purpose infrastructure of phone lines, security tokens are evolving from using the existing general purpose infrastructure of Ethereum. Regulators,*

*issuers, and market participants are demanding upgrades for security tokens, and we are delivering those upgrades with a security token blockchain; Polymesh."*

### Elitium

Elitium is a blockchain company aiming to accelerate the growth of the digital economy through building digital solutions to problems involving currency, finance, and how people enjoy their everyday lives. To facilitate this, their key product offerings include:

1) the Elitium card, which allows users to spend their token, EUM, anywhere that accepts VISA while earning cashback on purchases, and as well as no fees on transactions/deposits and accepted in 46M+ shops across the U.S. and Europe.

2) Elitium Capital, which facilitates investments on the blockchain through tokenization of luxury real estate resulting in 24/7 tradeable digital shares and quarterly dividends.

3) smart contracts that permit users to charter yachts via blockchain through Elitium's exclusive partnership with digital yacht charter platform, Boatsters.

4) the Elitium App, which serves as the gateway to Elitium's entire suite of exclusive products/services and offers staking of EUM of up to 6.5% (available via web, iOS, and Android); among other offerings both existing and in their pipeline.

Elitium was founded in 2017 by its CEO Raoul Milhado and CTO Jean-Pierre Morand and is based out of Switzerland and Gibraltar. Elitium's CEO and co-founder, Raoul Milhado, provided us with the following comments about the foreseeable evolution of asset

tokenization as well as Elitium's role in this process:

*"The whole world is going to be tokenized; assets, commodities, art, artists, you name it. This is a unique opportunity for us to tokenize trillion dollar illiquid markets, make them liquid and available for investing and trading. Elitium brings together a variety of blockchain investments in one simple-to-use platform, eliminating the complexity and security implications of holding a blockchain-based portfolio."*

*Elitium makes it easy for every investor to access the world of blockchain-based tokenized products and grow their wealth in a straightforward, streamlined, and secure way. Due to the efficiency of its technology, investors can save time managing their wealth while generating higher returns on a sustainable basis than via traditional systems."*

### RedSwan

RedSwan is a firm using blockchain to democratize investor access to commercial real estate projects typically only available to large institutional investors. As alluded to previously (see *Polymath* description), RedSwan achieves this through the tokenization of commercial real estate (CRE) assets, which permits ownership equity in affordable fractional shares for non-institutional private investors, the acquisition of quality CRE properties, and the continuous management and oversight of these CREs by experienced sponsoring entities. It's worth noting that RedSwan's security tokens have customizable features (i.e., dividends, holding periods, etc.) created for each of their issuances. RedSwan CRE provides investment options that cater to both long- and short-term capital, and raises capital via the sale of real estate limited

and general partner equity shares with great liquidity through a global marketplace of over 30,000 active accredited investors.

Compared to investment options in the status quo, RedSwan's benefits include allowing building owners to create more value via token shareholders, providing high-quality and affordable CRE assets, extremely secure transactions over blockchain technology, and great liquidity from their large investor network and investment exit periods of minutes instead of years. The RedSwan team has over 45 years of experience in CRE, capital markets and technology, and over \$22B analyzed in CRE properties. RedSwan was founded by current CEO Ed Nwokedi in 2018 and is based out of Houston, Texas.

### Nexo

Nexo is a blockchain company aiming to disrupt the financial system as one of the world's largest and most trusted lending institutions in the digital finance industry. They are committed to successfully solving inefficiencies in the lending markets through blockchain, envision a financial world in which all assets are tokenized on-chain and people can efficiently, seamlessly, and securely transfer/manage their funds, and have core values rooted in efficiency, transparency, and inclusivity.

To date, Nexo has processed over \$5B in transactions, acquired over 1M users, provided lending/borrowing services in over 40 currencies, and is now available in over 200 jurisdictions. Nexo's key product/service offerings allow users to earn up to 12% on cryptocurrency or fiat via lending, borrow cash/stablecoins with collateral from 5.9% APR without selling cryptocurrency, and spend the value of their cryptocurrency holdings without having to sell any via the Nexo Card. The

Nexo token is a regulatory compliant, dividend-paying, asset-backed security token that provides users with a 50% discount on accumulated interest via stacking, 25% higher interest rate on idle assets staked in users' Nexo accounts, as well as 30% of company profits being issued to Nexo token holders in the form of dividends; \$9.5M worth of dividends have been issued so far through three dividend payments in 2018, 2019, and 2020. Nexo was founded by CEO Antoni Trenchev, Executive Chairman Kosta Kantchev, and Managing Partner Kalin Metodiev in 2017, and is based out of Switzerland.

