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## Introduction

Is tokenization the next stage of evolution for securities? Jay Clayton, former Chair of the U.S. Securities and Exchange Commission (**SEC**), seems to think so. Comparing the jump from trading stock certificates to that of digital entries representing stocks, he has stated:

"...if you talk about trading today, all trading is electronic. Our exchanges have gone electronic. Every trade you do, if you call your broker and say, I want this, it gets routed through an electronic, an algorithm executed electronically. That was not the case 20 years ago. It may very well be the case that just as you had stock certificates and now you have entries, digital entries for representing stock. It may be very well the case that [stocks] all become tokenized."1

Following on from our paper "Security token offerings: The next phase of financial market evolution?" issued on 15 October 2020, this paper

identifies pain points of traditional capital raising channels faced by market participants, and considers how security token offerings (**STOs**) are able to address some of these problems. We will also demonstrate how STOs can reduce structural inefficiencies in traditional fundraising.

In this regard, we have conducted a number of consultations with potential security token issuers, investors and intermediaries in Hong Kong, surveying their views of the development of the STO market in Hong Kong. An analysis of the feedback received is set out in this paper. References in this paper to "Respondents" are to the respondents to the market survey questions posed by HKBitEX.

## The global STO market

Globally, the total level of funds raised from STOs now exceeds US\$360 million<sup>2</sup>.

 $<sup>^1</sup>$  Two Sides of the American Coin: Innovation & Regulation of Digital Assets, Hosted by Digital Chamber, 1 October 2020.

<sup>&</sup>lt;sup>2</sup> www.stomarket.com (11 December 2020)



# Issues with traditional capital raising channels

### Existing capital raising processes entail high costs for issuers

Traditional fund raising channels are most effective for certain types of companies, such as mature companies in established industries, or more recently, technology and biotech companies. In Hong Kong, these channels are also built on financial infrastructure created decades ago, and the accompanying inefficient payment and settlement systems, for example, increase the costs associated with fundraising. In addition, identifying beneficial security holders is time-consuming as registrars only record details of the nominee security holder despite the fact that the G20 has agreed to implement beneficial ownership transparency requirements.

The exercise of fundraising itself is expensive and only cost-effective where a company has reached a certain scale. Lastly, while issuers are required to update information provided to investors, there is always a lag as real time information is not readily available to investors, data tends to be dated and live updates are expensive to provide. For example, remittance reports for some debt financing instruments and some corporate actions such as dividend distributions can take at least 30 days to reach investors. The difficulties are more visible in the private markets, as the current systems involve a number of counterparties, resulting in cumbersome, duplicative and nontransparent processes.

#### **Traditional companies**

In Hong Kong, tapping the capital markets is typically accessible by a very narrow group of issuers:

- relatively mature businesses;
- traditional/unrestricted sectors; and
- those with tangible physical assets.

A large swathe of the corporate world is therefore left unserved, including growth stage business and new economy/ asset light businesses. Such companies often cannot meet eligibility requirements of large stock exchanges such as the Hong Kong Stock Exchange³, and also face difficulties in procuring bank loans due to lack of operating history and physical collateral, as well as the increasingly stringent capital requirements banks must comply with under Basel III regulations. If start-up companies are lucky, they may have access to venture capital (**VC**), private equity (**PE**) and their networks; if not, they must rely on their own savings or upon friends and family.

Our Hong Kong market surveys show that Respondents would be interested in investing in a number of asset classes by way of an STO, including traditionally illiquid assets; equity; and funds not currently available in Hong Kong.

<sup>&</sup>lt;sup>3</sup> For example, to list on the main board of Hong Kong Stock Exchange, a company must have a 3-year aggregate profit of at least HK\$50m and a market capitalization of at least HK\$50m, among other things. In November 2020, HKEX commenced a market consultation proposing an increase to the profit requirement by either 150% or 200%.

## Assets which are illiquid and difficult to fractionalize

There are a number of asset categories in which ownership often cannot easily be divided, split or transferred, including:

- Private markets (both debt and equity);
- Real estate:
- Fine wines;
- Art; and

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• Intellectual property rights.

As such, these asset classes are generally unsuitable for monetization by way of the traditional capital markets. However, by tokenizing these assets, their ownership can be fractionalized and widely distributed and traded. STOs for these asset classes open the door to a larger pool of potential investors at a lower cost of entry into the market. The biggest opportunities for tokenization lie in the private markets – within real estate alone, the size of the private real estate market is 32x larger than the public real estate market<sup>4</sup>. In this regard, owners of these assets can monetize what has historically been considered an illiquid asset.

