

# SEFtoken: Tokenized Warrant Exercisable for Conversion for Shares

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## Abstract

A covered warrant is a security that entitles the holder (but not the obligation) to buy the underlying shares of the issuing company at a fixed price called the exercise price until the expiry date. This Whitepaper proposes a more enhanced structured financial instrument, as an improvement to the existing financial instrument/products in the warrants and options class. The advanced model outlined in the Whitepaper tokenizes a covered warrant to produce a Tokenized Warrant. The Tokenized Warrant supersedes existing token securities fund raising methods (STOs, TAOs, CSOs) by ensuring regulatory compliant fundraising for cross jurisdictional assets under both US and Australian securities laws.

The proposed advanced structure is for a tokenized covered warrant to be issued by a Delaware corporation (Issuer) in the US, to be exercised for the conversion into the shares of the underlying asset held by the issuer. The underlying asset being shares in an Australian domiciled corporation. This model has been developed instead of a more straightforward securities token offering (STO) where the underlying asset is tokenized. A STO for an already incorporated company would not be regulatory compliant across both jurisdictions since most exchanges (crypto or otherwise) do not have the infrastructure to maintain shareholder registry and trade tokens using dApps or “smart contracts” and DLT, as yet. The advanced structure model outlined in this Whitepaper achieves a regulated compliant Securities Token Offering for more complex securitizations in dual jurisdictions of the US and Australia.

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# Introduction

In 2018, blockchain or DLT, has become mainstream news, with major companies, including traditional IT vendors, attempting self-promotion of their existing product lines by shoehorning off-the-shelf SaaS DLT-based solutions, especially for the supply-chain and financial clearing, settlement and custodial services into their operations. This misses the capability of DLT. Others do see the real applications as blockchain/DLT is trumpeted as bigger than Big Data and AI.<sup>1</sup> A second trend, spurred on by the continuous release of comments and speeches from the SEC in 2017-2018, is the increasingly universal recognition that almost all tokens, especially those issued pursuant to ICOs, are *securities*, and hence fall under the jurisdiction of the SEC.<sup>2</sup> This development has given rise to security tokens offerings (STO), tokenized assets offering (TAO), crypto-security offering (CSO) which require regulated and compliant trading exchanges leaving unregulated and noncompliant cryptocurrency exchanges unable to trade tokenized securities as they scramble towards legitimacy.

This security token offering is not a utility token. The SEFtoken entitles the owner to an exercisable right to an equity shareholding in an existing economic entity. The underlying asset is fully licensed electronic Swap Execution Facility (“SEF”) derivatives Financial Market Infrastructure (FMI).

The investment structure proposed in this Whitepaper provides SEFtoken holders, subject to the smart contract provisions, with an irrevocable, exercisable right to shares in the FMI, which is being offered to sophisticated and professional investors who are accredited investors under SEC regulations<sup>3</sup>.

The Issuer of the covered warrants will use the net proceeds from the SEFtoken offering to subscribe for Shares in an FMI, the asset underpinning the covered warrant. The FMI, subject to regulatory approval, will firstly use the proceeds from the subscription to expand and develop its existing proprietary technology to use DLT to facilitate blockchain clearing for its existing approved financial products (DLT Clearing System) and be at the forefront of regulated financial market infrastructures to use DLT in achieving desirable trading outcome for liquidity investors.

Secondly, technological innovations and development in intellectual property embedded within the FMI’s existing proprietary technology will be developed to operate fully regulated and compliant Tokenized Securities Market using blockchain technology for clearing of tokenized assets (Tokenized Securities Market). Such regulated integration of DLT into currently approved FMI provides a bridge, bypassing unregulated cryptocurrency exchanges, for tokenized securities issuers to have a venue for regulatory compliant trading for their assets. The scalability of the FMI is another significant factor paving the way into the exchange-as-a-platform development industry, the PaaS market.

Lastly, the FMI’s development path includes expansion with joint venture partners to utilize the FMI’s IP and technology with distribution hubs in other fully regulated and compliant markets to improve overall liquidity of trading.