### Lottery.com

Lottery.com is a platform that allows users to play the lottery on their smartphones, as well as play state games, view results, and winning numbers. In live states, users can play a variety of games including the real Powerball and Mega Millions right from their mobile devices via the Lottery.com app. The benefits of the platform include convenience given that users can set up an account and start playing within minutes, user safety as a result of industry-leading verification technology (i.e., location, age, identity) for an optimally secure experience, and easy cashouts as winnings are delivered directly to users' bank accounts safely and securely. The app has simplified its user experience into four key components:

1) Choose A Game: The lottery games Mega Millions and Powerball are available to play on Lottery.com in states in which the platform is operational within the U.S.. Moreover, users are able to see winning numbers, draw dates, and jackpot totals for many other games.

2) Pick Your Numbers: Users can either play their traditional lucky numbers or

have their numbers generated for them by the app.

3) Get Your Tickets: Users can purchase up to twenty tickets at a time with Lottery.com managing the tickets and notifying users of any winnings.

4) Collect Your Winnings: Winnings will be in balance so users can purchase more tickets or cash out directly to their bank accounts. For winnings larger than \$600, the platform contacts the user and guides them through the redemption and taxation process.

In states/jurisdictions in which the app isn't available, the platform notes that they are actively expanding into more states and that users can still get results, jackpot sizes and alerts, as well as track paper Mega Millions and Powerball tickets via the app. Lottery.com conducted an STO through a private sale via the company Securitize, raising \$47M to catalyze the creation of the mobile lottery dApp. Private investors holding the Lottery.com token receive 7% of the net raffle revenue via the company's new Global Impact Raffle. Participants are rewarded for any contributions akin to how Steemit rewards users using Steem. Participant's security token activities are regulated via the assistance of FINRA brokers. Lottery.com was founded by current CEO Tony DiMatteo and President Matt Clemenson in March 2015, and is based out of Austin, Texas.

### ArtID

ArtID is a platform that aims to drastically improve the art certification and record maintenance process through the use of blockchain technology. In particular, they accomplish this through the use of a digital certificate (DC) unique to each of their 3000+ artworks listed on the platform. A DC is an attribute of an

artwork that is effectively a zip folder containing all associated documentation, including HD images, author authentication, archiving records, exhibition history, indications of publications, and more. It essentially contains information on the author, historical periods, current/previous properties, physical location, prices, sale deeds, sales declarations and appraisals. This zip folder is in turn signed via blockchain, and its contents are immutable. This optimizes the due diligence process associated with artwork purchases, as well as for customs clearance associated with artwork imports/exports. Moreover, the visibility is improved given the option to publish the digital certificate on the public marketplace and other relevant platforms.

The DC effectively catalyzes a new generation of artworks that diverge from previous generations through incorruptibility, transparency, openness, and a more liquid art market. In regards to STOs, ArtID is in the midst of conducting its own via the STO development platform Stokr, which will allow ArtID to raise funds and conduct profit sharing (i.e., indicated 10%) for security token owners as per regulation under the CSSF in Luxembourg (EU). To date, ArtID has raised €1,154,472 (\$1,415,440.40 USD) via its offering with €997.1K (\$1,222,490 USD) in private sale from a base of 38 total investors. The company was founded by CEO Stefano Vablais and Luca Muttoni in July 2016, and is based out of Lugano, Switzerland.

### Sia

Sia is among the leading decentralized cloud storage providers in the blockchain industry currently. Without any sign ups, servers, or trusted third party requirements, Sia uses blockchain to

produce a data storage marketplace that is more robust and affordable than incumbent cloud storage providers. Cumulatively, Sia's network consists of over 326 storage providers with 2 PB (petabytes) of storage capacity, 615 TB (terabytes) of used storage and over 1.2M downloads globally. Sia provides complete privacy and user information autonomy through encryption and distribution across a decentralized network, costs 90% less than incumbent providers (e.g., \$1-2 per month for 1TB of files versus \$23 per month with Amazon), eliminates single points of failure and ensures uptimes rivaling traditional providers, has completely open source software with contributions from leading software engineers and a thriving developer community using the Sia API, and uses its blockchain to establish a decentralized storage marketplace in which providers compete for business in turn leading to minimum consumer pricing.

Note that storage renters pay via the platform's utility token, Siacoin, which can also be traded and mined. In addition to the Siacoin utility token, Sia also operates a security token called Sifunds. Sifunds are a revenue-generation-based token, intrinsically designed to provide a revenue stream to Sifund holders denominated in Siacoin. When network contracts are executed, approximately 3.9% of each funding source is reserved for Sifund holders and disbursed to all Sifund holders equally. These funding sources include: host collateral, renter bandwidth costs, and renter storage fees. Sifunds effectively enable the Sia network to fund development and growth, in turn capturing additional value for Sifund holders with greater cloud storage activity/network growth and encouraging them to contribute longer-term to Sia's growth and development. Note that since the number of Sifunds issued is fixed (i.e.,

10,000 which were generated upon launch), as the number/size/value of contracts on Sia's network increases, the revenue amount per Siafund increases proportionally. Sia was founded in 2014 by CEO/Lead Developer David Vorick and Core Developer Luke Champine, and is based in Cambridge, Massachusetts.