Although there is interest in investing in unique products, a more pressing concern is whether there will be sufficient liquidity for these assets – of our Respondents, the majority agreed that sufficient liquidity was the most important consideration in selecting a virtual asset platform, whereas the least important consideration for Respondents was the exclusiveness of the product.

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<sup>4</sup> For Digital Assets, Private Markets Offer the Greatest Opportunities by Mike Kühnel, Thomas Olsen, John Fildes and Karl Gridl



#### Case Study #1 - St. Regis AspenCoin [asset class: real estate]

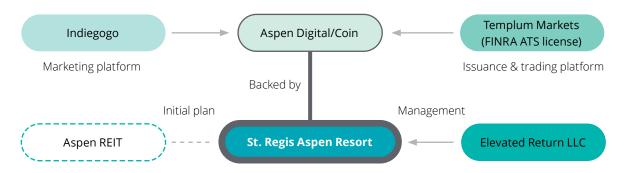
This case study examines the STO of the St. Regis Aspen, a luxury real estate project, which raised US\$18m in the U.S. in October 2018.

#### **Background**

The St. Regis Aspen Resort is a luxury real estate project located in Aspen, Colorado. The offering represented the first tokenized ownership of real estate.

#### **Corporate Structure**

The basic corporate structure of the AspenCoin is as follows:



Source: https://medium.com/krypital/security-token-case-analysis-aspen-coin-the-first-real-estate-security-token-offering-bbbcc52ace5

#### How does it work and who can invest?

The underlying asset which is tokenized represents fractional ownership in the resort and has been promoted as the first of its kind. The digital token was distributed to investors through an exemption under Regulation D of the U.S. Securities Act of 1933, as amended. Investment in the tokens equates to a corresponding economic interest equal to one common share of the Aspen Digital, Inc., a single asset REIT, inclusive of nonvoting rights and the REIT's income distributions.

The offering, raising US\$18 million, was originally marketed and promoted by Indiegogo (a company which provided a distribution platform for accredited investors to purchase tokens) and listed on Templum Markets, a U.S. exchange registered with the SEC and the Financial Industry Regulatory Authority (FINRA) for the secondary trading of digital assets that are securities. The tokens are currently available to

professional investors only. In this regard, the roles of Indiegogo and Templum, respectively, are comparable to those of an underwriter and exchange operator in a traditional IPO process.

#### What Blockchain technology is used?

Ethereum is the host currency used for AspenCoin on Templum Markets, whereas the tZERO platform utilizes the Tezos system. tZERO commenced trading AspenCoin in August 2020.

#### How is it regulated?

AspenCoin is subject to U.S. securities laws and regulations because it targets U.S. investors and is listed on Templum Markets.

#### What problems did it solve?

For issuers, AspenCoin provided the opportunity to fractionalize a previous illiquid asset in real estate at a lower entry value for investors.



#### Case Study #2 - SPiCE Venture Capital (SPiCE VC) [asset class: VC/PE fund]

This case study examines SPICE VC. SPICE VC is a tokenized venture capital fund, focusing its investments on blockchain companies and other tech startups. It has taken stakes in INX, Bakkt, Securitize, Archax and several other companies. It is a venture capital fund from Israel, which raised US\$15m in the U.S. by way of an STO of its fund interests in October 2018.

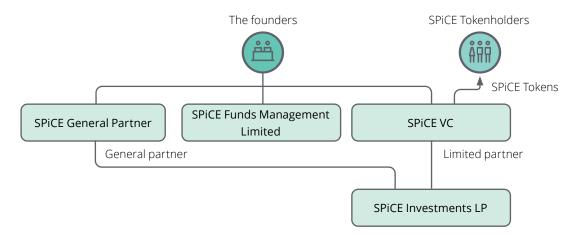
#### **Background**

SPICE VC is the first fully tokenized VC fund and is currently traded on the Fusang Exchange (Asia) and OpenFinance Network (U.S.) digital asset exchanges. SPICE VC is currently mid-way through a second round of fundraising and is seeking to raise US\$100m.

SPICE VC retained an international law firm to prepare the offering memorandum and advise on global regulatory issues, but did not engage any placement agents to distribute the tokens.

