



Report on the Blockchain Economic Forum and Initial Coin Offerings in Singapore

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Conference Report

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This report is based on the proceedings of the Blockchain Economic Forum 2018 and the accompanying roundtable discussions on blockchain economics, regulation, use cases and Initial Coin Offerings by more than 100 international speakers (accessible at <https://bef.latoken.com/>). The views expressed in this report reflect the author's personal opinions and do not necessarily reflect the policies or views of the Centre for Banking & Finance Law.

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Report on the Blockchain Economic Forum and Initial Coin Offerings in Singapore

Dominika Nestarcova

Abstract

Initial Coin Offerings (ICOs) emerged in 2017 as a novel form of funding, whereby start-up companies issue blockchain-based assets ('tokens') to the public in return for a payment in cryptocurrencies or fiat money. The advent of ICOs mushrooming worldwide promises to democratize financing, yet the unregulated space in which ICOs operate, opens up a Pandora's Box of investment risks. Within this context, Singapore has positioned itself as an ICO-friendly jurisdiction with its 'Smart Nation' vision and a flourishing FinTech ecosystem. The Monetary Authority of Singapore (MAS) remains cautious of the legal characterization of ICOs and the potential applicability of securities regulation. The present paper outlines the process of carrying out an ICO, assesses the current state of ICO regulation in Singapore and outlines relevant legal risks.

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Introduction

This report is written in response to the proceedings of the Blockchain Economic Forum 2018 and the accompanying roundtable discussions on blockchain economics, regulation, use cases and Initial Coin Offerings by more than 100 international speakers at the forum. The forum panels made it repeatedly clear that Initial Coin Offerings (ICOs) are high on the agenda not only in the crypto-community, but equally among venture capitalists and retail investors. The position of Singapore as a crypto-friendly jurisdiction is significant as part of the city-state's Smart Nation initiative, and continues to be a decisive factor for ICO start-ups launching their ICO and venture capitalists hoping to invest. For that reason, it is important for academics and regulators to explore how ICOs affect market dynamics, identify and examine the associated risks including any legal and systemic risks and consider the need for regulation.

The 21st century has witnessed the emergence of a number of disruptive technologies, including blockchain technology which has created an ecosystem in which cryptocurrencies and ICOs can flourish. Blockchain technology is built upon a set of technological solutions, which enable a single, sequenced, cryptographically-secured and distributed record of any specific activity to be held among a network of participants.¹ Through the distributed ledger, the network participants can confirm and create transactions without a central authority. The peer-to-peer architecture of a blockchain allows for a direct exchange of value between the participating parties. Cryptocurrencies rely on this distributed verification – each time a cryptocurrency transaction is made (for example between an ICO issuer and an ICO investor), a new 'block' on the shared ledger is generated. In this context, cryptocurrencies are digital, encrypted mediums of exchange that are used to verify transactions or control the creation of monetary units.² Apart from their utility function, investors today utilise cryptocurrencies to invest in ICOs, whereby an ICO issuer will exchange the cryptocurrencies for a proprietary digital medium of exchange (token) that functions on the ICO issuer's blockchain technology.

In this respect, ICOs – also referred to as 'token sales' or 'initial token offerings' can be viewed as a creation of blockchain technology coupled with crowdfunding by cryptocurrency investors looking for new financing models in the technology sector. ICOs are fully digitalized, using a distributed ledger technology (for example blockchain) and the tokens released for public offering are sold either for cryptocurrency or fiat currency. Each issue of tokens is characterized by specific conditions, which dictate what sort of rights, return or utility the investors can derive from the purchased tokens. The tokens themselves may grant the investor: a right to use a product or service being developed, the right to sell the token on secondary markets, voting rights or the right to receive a share of the

¹ Presently, there is no consensus on the definition of 'blockchain', given that blockchain technologies may differ in the protocol and cryptography used. For general descriptions, see:

ASTRI (commissioned by the Hong Kong Monetary Authority), *Whitepaper on the Distributed Ledger Technology* (Whitepaper, 2016) para 2.1 or Accenture, *Blockchain-Enabled Distributed Ledgers: Are Investment Banks Ready?* (Capital Markets Report, 2016) Available at: <https://www.accenture.com/t20160203T200922_w_us-en_acnmedia/PDF-6/Accenture-Blockchain-Enabled-Distributed-Ledgers.pdf%20-%20zoom=50> accessed 10 February 2018

² The legal characterization of cryptocurrencies is outside the scope of this paper. For present purposes, it is important to point out a divergence in the characterization, which is evident in different regulatory characterizations among jurisdictions.

company's future. Investors will have different objectives in purchasing the tokens, such as to support the ICO project, to become involved in the management of the project or to receive a return on the rising price of the tokens through a resale in the secondary market.