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<sup>1</sup> George F Gilder, *Life after Google: The Fall of Big Data and the Rise of the Blockchain Economy*, Gateway Editions (2018).

<sup>2</sup> If tokens are commodities, they will be regulated by the CFTC and if they are currencies, rules and regulations on KYC and AML are critical.

<sup>3</sup> US Title 17, Ch II, Pt 230, §230.501 – definition of *Accredited investor*.

# 1. Financial Derivatives and Markets

## 1.1. OTC Derivatives Market

The global OTC derivatives market in 2017 was USD13.64 trillion in gross market value.<sup>4</sup> In the United States of America, OTC derivatives can be traded on platforms known as swap execution facilities (SEF) regulated by both the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC).

## 1.2. Swap Execution Facility (SEF)

The term “swap execution facility” means<sup>5</sup> a trading system or platform in which multiple participants have the ability to execute or trade swaps by accepting bids and offers made by multiple participants in the facility or system, through any means of interstate commerce, including any trading facility, that:

- (a) facilitates the execution of swaps between persons; and
- (b) is not a designated contract market.

A SEF is similar to a formal exchange. It is a distributed group of approved trading systems. The handling of trades is similar to exchanges.

Before the Dodd-Frank Wall Street Reform and Consumer Protection Act 2010, the trading of swaps was exclusively via over-the-counter markets, with little transparency or oversight. The Dodd-Frank Act resulted in a change to the expected role of the swap execution facility, which now allows for transparency and provides a complete record and audit trail of trades.

# 2. Bitcoin, Blockchain and DLT

## 2.1. Satoshi Nakamoto, Bitcoin and Blockchain

On 31 October 2008 Satoshi Nakamoto published “Bitcoin: A Peer-to-Peer Electronic Cash System”. This was 16 days after the collapse of the US investment bank Lehman Brothers as a consequence of the global financial crisis (GFC 2007-2008). In the paper, Satoshi Nakamoto proposed amongst other things a cryptographic electronic coin, bitcoin, and the blockchain, based on peer-to-peer (decentralized) distributed ledger technology (DLT), with the important qualities of trustlessness and immutability.

Nakamoto combined several prior inventions such as b-money and HashCash to create a completely decentralized electronic cash system that does not rely on a central authority for currency issuance or settlement and validation of transactions. The key innovation was to use a distributed computation system (called a “Proof-of-Work” algorithm) to conduct a global “election” every 10 minutes, allowing the decentralized network to arrive at consensus about the state of transactions. This elegantly solves the issue of double-spend where a single currency unit can be spent twice. Previously, the double-spend problem was a weakness of digital currency and was addressed by clearing all transactions through a central clearinghouse.<sup>6</sup>

<sup>4</sup> BIS Statistics (<https://www.bis.org/statistics/derstats.htm?m=6%7C32%7C71>)

<sup>5</sup> Commodity Exchange Act s 5h (7 USC 7b-3)

<sup>6</sup> Andreas M Antonopoulos, *Mastering Bitcoin* (2ed 2017: O'Reilly) p 4.

## 2.2. DLT: Use Cases

In financial markets, DLT is considered to be the most promising technological innovation leading to the next revolution in derivatives trading via SEFs.

The use cases for DLT in finance are tokenization of commodities and assets (tangible and intangible) and their derivatives, payments systems, registration and certification of identification (for KYC and AML purposes), and registration of records for settlement and custodial purposes.

DLT also offers the ability for bilaterally settled trades to be instantly cleared and settled across traditional financial products and tokenized securities classes, thus eliminating counterparty risk in regulated SEF markets.