#### **Structure**

The basic corporate structure of SPiCE VC is as follows:



Source: SPiCE VC Offering Memorandum p.30–30 November 2017

#### How does it work and who can invest?

The underlying asset which is tokenized in this case is the limited partner (**LP**) interests in a closed-ended fund that invests in blockchain and tokenization companies. The tokens are currently available to professional investors only. Investors in SPiCE VC tokens are from time to time entitled to net revenues from realizations from the underlying assets (i.e., the sale of shares in blockchain and tokenization companies) which the fund receives on a pro rata basis. The flow of funds is also shown in the corporate structure diagram above.

#### What Blockchain technology is used?

Ethereum is the public blockchain system used for the SPiCE VC tokens.

#### How is it regulated?

SPICE VC is subject to U.S. securities laws and regulation through its listing on OpenFinance Network in addition to Labuan law through its secondary listing on Fusang Exchange in 2020.

#### What problems did it solve?

Certain financial instruments, such as VC or PE fund interests are not very liquid. Investors usually make capital commitments that are subject to calls over a long period of time and their investments are also locked-up for the duration of the project complicating any exist of such investments. By leveraging on blockchain technology, such VC and PE interests can be tokenized to allow investors to realize returns much sooner and an earlier exit.

This STO was able to provide secondary liquidity for its investors by way of its tradable tokens listed on digital exchanges and a regulated platform for investment in blockchain technology and disruption companies. To enable tradability, SPiCE VC standardized the terms of the fund interest so each security token is fungible.

## Suboptimal verification of security ownership and settlement process

Due to the large number of security holders, most securities are held through share registrars or depositaries. These intermediaries serve an important function, including validating ownership for security transfers, receipt of distributions and communicating with ultimate beneficial holders. The associated downside is that these processes are time consuming and subject to human error. For example, security transfer authorization ultimately depends on the depositary verifying the identity of the account

holder. In contrast, digital tokens are immediately "validated" and, the holder has private knowledge of this validation in the form of a personalized cryptographic key. Leveraging technology to streamline these processes leads to better execution and higher overall investor confidence.

The usual process for the majority of settlement transactions in Hong Kong as well as on exchanges worldwide is T+2 (i.e., the ownership is not transferred until 2 days after execution of the transaction). With the benefit of blockchain enabled technology, transfers of security tokens will be almost instantaneous (i.e., T+0), including the automatic updating of ownership records on the blockchain. There is also 24/7 market access, giving parties increased overall liquidity, through secondary trading on a virtual asset exchange.<sup>5</sup>



<sup>&</sup>lt;sup>5</sup> Blockchain and Public Companies: A Revolution in Share Ownership Transparency, Proxy-Voting and Corporate Governance? by Federico Panisi, Ross P. Buckley, Douglas W. Arner

#### Case Study#3 - Santander Digital Bonds [asset class: bonds]

This case study looks at the first "end-to-end" blockchain bonds issued by Banco Santander (**Santander**) with a value of US\$20m.

#### **Background**

On 12 September 2019, Santander issued the first "end-to-end" blockchain bonds. The bank issued the bond directly onto the blockchain and the bond will also continue to exist exclusively on the blockchain.

#### How does it work and who can invest?

Santander was able to securely tokenize the bond and register it in a permissioned manner on the blockchain. The cash used to complete the investment (on-chain delivery-versus-payment) and the quarterly coupons are tokenized and represented digitally on the blockchain. The bonds have a maturity of one year.

#### What Blockchain technology is used?

The bonds utilize the Ethereum blockchain system.

#### What problems did it solve?

Due to this automation process, Santander was able to reduce the number of intermediaries required in the process, improving the pace, efficiency, and simplicity of the transaction. Further, the counterparty risk is reduced due to the time-controlled contracts issued on the blockchain.



"STOS are often analogized to IPOs due to similar sounding acronyms, but the largest STOs have been debt offerings. When you think about it, tokenization requires standardization, so many terms in debt that is issued under programs, such as mediumterm note programs, can be very easily tokenized. Once tokenized, the security can enjoy streamlined settlement and automated administrative functions coded into smart contracts. The debt market also dwarves the equity market: in 2019, the securities industry raised \$2.1 trillion of capital for businesses through debt and equity issuance activity in the United States. Of that, \$228.1 billion was equity and the rest nearly \$1.8 trillion—was debt. Globally, the long-term bond market issuance amounted to \$21.0 trillion in 2019, while the global equity issuance amounted to \$540.5 billion.6

Best of all, the benefits of STOs are not limited to public issuances of debt or equity. Private placements can take advantage of the increased efficiency and transparency of tokenizing a security. This means that issuers do not have to incur the high costs of a public offering to leverage the cost-efficiencies afforded by STOs."