Upon closer analysis, the nascent nature of the ICO funding model for start-up companies reveals a number of legal risks for investors, and on a macro-level, systemic risk for the capital markets, which are traditionally governed by securities regulation and consumer protection. The following paper outlines ICO-related risks for investors and looks at the relevant securities regulation applicable to ICOs in Singapore. The paper will conclude by assessing future ICO trends based on the Forum's proceedings and will offer forward-looking recommendations conducive to fostering an ICO-friendly environment in Singapore.

PART A: ICOs and INVESTMENT RISKS

ICO market

ANATOMY OF AN ICO

An ICO is a new funding model for start-up technology projects, which displays elements resembling an IPO (selling of tokens for cryptocurrency instead of fiat currency) and an open crowdfunding. Given that ICOs are a novel phenomenon, there are currently no binding rules or procedures on how to structure an ICO in any jurisdictions. The ICO structure will reflect the financing model adopted by the ICO issuer. Most ICOs follow a certain modus operandi, which can be summarized as follows:

1. **Pre-announcement:** The ICO issuer, usually a foundation-type entity or a public company limited by a guarantee (the two most common corporate structures used in Singapore in ICOs) comes up with a business idea involving blockchain technology. In order to establish market sentiment, the ICO issuer determines the level of interest through social media and investor outreach. From there an announcement is made as to the start-up's business idea, its goals and the rationale behind using an ICO funding model.
2. **Marketing and Whitepaper:** The ICO issue will release a Whitepaper,³ which describes its product, business model and the terms of the ICO, together with the description of the tokens, their utility and a roadmap for development. A marketing process will follow, involving social media outreach, conferences and road shows.

³ Within the ICO context, a whitepaper is a document that states the technology behind the ICO project. The document will state an issue and propose a solution with a detailed description of the system architecture and interaction with the users. It will also contain information such as the market cap, anticipated growth and technical details like the terms and conditions regarding the use of the tokens. The whitepaper will refer to separate terms and conditions on the ICO sale. The majority of whitepapers will include a disclaimer stating that in no manner is the whitepaper to be construed as a prospectus. Nevertheless, the purpose of a whitepaper is to familiarize the investors with the ICO project and to solicit funding.

3. **Pre-token sale:** Some ICO issuers will run a pre-ICO or a pre-token sale ('pre-sale') in order to raise funds to cover expenses leading to the ICO. The pre-sale is private and will most often involve large investors such as venture capital funds. Simultaneously, the funding raised during a pre-sale will serve to entice the public's interest and 'legitimize' the business product offered. In most cases, the pre-sale conditions will differ from the ICO sale conditions, and investors buying tokens en masse will get a discount or other favourable terms.
4. **Token sale:** The token sale takes place in accordance with the stipulated Whitepaper. ICO issuers continue to explore what is the most efficient sale format. The sale can either be capped or uncapped as to the number of tokens being offered, and more recently, a reversed Dutch-auction saleformat has been used.⁴
5. **Investor participation:** In order to participate in an ICO, the participants must register for the sale and state their wallet address – where they want to receive the purchased tokens.⁵
6. **ICO triggered:** the majority of ICOs run on the Ethereum network and use the ERC20 token standard in order to programme how the created tokens should function during the ICO. ERC20 defines a standardized set of rules that the tokens must follow and allows for a set of functions – such as how the token should be transferred or what data can be accessed. Once the ICO issuer triggers the token sale, a specific number of tokens is released into a worldwide public crowdfunding event. Participants in the token sale purchase the tokens through an online portal in exchange for cryptocurrencies or less frequently fiat money. The tokens are then deposited in their digital wallet, which is cryptographically secured. This process is carried out through the use of 'smart contracts' on a blockchain – a set of functions written in code. The participants instruct their wallets to subscribe to a desired number of tokens, transfer the digital currency into the issuer's wallet address, which in turn registers the tokens in the participant's account.
7. **The proceeds from the token sale** go directly to the ICO issuer who uses them in accordance with the investment plan outlined in the Whitepaper. Most ICO issuers will reserve a pool of tokens, which are not distributed. The distributed tokens become non-redeemable upon the sale completion and are generally not subject to transfer restrictions.
8. **Post-ICO sale:** The new token holders can either hold onto their tokens and derive whatever utility they offer or may trade them on secondary market cryptocurrency exchanges. The exchanges will list tokens depending on their admission rules and thereby turn the tokens into

⁴ In a reversed Dutch-auction model, the ICO sale opens at a high price and then gradually decreases to find the optimal market price. Prior to the ICO sale, an investor would first decide what he considers to be the highest valuation of the token. When the sale starts, instead of immediately buying the token, the investor waits until the valuation drops below the pre-determined level, upon which he initiates the transaction.