## 3. Tokens are Securities

### 3.1. SEC

On 25 July 2017, the SEC issued a Report of Investigation under Section 21(a) of the Securities Exchange Act of 1934 describing an SEC investigation of The DAO, a virtual organization, and its use of distributed ledger or blockchain technology to facilitate the offer and sale of DAO Tokens to raise capital. The Commission applied existing US federal securities laws to this new paradigm, determining that DAO Tokens were securities. The Commission stressed that those who offer and sell securities in the U.S. are required to comply with federal securities laws, regardless of whether those securities are purchased with virtual currencies or distributed with blockchain technology.<sup>7</sup>

The SEC on the same day released an Investor Bulletin stating: “Depending on the facts and circumstances of each individual ICO, the virtual coins or tokens that are offered or sold may be securities. If they are securities, the offer and sale of these virtual coins or tokens in an ICO are subject to the federal securities laws.”<sup>8</sup>

In his testimony before the Committee on Banking, Housing, and Urban Affairs of the United States Senate on 6 February 2018,<sup>9</sup> SEC Chairman Jay Clayton stated his belief that most ICOs to date were securities offerings requiring compliance with US securities regulation.

The SEC published a Statement on Digital Asset Securities Issuance and Trading on November 16 2018.<sup>10</sup> The Statement and civil penalties proceedings against two ICO Issuers reaffirm the SEC’s conviction that a digital asset is very likely a security under the Securities Act and requires registration.

“The registration undertakings are designed to ensure that investors receive the type of information they would have received had these issuers complied with the registration provisions of the Securities Act of 1933 (“Securities Act”) prior to the offer and sale of tokens in their respective ICOs. With the benefit of the ongoing disclosure provided by registration under the Exchange Act, investors who purchased the tokens from the issuers in the ICOs should be able to make a more

<sup>7</sup> <https://www.investor.gov/additional-resources/news-alerts/alerts-bulletins/investor-bulletin-initial-coin-offerings>.

<sup>8</sup> Ibid.

<sup>9</sup> “There should be no misunderstanding about the law. When investors are offered and sold *securities* – which to date ICOs have largely been – they are entitled to the benefits of state and federal securities laws and sellers and other market participants must follow these laws.” [emphasis added] (<https://www.sec.gov/news/testimony/testimony-virtual-currencies-oversight-role-us-securities-and-exchange-commission>).

<sup>10</sup> Joint Statement of the Division of Corporation Finance, Division of Investment management, and Division of Trading and Markets (<https://www.sec.gov/news/public-statement/digital-asset-securities-issuance-and-trading>). This was followed by civil penalties proceedings against two ICO Issuers who have settled the charges: <https://www.sec.gov/news/press-release/2018-264>.

informed decision as to whether to seek reimbursement or continue to hold their tokens.”<sup>11</sup>

## 3.2. The *Howey* Test

Under section 2(a)(1) of the Securities Act and section 3(a)(10) of the Securities Exchange Act, a security includes, among other items, “an investment contract.” An investment contract is an investment of money in a common enterprise with a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others. See *SEC v Edwards* 540 US 389, 393 (2004); *SEC v WJ Howey Co*, 328 US 293, 301 (1946); see also *United Housing Found, Inc v. Forman* 421 US 837, 852-53 (1975).

## 3.3. Securities Token Offering (STO)

It is clear that the idea of an ICO as an alternative to the traditional Wall Street IPO is a disruptive innovation into the capital fund-raising sphere, but not well founded on legal principles. As the Chairman of the SEC stated, most, if not all, ICOs are in substance structured as a securities offering.<sup>12</sup>

“It is possible to conduct an offer and sales of securities, including an ICO, without triggering the SEC’s registration requirements. For example, just as with a Regulation D exempt offering to raise capital for the manufacturing of a physical product, an ICO that is a security can be structured so that it qualifies for an applicable exemption from the registration requirements.”<sup>13</sup>

The SEFtoken offering is structured as a securities offering, i.e. a securities token offering (STO), in compliance with US securities regulations. The SEFtoken offering for domestic fundraising in the US is relying on the exemption granted pursuant to the regulations, Reg D 506(c). There is also a concurrent offering for persons outside of the US pursuant to the exemption under Reg S.