### BlockQuake

BlockQuake serves as a platform that provides safe, secure, and regulatory-compliant trading for users' digital assets, aiming to become a leading force in the international token security sector. In line with their motto of "By Traders, For Traders", BlockQuake provides over 100 trading pairs, low and competitive trading fees, free deposits and withdrawals, a facile UI and UX, as well as industry-standard security and safety. Moreover, they mandate global KYC verification for all users, provide a variety of order types (i.e., market, stop, limit, time in force), accept a variety of retail and institutional accounts (e.g., corporate, retirement, trust, etc.), provide qualified custodianship for both hot and cold wallet storage, have trade Matching Engine engineered to handle more than 10M transactions per second (i.e., based on high-frequency trading equities technology), and have an exchange backed by an aggregated liquidity pool of the top exchanges ensuring constant transaction availability for traders.

It's worth noting that BlockQuake puts particular emphasis on regulation and compliance with both domestic and international regulation, particularly in terms of: Operation of a Broker-Dealer/Alternative Trading System with a membership of the Financial Industry Regulatory Authority and registered with the U.S. SEC, Commodity Futures Trading Commission registrations, and New York State

BitLicense. BlockQuake is currently in the process of an STO both domestically for accredited US & Canadian investors (i.e., Reg D 506(C) Token Offering) as well as for the greater international community (i.e., Reg S International Token Presale). The domestic STO has a hard cap of \$40,000,000 (USD) and a minimum investment of \$20,000, while the greater international offering has a hard cap of \$100,000,000 and a minimum investment of \$1000, each with 99 days left in their respective offering periods. BlockQuake was founded in early 2018 by CEO Antonio Brasse and is based out of New York City.

### Blockchain Capital

Blockchain Capital is one of the most active and esteemed venture capital firms in the blockchain industry. They have over 75 portfolio companies, \$275M in assets under management, a team of nine dedicated investment professionals, four funds to date, and five unicorn investments. Some of their most notable investments include Coinbase, Kraken, Libra, Uniswap, Bitwise, Ripple, Blockstream, Augur, and many more.

The team prides themselves in their deep experience in a relatively nascent industry, being rational in an intrinsically irrational market, and coming from entrepreneurial/innovative backgrounds themselves. In addition to operational and capital support, they place specific emphasis on supporting founders through their network of world-class entrepreneurs, advisors, and supporters, as well as community events including conferences, happy hours, protocol meetups, and more.

Blockchain Capital is also the pioneer behind the world's first tokenized investment fund (i.e., one of their four funds), as well as the blockchain industry's

first security token, BCAP. BCAP was sold through an US-securities law compliant STO in April 2017, which led to a successful raise of \$10,000,000 in just six hours. BCAP holders are able to gain exposure to Blockchain Capital's venture capital portfolio and returns without access fees, required minimums, or similar barriers to entry (though there is a 2.5% management fee and 25% performance fee). The company was founded by Managing Partner Bart Stephens, Managing Partner Bradford Stephens, and Bitcoin Foundation Chairman/2020 U.S. Presidential Candidate Brock Pierce in October 2013, and is headquartered in Jackson Square in San Francisco.

## Conclusion

STOs represent regulated, initial offerings of cryptocurrencies known as security tokens, which fundamentally operate as investment contracts, unlike other token forms (e.g., utility tokens). They present a myriad benefits relative to ICOs, including greater transparency, clarity on token asset valuations, and driving wider-scale institutional/mainstream adoption, as well as greater flexibility, speed, and cost-savings relative to more traditional forms of financing such as IPOs.

However, the increased regulation of STOs serves as a double-edged sword in that the associated requirements (e.g., KYC/AML, custodianship, ongoing compliance, etc.) can create an increased burden for companies, and securities treatment could mean that some security tokens are only available for accredited investors. STO/securities token regulatory treatment varies across jurisdiction as

discussed in U.S.A., U.K., and Switzerland, and with current bans in China, South Korea, and a slew of other countries (see *Cross-Jurisdiction Regulation and Perspective*), and no specific current treatment in Russia, Thailand, and the U.A.E.

STOs consist of five main stages that cumulatively can last well over a year: assembling a team, pre-listing preparations, marketing campaign, creation and KYC/AML, ending with the three components of the offering itself. There are many key players in the STO space, including the nine companies described herein: [Polymath](#), [Elitium](#), [RedSwan](#), [Nexo](#), [Lottery.com](#), [ArtID](#), [Sia](#), [BlockQuake](#), and [Blockchain Capital](#).

## About GDA Capital

Global Digital Assets Capital (GDA) brings together 50+ years of capital markets and financial technology experience. GDA acts as the bridge between institutional capital into disruptive technology markets.

- Global HQ in Toronto & NYC with satellite offices in SF, London, HK
- \$20.5B > in Digital Asset Offerings
- \$25M > in Specialized Private Placements
- \$2B > in Over the Counter (OTC) Transactions
- \$5B > in Asset Capitalization

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## Disclosure

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