⁵ The majority of the ICO tokens are issued on the Ethereum blockchain. In order to participate in the ICO, an investor needs a so-called 'digital wallet'. The wallet needs to be compatible with the Ethereum ERC20 smart code. As the owner of the wallet, the investor will have a set of private keys (secure digital code known only to the user - whoever has access to an address' private key controls the coins or tokens inside it) and public keys (a public digital code connected to a certain amount of currency), which will enable him to send and receive coins/tokens. In other words, the keys are necessary for an interaction with smart contracts to transfer and receive tokens. The cryptocurrencies are not stored in the wallet – instead, the wallet stores the private and public keys and acts as a form of a ledger. Each digital wallet has an address, which is given out in order for the investor to carry out transactions.

liquid assets. Some tokens are subject to hold-up periods, but generally the token holders are free to sell or speculate on the market value of the acquired token.

A MARKET FOR ICOs

ICOs offer an alternative way for start-up companies to raise capital from a community without having to rely on traditional means of funding such as venture capital or IPOs. The typical ICO issuer will be an early-stage technology company with a high-risk model (without a working product), seeking to eliminate barriers to capital by utilizing the power of crowdfunding where no venture capital (VC) funding or angel investor is available. ICO issuers benefit from (i) engaging the community by democratizing the accessibility of an ordinary blockchain-enthusiast to directly contribute to a business idea he believes in, (ii) lowering transactions costs associated with the ICO – no need to hire investment bankers, lawyers or underwriters, instead the only costs involved are for marketing and overseeing the ICO execution, (iii) raising capital efficiently and avoiding the VC funding pitfall of raising capital at the expense of suffering a dilution, and (iv) community creation, whereby the digital outreach, coupled with the current ICO hype, offers a greater marketing exposure and at the same time engages early adopters, who in order to profit from their investment will strive to market the business idea to expand its adoption.

Tokenization of financing incentivizes new token owners to contribute to the network, as by purchasing the token, they acquire a vested interest in the network's future success. The most significant benefit that the ICO funding model offers is efficient financing. ICO issuers can engage the public across jurisdictions and reach any potential investor/enthusiast with an Internet connection. Similarly, ICO investors will benefit from (i) gaining an early access to the business idea through the token purchase, (ii) acquiring voting or other membership rights alongside with the token in order to influence the direction of the company, and (iii) enjoying the potential gains, if the tokens increase in value.

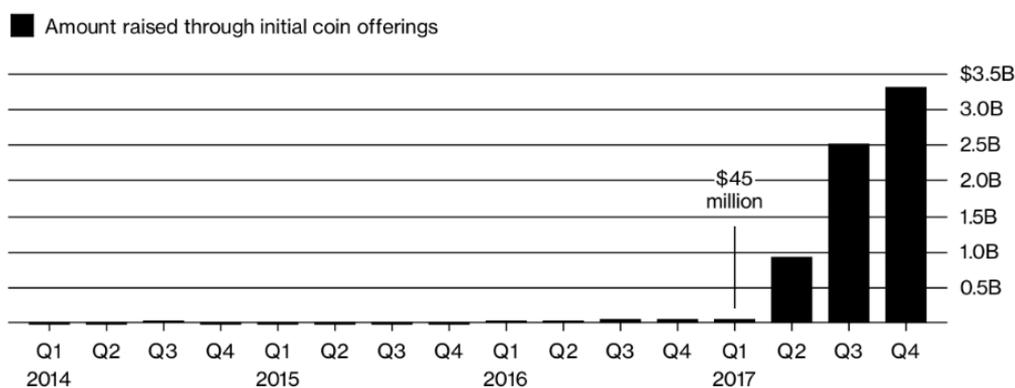
There is enormous potential value in the ICO funding model, as investors can bring early capitalisation into their project with pre-revenue traction, without having to embark on lengthy fundraising roadshows; instead, they can focus on building up the network and their product.

DEVELOPMENTS IN THE ICOs MARKET

The popularity of the ICO funding model is evident in the exponential rise of ICOs conducted worldwide. While in 2016, the total number of ICOs was 45, the number quadrupled to 211 in 2017.⁶ Blockchain infrastructure and financial services are the most common ICO projects areas.⁷

⁶ CoinSchedule, 'Cryptocurrency ICO stats 2017' (CoinSchedule, 207) Available at: <<https://www.coinschedule.com/stats.html?year=2017>> accessed 11 February 2018

⁷LAToken, ICO trends (Report, 2017) Available at: <<https://cdn-new.latoken.com/common/files/analytics/ICO-trends-december-2017.pdf>> accessed 3 February 2018



Data: Smith + Crown; graphic by Bloomberg Businessweek

Research conducted by Smith + Crown (see above graphic) shows a surge in Q3 and Q4 in 2017, with a funding increase to \$6.8 billion in 2017, from \$151 million in 2014, 2015 and 2016 combined.⁸ Some of the largest ICOs include Tezos, which has raised \$232 million, and messaging app provider Telegram which has raised \$850 million in the first part of its ICO, and aims to surpass the \$1 billion mark once completed.⁹

TOKEN ECONOMICS

What we are witnessing is a new form of token economics. By tokenizing their early-stage business models, ICO issuers can now raise funds efficiently and capitalize on the network effects. Fully digital and open worldwide to any Internet user, ICOs unlock a new model to creating a true network effect. An interplay between the network effects and liquidity, in the form of de facto ‘helicopter money’ being dropped in an ICO, reinforce each other to create token economics.