# 4. Securities: Warrants

## 4.1. Options

Shares in a company or corporation are the most common method of investment and ownership and sharing the potential and future profits. If share ownership is possible, and if the circumstances permit, alternative indirect methods of owning shares, and thereby sharing the potential capital growth, are available. An option to purchase shares (a *call* option) is one possible method. Options, in the main, are considered to be part of the larger class of financial instruments or products known as derivatives, and are traded on options exchanges such as the CBOE. Options are also traded on OTC facilities. Options, together with another class of financial products called futures, are used in contemporary global finance as a hedging mechanism to secure against price fluctuations, and also in speculative trading.

## 4.2. Warrants

Warrants are similar to options, in particular, call options. A warrant is a security that entitles (but does not obligate) the holder to buy the underlying shares of the issuing company at

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<sup>11</sup> Ibid .Statement

<sup>12</sup> See also speech by William Hinman, Director, Division of Corporation Finance, SEC, “Digital Asset Transactions: When Howey Met Gary (Plastic)” at the Yahoo Finance All Markets Summit: Crypto on 14 June 2018 (<https://www.sec.gov/news/speech/speech-hinman-061418>).

<sup>13</sup> SEC Chairman Jay Clayton’s testimony before the Committee on Banking, Housing, and Urban Affairs of the United States Senate on 6 February 2018 (<https://www.sec.gov/news/testimony/testimony-virtual-currencies-oversight-role-us-securities-and-exchange-commission>).

a fixed price called the exercise price (usually at a premium) until the expiry date. Warrants are limited liability instruments, in that there are usually no further payments to be made beyond the initial and/or the strike price (optional exercise). Warrants do not pay dividends or come with voting rights. Whilst options are mainly publicly traded on exchanges on standardized terms and conditions, warrants are issued by corporations. Traditional equity warrants issued by a corporation are dilutive in the effect on the existing shareholding. Call options, in contrast, are not dilutive.

### 4.3. Covered Warrants

There is a specific type of warrant which has the same effect as a call option in not being dilutive on the shareholding of the corporation: a covered warrant (also known as structured warrants). An issuer of covered warrants will usually have purchased the shares in the corporation prior to the issue, or the issuer has a mechanism, such as a share subscription agreement, through which they can obtain the shares. Typically covered warrants are issued by banks and financial institutions as debt offerings traded on securities exchanges (e.g., London Stock Exchange, the ASX), and settled for cash.

### 4.4. Securities Act 1933

Section 2: (1): The term “security” means any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security”, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing. [emphasis added]

In the US, a warrant to purchase stock (or shares) is a security pursuant to the Securities Act 1933.

## 5. SEF: Mercari Pty Limited

### 5.1. Mercari Pty Ltd, licensed as an SEF

Mercari Pty Ltd (Mercari) is an Australian incorporated company established in 2003 to build and operate an OTC market place. It has operated a regulated Swap Execution Facility in Australia since 2005.

### 5.2. Australian Market Licence

Mercari was granted an Australian Market Licence in 2005<sup>14</sup> and is licensed to operate the market known as Mercari Direct. The licence allows the following classes of financial product to be traded on Mercari Direct:

- (a) interest rate derivatives;
- (b) foreign exchange derivatives;

<sup>14</sup> [https://download.asic.gov.au/media/1340738/Mercari\\_AML.pdf](https://download.asic.gov.au/media/1340738/Mercari_AML.pdf); <https://download.asic.gov.au/media/1340732/Mercari-Variation-Notice-2010.pdf>

- (c) commodity derivatives;
- (d) energy derivatives; and
- (e) environmental derivatives.

Mercari Direct is conducted using Mercari's proprietary eSEF (electronic swaps execution facility) technology. As an OTC market platform, Mercari eSEF has been uniquely designed to meet the specialist requirements of OTC markets and dealers. Through its innovative and flexible system, Mercari has proven itself to deliver fast, efficient, relevant and reliable OTC markets.

### 5.3. Application Process for Australian Market Licence

Any entity that applies for an Australian Market Licence is heavily scrutinized by the Australian regulator, ASIC, before the Market Licence is granted. The application process is long and the application document alone can run to hundreds of pages.

The process to obtain a Market Licence may take anywhere from 24 months to 48 months with no certainty of success. In order for any entity to be granted an Australian Market Licence, it must be compliant with the requirements set out in ASIC Regulatory Guide 172<sup>15</sup>.