Lin Shi, COO HKbitEX



<sup>&</sup>lt;sup>6</sup> sifma 2020 Capital Markets Fact Book

# Technological advantages of STOs

#### **Unprecedented liquidity: fractionalization**

Blockchain empowered fractionalization of assets effectively reduces the minimum investment threshold for investors. This encourages more participation in private markets securities, real estate and collectables, bringing unprecedented liquidity to these asset classes.

#### Security: record immutability

In addition to increased liquidity, another feature of this technology is the immutability of ownership records in relation to the underlying asset of the security token.<sup>7</sup> Records are immutable in that every block in the chain contains a cryptographic hash of the previous block. So if someone wants to amend the record, they will need to change the hash of all previous blocks–something that is theoretically not possible.

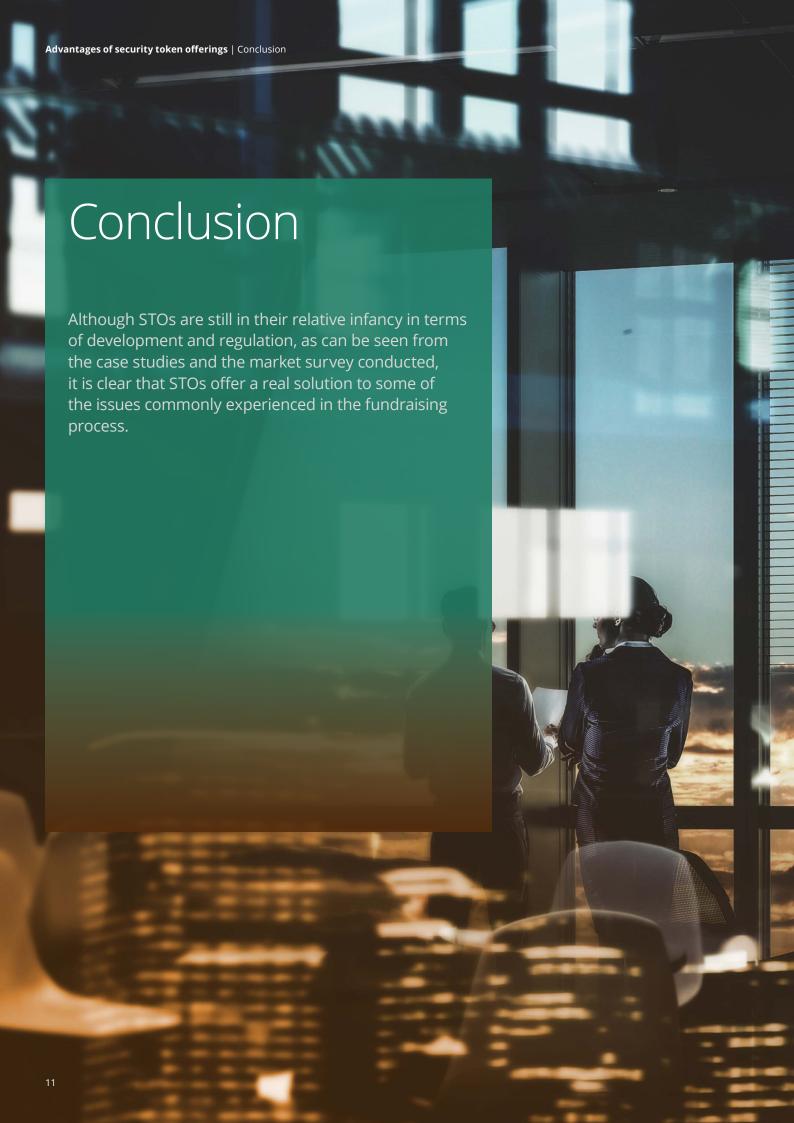
### Automated corporate actions: smart contracts

Investors in an STO benefit from the utilization of blockchain technology and the automatic execution of certain operations through smart contracts. One practical example of this is corporate actions. In the event of dividend/coupon distribution, the smart contract is programmed to automatically instruct distribution at a predetermined pay date and amortize the residuals (debt). Investor voting can also be expedited using smart contract instead of through traditional proxy forms.