Blockchain entrepreneurs leverage on the democratization of the investment space by unlocking the liquidity of small investors. The democratizing element of its funding model brings valuable capital into the technology’s ecosystem and creates a positive feedback loop, whereby a community can support the project’s mission, and the project can capitalize on the community’s support. The prospective utility that the investors derive from their investment fosters a community. The community of investors’ objective is for the product/service to become more useful, and with more users, the demand for the capped tokens increases and consequently, the value of their ownership.

⁸ Yuri Nakamura, ‘Startups are raising billions using initial coin offerings’ (Bloomberg, 22 January 2018) Available at: <<https://www.bloomberg.com/news/articles/2018-01-22/startups-are-raising-billions-using-initial-coin-offerings>> accessed 1 February 2018

⁹ Paul Vigna, ‘Tezos Raised \$232 Million in a Hot Coin Offering, Then a Fight Broke Out’ (The Wall Street Journal, 19 October 2017) Available at: <<https://www.wsj.com/articles/tezos-raised-232-million-in-a-hot-coin-offering-then-a-fight-broke-out-1508354704>> accessed 7 February 2018

Jon Russell, ‘Telegram has raised an initial \$850M for its billion-dollar ICO’ (TechCrunch, 16 February 2018) Available at: <<https://techcrunch.com/2018/02/16/telegram-ico-850-million/>> accessed 20 February 2018

ICO-related risks

Despite the surge in ICOs and the hype around the ICO funding phenomenon, which is further inflated by media reporting on astronomical sums being raised and even higher returns expected, the lure of ICOs as the funding model of the 21st century does not escape scepticism and warnings. These come at a time where small start-ups of few employees raise sometimes hundreds of millions, which inflate the potential risks for both investors and markets. As a novel form of funding, ICOs pose specific risks. Mixed with the current investment bonanza based on high risk/high return, an understanding of these risks becomes important in the eyes of industry participants and policy-makers alike.

INVESTOR RISKS

ICOs target a spectrum of investors, from pre-teens investing their pennies, to institutional investors with advanced investment knowledge. The participants in ICOs do not enjoy the same investor protection as investors in traditional funding models. A number of investor risks can be identified:

1. **Lack of transparency.** In a traditional start-up backed by a venture capital fund, the product development would have reached a certain stage, whereas in ICOs, most start-ups rely on a mere concept outlined in their Whitepaper or such information as the project's team has published. The lack of information about the credibility of the business idea and the team behind it, does not allow investors to make an informed decision whether they should invest. The lack of transparency conceals any investment risks, which may materialize during the product development, as the team attempts to market their business idea in the most favourable light. Not subject to securities regulation and stringent prospectus requirements, ICO issuers publish only a Whitepaper prior to the ICO sale, which does not offer a standardized description of the structure of the business model or the tokens to support it. The lack of transparency is evident in the post-ICO volatility of the token value.
2. **No tangible product.** ICO participants are investing in a business idea or a future promise of an idea associated with the platform, not a tangible product or service. Many issuers will struggle post-ICO to fulfil these promises in accordance with investors' expectations, which underlines the reversed nature of ICO funding – first the start-up does the funding and only later is the product deployed.
3. **Lack of functional utility.** The real utility of the blockchain technology or of the token as an integral element to the business idea may be lacking. Without expert knowledge in blockchain technology, it can prove to be difficult for investors to realize that a Whitepaper does not provide a clear explanation of the business rationale for blockchain or the token being offered in the ICO. Without functional utility, the investment in the token and the future utility for the token holders may be worthless.
4. **Volatility in token valuation.** Together with a lack of due diligence and transparency, a flawed token valuation increases post-ICO token volatility and puts the ICO participants' investments at risk. The valuation depends on a number of parameters, which due to the lack of due diligence are difficult to determine at the development stage. If tokens were to be valued as financial instruments, the means of valuation could be based either on the asset backing the token or the prospective cash flows. However, there are four main issues, which pose difficulty

with token valuation; (i) the traditional demand and supply dynamic is not present, (ii) dual nature of the token valuation,¹⁰ (iii) the ICO marketing and sale technique employed and (iv) the liquidity of secondary markets.