### 5.4. Obligations under Chapter 7 of the Australian *Corporations Act* 2001 (Cth)

Section 792A sets out the general obligations of a market licensee. Those which are relevant to Mercari are as follows.

Mercari must:

- (a) to the extent that it is reasonably practicable to do so, do all things necessary to ensure that the market is a fair, orderly and transparent market; and
- (b) comply with the conditions on the licence; and
- (c) have adequate arrangements (which may involve the appointment of an independent person or related entity) for operating the market, including arrangements for:
  - i. handling conflicts between the commercial interests of the licensee and the need for the licensee to ensure that the market operates in the way mentioned in paragraph (a); and
  - ii. monitoring and enforcing compliance with the market's operating rules; and
- (d) have sufficient resources (including financial, technological and human resources) to operate the market properly; and
- (e) if section 881A requires there to be compensation arrangements in relation to the market that are approved in accordance with Division 3 of Part 7.5 ensure that there are such approved compensation arrangements in relation to the market; and
- (f) take all reasonable steps to ensure that no disqualified individual becomes, or remains, involved in the licensee (see Division 2 of Part 7.4).

### 5.5. Other Obligations under Chapter 7

- (a) under section 792B, Mercari has an obligation to notify ASIC of certain matters, including:
  - i. if it becomes aware that it may no longer be able to meet, or has breached, an obligation under section 792A;

<sup>15</sup> <https://download.asic.gov.au/media/4720076/rg172-published-4-may-2018.pdf>



- ii. if it provides a new class of financial service incidental to the operation of the market;
  - iii. if it takes any kind of disciplinary action against a participant in the market;
  - iv. if it has reason to suspect that a person has committed, is committing, or is about to commit a significant contravention of the market's operating rules;
  - v. if it becomes aware of:
    - A. matter that the licensee considers has adversely affected, is adversely affecting, or may adversely affect the ability of a participant in the market, who is a financial services licensee, to meet the participant's obligations as a financial services licensee; or
    - B. a matter, concerning a participant in the market who is a financial services licensee, that is of a kind prescribed by regulations made for the purposes of this paragraph;
  - vi. if a person becomes or ceases to be a director, secretary or senior manager of a market licensee or of a holding company of a market licensee (including when a person changes from one of those positions to another);
- (b) under section 792C, if Mercari makes information about a listed disclosing entity available to participants in the market (whether or not Mercari also makes the information available to anyone else), Mercari must give ASIC the same information as soon as practicable;
  - (c) under section 792D Mercari must give such assistance to ASIC, or a person authorized by ASIC, as ASIC or the authorized person reasonably requests in relation to the performance of ASIC's functions;
  - (d) under section 792E Mercari must give a person authorized by ASIC such reasonable access to the market's facilities as the person requests for any of the purposes of Chapter 7;
  - (e) under section 792F Mercari must, within 3 months after the end of its financial year, give ASIC an annual report on the extent to which the licensee complied with its obligations as a market licensee under Chapter 7. This annual report must be accompanied by any information and statements prescribed by relevant regulations, be accompanied by any audit report that the Minister requires under subsection section 792E(4);
  - (f) under section 792G Mercari has an obligation to notify people about clearing and settlement arrangements in certain circumstances;
  - (g) under section 792I Mercari must take reasonable steps to ensure that information about the compensation arrangements that are in place under Part 7.5 of the Corporations Act is available to the public free of charge; and
  - (h) section 793A requires Mercari to have in place operating rules which comply with the regulations.

## 5.6. Australian Financial Services Licence

Section 911A of the *Corporations Act 2001* requires all entities that "carry on a financial services business in Australia" to hold an Australian Financial Services Licence (AFSL) or to rely on an exemption from the requirement to hold an AFSL. Mercari holds AFSL number 229935.