In terms of tokenized debt, there is also more certainty, given the improved ongoing disclosure and the specific and automatic valuation report which can be embedded in the smart contract. These capabilities largely reduce the risks of the error-prone processes, and enhance operational efficiency, allowing for streamlining audit purposes.



<sup>&</sup>lt;sup>7</sup> Douglas Arner et al., Distributed Ledger Technology and Digital Assets–Policy and Regulatory Challenges in Asia, Asian Development Bank Economic Research Report, July 2019



# Acknowledgments



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HKbitEX is a leading digital asset exchange headquartered in Hong Kong. HKbitEX is committed to providing a compliant and regulated digital asset spot trading and over-the-counter (OTC) trading platform for global professional investors, and are one of the first organizations in Asia Pacific to apply for a 'virtual asset trading platform license' from Hong Kong's Securities and Futures Commission, which will further enable regulated, compliant, and secure digital asset trading services to global professional and institutional investors. For more information, please visit <a href="https://www.hkbitex.com.hk/">https://www.hkbitex.com.hk/</a>



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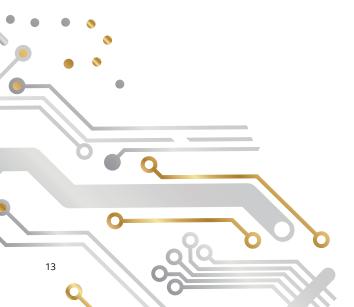
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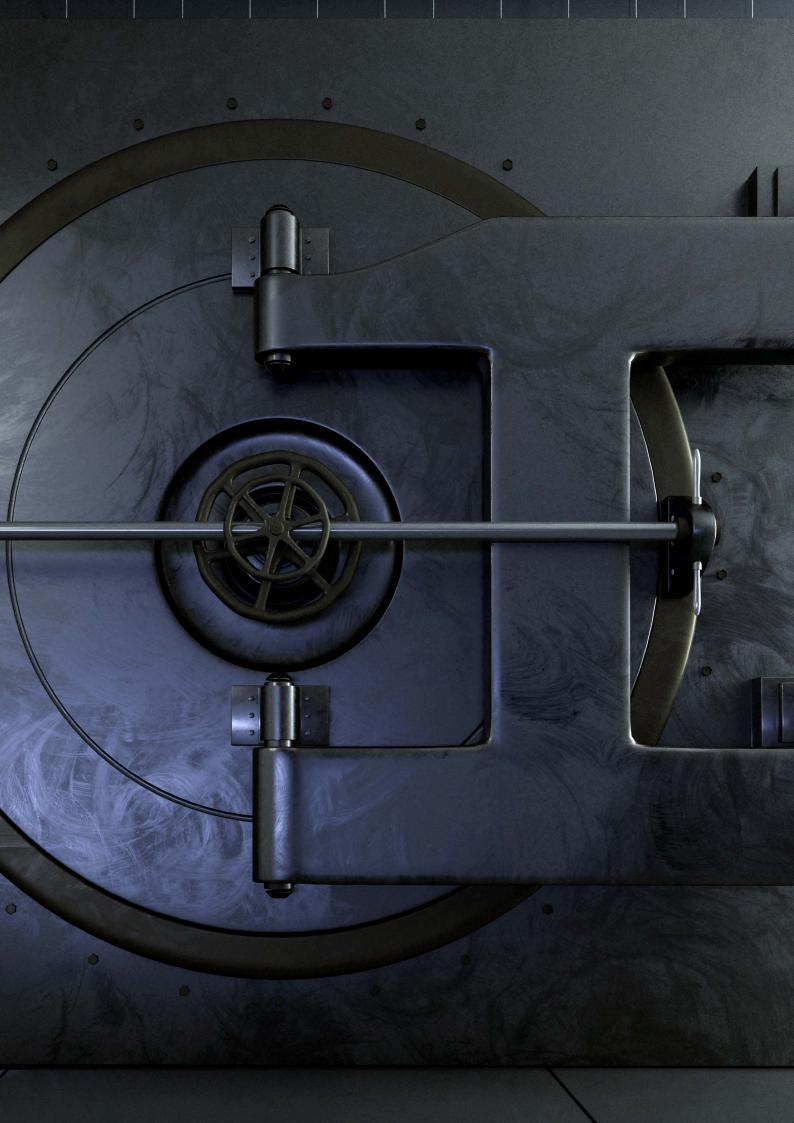
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