5. **Liquidity on secondary markets.** For those investors wishing to convert their tokens post-ICO, the expectation is that the tokens will be tradable on secondary markets through exchanges or convertible either to cryptocurrencies or fiat money. Each exchange will have its own standards for token admissibility. Purchased tokens may not be accepted by exchanges, whether due to insufficient public demand or poor performance, negatively impacting their liquidity. Moreover, a particular investor risk highlighted by the MAS is an insufficient secondary market. Despite the presence of exchanges, 'there may not be enough active buyers and sellers or the bid-ask spreads may be too wide. Consumers may not be able to exit their token investments easily'.¹¹
6. **Ponzi schemes and scams.** ICOs have been dubbed 'Ponzi schemes' or outright scams, operating in an unregulated ecosystem with very few checks and balances.¹² Instead of a utility engagement, ICO issuers use the ICO funding for speculative and 'pump and dump schemes'. The U.S. Securities and Exchange Commission has described such schemes in one of its investor alerts, as schemes where ICO issuers urge prospective buyers to buy tokens through misleading messages in order to pump-up the market into a buying frenzy. Once the ICO is over, they either disappear with the collected funds or dump their tokens for a large profit, leaving other investors to lose money on the falling token value.¹³
7. **ICO security breaches.** A live ICO is a prime target for hackers, which can take the form of a malicious denial of service attack to disrupt the sale, exploitation of weaknesses in smart contract codes, cyber-attacks through company employees or IT infrastructure, and hacking

¹⁰ The tokens have a dual nature, complicating valuation for investors. The dual nature is a result of the ICO model itself. Since the token itself is not a share, nor does it represent some underlying asset of the issuing company, the token valuation is torn between the token's market capitalisation value and the equity capitalisation of the ICO issuer. How one values the underlying business from the perspective of profit and loss is divorced from how the market influences the value of the tokens. An ICO investor is buying a token whose value may or may not be linked to the product/service, depending on whether the token is indispensable to the functioning of the blockchain technology. The variable value of the token is based on the market perception (influenced by demand and supply) and the success of the product development, but also the company behind the ICO. What becomes clear is that the tokens are issued in isolation from the market forces, which indirectly encourages speculative behaviour and the no real market force behind token valuation poses a clear investor risk.

¹¹ Monetary Authority of Singapore, 'Consumer Advisory on Investment Schemes Involving Digital Tokens (Including Virtual Currencies)' (News and Publications, 10 August 2017) Available at: <<http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/Consumer-Advisory-on-Investment-Schemes-Involving-Digital-Tokens.aspx>> accessed 17 February 2018

¹² David Z Morris, 'The Rise of Cryptocurrency Ponzi Schemes' (The Atlantic, 31 May 2017) Available at: <<https://www.theatlantic.com/technology/archive/2017/05/cryptocurrency-ponzi-schemes/528624/>> accessed 17 February 2018, Brian Kean, 'Don't believe the hype. The five largest "ICO exit scams": Expert Take' (Cointelegraph, 19 February 2018) Available at: <<https://cointelegraph.com/news/dont-believe-the-hype-the-five-largest-ico-exit-scams-expert-take>> accessed 20 February 2018 Camila Russo, 'A Clue to the Latest ICO Scam May Have Been Hidden in the Name' (Bloomberg, 30 January 2018) Available at: <<https://www.bloomberg.com/news/articles/2018-01-29/crypto-victims-flush-away-cash-on-deal-that-s-more-uti-than-ico>> accessed 16 February 2018

¹³ U.S. Securities and Exchange Commission, 'Public companies making ICO-related claims', (Investor Alert, 28 August 2017) Available at: <<https://www.investor.gov/additional-resources/news-alerts/alerts-bulletins/investor-alert-public-companies-making-ico-related>> accessed 17 February 2018

or phishing of websites. EY in its report analysed 372 ICO projects and found that more than 10% of the proceeds were intercepted and stolen by hackers. There have also been instances of data leaks where hackers got access to investor information provided to coin issuers.¹⁴

What the investor risks reveal is that unregulated ICOs and a high volatility in token valuations are a direct cause of information asymmetry in the market. With the current volume of ICO tokens circulating the market, the ICO market may be too small to justify ICO-specific regulation to protect investors. However, as barriers of investment entry disappear, and ICOs attract more and more retail investors, including alternative investment funds and institutional investors alike, more ICO participants become exposed to the hot market. More liquidity is pumped into the ICO market with the potential of creating the next tech bubble, which readily resembles the Dotcom bubble preceded by an IPO frenzy in the 1990s.

PART B: SECURITIES REGULATION AND ICOS IN SINGAPORE

Securities regulation

The economics of using an ICO funding model need to be sustainable in order to prevent damaging the credibility of this model, to protect investors and most importantly, to encourage technology innovation. The current market displays worrisome characteristics of being overheated and a fertile ground for 'bad lemons', as it lacks a mechanism to ensure transparency for investors and doesn't allow for an independent audit. In view of the risks and systemic challenges that ICOs may invite, the role of regulators becomes increasingly important. Although ICOs are not regulated by any specific legislation in Singapore, the ICO funding model together with the security-like characteristics of the token, may make them subject to the securities regulation.

Indeed, the main concern among ICO market participants is whether the ICO sale of tokens constitutes a public offer and sale of securities, which would make ICOs subject to the MAS' regulatory oversight and compliant to the rules in the Securities and Futures Act. Whether an ICO needs to comply with securities regulation of the given jurisdiction will depend on whether tokens should properly be characterized as a security.

TOKEN CHARACTERIZATION

¹⁴ EY, 'Initial Coin Offerings (ICOs)', (EY Research, December 2017) Available at: <http://www.ey.com/Publication/vwLUAssets/ey-research-initial-coin-offerings-icos/%24File/ey-research-initial-coin-offerings-icos.pdf> accessed 10 February 2018

At first glance, tokens distributed in an ICO resemble a cross-over between a share and currency. However, a detailed analysis reveals that tokens in their function represent a variety of assets, which take a variety of forms. In basic terms, a token is a digital representation of a value that is tradable on secondary markets and functions as a token-holder's right to receive or benefit from the ICO issuer's future product or service. Each token is specific to the ICO project and will have its own characteristics. Currently, the ICO market does not have a standardized token classification and commentators differ in their terminology.¹⁵ Nevertheless, based on their function, tokens can be generally characterized as either utility tokens or investment tokens. Investment tokens are more likely to qualify as securities than utility tokens but there is a fine line between their characterization. A buyer invests in a utility token with a belief that there is a value in the issuer's product. For example, following the product-development, a utility token may be used by the investor to access the start-ups product or to actively use it. A start-up offering a decentralized storage network, which uses available storage space on computers among the network participants will allow token holders to spend the purchased tokens for storing or receiving data. Despite being tradable on a secondary market, utility tokens are integral to the functioning of the ICO project and are not designed as investments.

In contrast, investment tokens assign economic rights to their holders. There is a strong investment component in investment tokens. De facto, an ICO issuer will issue a token as a utility token. However, its inherent characteristics and the rights it confers, may convert a utility token into a security-like structure. Since tokens can serve a number of utilities, their multifaceted nature makes it difficult for both investors and regulators to categorise them. What complicates the distinction further is the fact that all utility tokens can be traded on secondary markets and sold for profit. Some may argue that even with the purchase of utility tokens, an investor could have an expectation of profit despite the primary design of a token to confer a pure utility.

How, then, can we with certainty distinguish between a utility token and a security-like token, bearing in mind that the latter displays characteristics of a financial instrument and is more likely to fall under existing regulation? At the heart of this debate is the elusive nature of blockchain technology and tokenization. In an ICO, the issuer is offering a product or service, which is not a financial instrument. However, it is the process of tokenizing the product/service, and the offering of tokens, which makes the token exhibit characteristics of a security due to the fact that tokens can increase in value and the economic purpose of holding a token is an investment, with an expectation of deriving an income or capital gain.

Jurisdictions will differ in their legal characterization of a security, and as it stands – the classification of tokens as securities will depend on the approach taken by relevant regulatory authorities. To illustrate the hybrid nature of tokens, there is the example of Munchee and its MUN token, which was subject to U.S Securities and Exchange Commission (SEC) scrutiny. Munchee was a restaurant review application, which sought to raise funding by issuing MUN tokens. Its Whitepaper offered a legal disclaimer and an explanation as to why its token does not constitute a security in the USA, merely conferring a utility value (token would be used within the Munchee ecosystem and not to fund its

¹⁵ For token classification, see: Saman Adhami, Giancarlo Giudici, and Stefano Martinazzi, 'Why Do Businesses Go Crypto? An Empirical Analysis of Initial Coin Offerings' (October 20, 2017). Available at: <<https://ssrn.com/abstract=3046209>> accessed 11 February 2018, Jonathan Rohr and Aaron Wright, 'Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets' (October 4, 2017). Cardozo Legal Studies Research Paper No. 527; University of Tennessee Legal Studies Research Paper No. 338. Available at: <<https://ssrn.com/abstract=3048104>> accessed 8 February 2018, 23

operation).¹⁶ However, in its analysis, the SEC halted Munchee's offering of tokens, arguing that its tokens were securities pursuant to the *SEC v. W. J. Howey Co* case¹⁷ ('Howey test').¹⁸ The crucial investment elements identified by the SEC, were (i) the purchaser's reasonable expectation of profits based on Munchee's promise to build an 'ecosystem' that would create demand for the tokens and (ii) the marketing of tokens via social media promising investors a 'return'.

The Munchee case highlights the importance of focusing on the substance, rather than the form of tokens. The following sections outline the regulatory status of ICOs in Singapore and MAS' approach to token characterization.

Singapore policy on ICOs

Instead of imposing an outright ban or legislating, Singapore considers ICOs to be regulated within existing regulations. MAS continues, on the one hand, to actively monitor ICOs within its jurisdiction while taking an inviting-approach. Recognizing the potential of the ICO funding model, MAS is cautious with regards to investor protection. Together with the Commercial Affairs Department (CAD), MAS has issued a Consumer Advisory on Investment Schemes involving Digital Tokens, advising its citizens to exercise due diligence to understand the risks associated with ICOs. In particular, it cautions about the risk of fraud, liquidity of the secondary market and the lack of transparency when making an investment.¹⁹

A GUIDE TO DIGITAL TOKEN OFFERINGS ('DTO GUIDE')²⁰

In the DTO Guide, MAS provides general guidance on the regulation of ICOs in Singapore. It makes it clear that digital tokens which fall under the category of securities will be regulated by MAS (para 2.1). Without further elaborating on which elements of a token constitute a security, digital tokens are analysed on a case-by-case basis, as to whether they fall within the definition of the Securities and Futures Act (the SFA), either as a share, a debenture or a unit in a collective investment scheme (para 2.3). If the tokens amount to securities, the ICO has to comply with relevant prospectus requirements

¹⁶ Munchee, 'Munchee Token: A decentralized Blockchain based food review/rating social media platform' (Whitepaper, 14 November 2017) Available at: <<https://s3.amazonaws.com/munchee-docs/Munchee+White+Paper+-+EN.pdf>> accessed 18 February 2018, 2-3

¹⁷ 328 U.S. 293 (1946)

¹⁸ U.S. Securities and Exchange Commission, 'In the Matter of MUNCHEE INC., Respondent' (Administrative Proceedings File No.3-18304, 11 December 2017) Available at: <<https://www.sec.gov/litigation/admin/2017/33-10445.pdf>> accessed 10 February 2018

¹⁹ Monetary Authority of Singapore, 'Consumer Advisory on Investment Schemes Involving Digital Tokens (Including Virtual Currencies)' (Media Release, 10 August 2017) Available at: <<http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/Consumer-Advisory-on-Investment-Schemes-Involving-Digital-Tokens.aspx>> accessed 10 February 2018

²⁰ Monetary Authority of Singapore, 'A Guide to Digital Token Offerings' (News and Publications, 14 November 2017) Available at: <<http://www.mas.gov.sg/~media/MAS/Regulations%20and%20Financial%20Stability/Regulations%20Guidance%20and%20Licensing/Securities%20Futures%20and%20Fund%20Management/Regulations%20Guidance%20and%20Licensing/Guidelines/A%20Guide%20to%20Digital%20Token%20Offerings%20%2014%20Nov%202017.pdf>> accessed 10 February 2018

under the SFA (para 2.5), subject to specific exemptions (para 2.6). Intermediaries who facilitate ICOs or crowdfunding platforms may need to hold a licence for dealing with securities (para 2.8). Platforms that provide secondary trading for digital tokens may need to be approved or recognized as a securities market if the tokens traded include security tokens (this includes cryptocurrency exchanges para 2.11). Even if the tokens fall outside the parameters of the SFA, they may be regarded as stored value facilities and the holder of the raised funds may need to be approved by the MAS. The DTO Guide approach leaves a wide discretion to MAS to determine whether an ICO constitutes a securities offering. Apart from the SFA, relevant AML regulation applies, together with the proposed New Payments Framework.²¹

TOKEN CHARACTERIZATION

While the DTO Guide is silent on token characterization, MAS has previously characterized an ICO token as being ‘a cryptographically-secured representation of a token-holder's rights to receive a benefit or to perform specified functions’. MAS follows a similar approach to other regulators in noting that the function of tokens has become more elaborate and they may represent ‘ownership or a security interest over an issuer’s assets or property’.²²

In the ‘DTO Guide’, MAS has clarified that if a token constitutes a product regulated under Singapore’s securities laws, the ICO issuer must comply with the applicable securities law. The managing director of the MAS, Ravi Menon, stated that ‘what makes a security a security is basically a promise; a promise to share in the economic interest of your enterprise’.²³ The DTO Guide does not give any further guidance as to what attributes of a token make it a security. This conscious decision gives flexibility to ICO issuers and addresses the inherently complex nature of tokens, which will be assessed on case-by-case basis. MAS will look at the substance of a token and examine the token structure, utility/investment elements and any rights attached to it.

Although not articulated by MAS, there are a number of elements that the ICO participants may consider to be indicative as to the nature of the token. These may include (i) the manner in which tokens are being marketed, (ii) investor motivation in purchasing tokens, (iii) any effort to list the tokens on secondary markets, (iv) prior communication with the regulatory authorities and legal advice or (v) the utility of token in the functioning of the ICO’s product.

SMART NATION

²¹ Monetary Authority of Singapore, ‘MAS Launches Second Consultation on New Regulatory Framework for Payments’ (Press release, 21 November 2017) Available at: <<http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-Launches-Second-Consultation-on-New-Regulatory-Framework-for-Payments.aspx>> accessed 10 February 2018

²² Monetary Authority of Singapore, ‘MAS clarifies regulatory position on the offer of digital tokens in Singapore’ (Press release, 1 August 2017) Available at: <<http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-clarifies-regulatory-position-on-the-offer-of-digital-tokens-in-Singapore.aspx>> accessed 10 February 2018

²³ Laura Noonan, ‘Singapore keen on initial coin offerings’ (Financial Times, 15 November 2017) Available at: <<https://www.ft.com/content/17173c92-c9e6-11e7-ab18-7a9fb7d6163e>> accessed 10 February 2018

The position of regulatory authorities in Singapore is reflective of the wider effort to become a ‘Smart Nation’, whereby Singapore is actively pursuing positive legal and regulatory approaches to technology development, particularly in the financial services industry. With regards to ICOs, Singapore pursues a more balanced approach – cautious of the risks, yet supportive of the initiatives in the FinTech sector. Singapore dominates globally as a jurisdiction for ICOs. The Association of Cryptocurrency Enterprises and Startups, Singapore (ACCESS) has stated that as of November 2017, ICOs in Singapore have raised a total of about US\$790 million,²⁴ which constituted about 20% of the total funds raised by ICOs globally in 2017.²⁵ Singapore’s stance towards ICOs sends a welcoming message to ICO issuers and is a sign of recognition that token offerings offer a new capital-raising strategy for innovative tech start-ups. Singapore’s efforts to foster a blockchain-friendly ecosystem are consistent with its ambitions to be a FinTech hub which recognizes the future role of digital currencies and blockchain technology as underpinning its tertiary sector. The DTO Guide makes this approach clear in MAS’ inclusion of ICO issuers in its Regulatory Sandbox. The regulatory approach remains technology-neutral without unnecessarily stifling the new funding model offered by ICOs.

PART C: FUTURE DIRECTIONS AND RECOMMENDATIONS

Future trends in the ICO market

Reflecting on the proceedings of the Blockchain Economic Conference, the majority of speakers agreed that the number of ICOs conducted will not slow down and Singapore will play a crucial role in facilitating the progress of ICOs into a mature funding model. Despite the aforementioned risks, the ICO market participants can expect a stronger focus on governance and self-regulation, especially with the expected entry of institutional investors. As the ICO market matures, self-regulatory initiatives that aim to standardize the industry and develop best practices by borrowing practices from the mainstream securities market, will pave the way for an engagement with regulators. Several initiatives have been proposed, among many – the ICO Code of Conduct developed by the Crypto Valley Association, ICO Governance Foundation or Token Alliance. There is a common desire in the crypto community to self-regulate and achieve community-consensus on best practices and the rules of engagement.

²⁴ For a comprehensive database of ICOs in numbers see <https://www.coindesk.com/ico-tracker/>

²⁵ Janice Lim, ‘More Singapore-based companies find appeal in Initial Coin Offerings’ (Channel News Asia, 24 November 2014) Available at: <<https://www.channelnewsasia.com/news/singapore/initial-coin-offerings-more-singapore-based-companies-9437706>> accessed 11 February 2018

Long-term regulatory considerations

In light of the above considerations, it is important for Singapore to continue to play an active role in nurturing a healthy ecosystem for ICOs, and find a middle ground between treating ICOs as inherently criminal Ponzi schemes or as the capital markets of the future. There are a number of approaches Singapore can take in nurturing such an environment:

1. **Cultivate a positive relationship with the ICO community.** Whether it is in the form of the Regulatory Sandbox or one-on-one consultations, MAS stands to benefit from engaging the ICO issuers by receiving invaluable input on the blockchain technology and in turn, from giving participants the regulatory certainty of not unexpectedly falling within a definition of a securities offering. On a greater scale, such engagement could take a form of hackathons – where the MAS would perform due diligence on ICOs within its jurisdiction.
2. **Registry of ICOs.** As it stands, there is no independent registry of ICOs in Singapore. Instead, ICOs are documented on various websites, often with incomplete information. It would be to the benefit of investors, MAS and ICO issuers to have such a registry (possibly voluntary) in order to provide independently verifiable information on ICOs.
3. **Further guidance on token characterization.** In view of the concerns voiced by the forum’s participants, detailed guidance on token characterization would be beneficial. Official guidance on token characterization should include a detailed analysis with case studies on which factors can be used to differentiate between a utility and an investment token. Such guidance should go beyond the case studies listed in the current DTO Guide.
4. **MAS ‘Cyber Unit’.** As of February 2018, MAS has set up a Financial Technology & Innovation Group and a FinTech office, with the aim of forming regulatory policies, facilitating the use of technology and developing a vibrant FinTech ecosystem, respectively. These initiatives facilitate and support innovation and Singapore’s vision of a Smart Financial Centre. Despite its friendly approach to ICOs, it is suggested that MAS should consider setting up a ‘cyber unit’ akin to the one set up by the US Securities and Exchange Commission. The unit’s focus would be on the enforcement of the position promulgated in the DTO Guide. Such initiative would send a signal to the market that MAS is serious about regulating ICOs under the securities regulation, yet at the same is cautious in excessively pursuing enforcement initiatives. A specialized unit would signal MAS’ resolve to better understand the distributed ledger technologies and cryptocurrencies.

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