Mercari's AFSL authorizes it to (in relation to wholesale clients):

- (a) provide financial product advice in relation to:
  - i. derivatives;
  - ii. foreign exchange contracts;
  - iii. carbon units;

- iv. Australian carbon credit units; and
- v. eligible international emissions units;
- (b) deal in a financial product by arranging for another person to issue, apply for, acquire, vary or dispose of a financial product in respect of the following:
  - i. derivatives;
  - ii. foreign exchange contracts;
- (c) deal in a financial product by arranging for another person to apply for, acquire, vary or dispose of a financial product in respect of the following:
  - i. derivatives;
  - ii. foreign exchange contracts;
  - iii. carbon units;
  - iv. Australian carbon credit units; and
  - v. eligible international emissions units.

## 5.7. Application Process for an AFSL

Any entity that applies for an AFSL is heavily scrutinized by ASIC before the AFSL is granted. The application process is involved, requiring (at a minimum) submission of the following:

- (a) ASIC Form FS01;
- (b) A5 Business Description Proof application document;
- (c) People Proof application documents in relation to each Responsible Manager attached to the AFSL;
- (d) B1 Organizational Competence Proof application document; and
- (e) B5 Financial Statements and Financial Resources Proof application document.

The process to obtain an AFSL may take anywhere between 3 and 8 months.

## 5.8. AFSL Obligations under Chapter 7 of the Corporations Act

Section 912A of the Corporations Act imposes the following obligations on an AFSL holder:

- (a) a duty to do all things necessary to ensure that the financial services covered by the license are provided efficiently, honestly and fairly (s 912A(1)(a));
- (b) a duty to have adequate arrangements in place for the management of conflicts of interest (s 912A(1)(b));
- (c) a duty to comply with the financial services laws<sup>1</sup> (s 912A(1)(c));
- (d) a duty to take reasonable steps to ensure that the AFSL holder's representatives comply with financial services laws (s 912A(1)(ca));
- (e) a duty to ensure that the AFSL holder's representatives are adequately trained, and are competent, to provide the financial services covered by the license (s 912A(1)(f));
- (f) a duty to self-report breaches of the above duties with ASIC (s 912D); and
- (g) a duty to file audited accounts (s 998B).

ASIC Regulatory Guide 104<sup>16</sup> deals with the general obligations imposed on AFSL holders.

ASIC also imposes conditions on each AFSL granted. These conditions are standardized and are set out in ASIC Pro Forma 209<sup>17</sup>.

<sup>16</sup> <https://download.asic.gov.au/media/3278615/rg104-published-1-july-2015.pdf>

<sup>17</sup> <https://download.asic.gov.au/media/4501243/pf209-published-29-september-2017.pdf>

## 6. Tokenization of a Warrant as a Fundraising Mechanism

### 6.1. An Advanced Structure of the STO

To date, a warrant is a security that entitles the holder (but not the obligation) to buy the underlying shares of the issuing company at a fixed price called exercise price (usually at a premium) until the expiry date.

**This Whitepaper proposes a more enhanced structured financial instrument, as an improvement to the existing financial instrument/products in the warrants and options class. The enhanced structured financial instrument outlined in the Whitepaper tokenizes a covered warrant to produce a Tokenized Warrant. The Tokenized Warrant supersedes existing token securities fund raising (STOs, TAOs, CSOs) by ensuring regulatory compliant fundraising for cross jurisdictional assets under both US and Australian securities laws.**

The enhanced structured financial instrument is for a tokenized covered warrant to be issued by a corporation (Issuer) in the US, to be exercised for the conversion into the shares of the underlying asset held by the issuer. The underlying asset being shares in an Australian domiciled corporation. This model is adopted instead of a more straightforward securities token offering (STO) version with the underlying asset tokenized. A more straightforward STO for already incorporated companies would not be regulatory compliant across both jurisdictions since most exchanges (crypto or otherwise) are not geared to maintaining shareholder registry and trading tokens using dApps or “smart contracts” and DLT, as yet.<sup>18</sup>

The advanced structure model outlined in this Whitepaper achieves a regulated compliant Securities Token Offering for more complex securitizations in dual jurisdictions of the US and Australia.

### 6.2. Tokenizing the Underlying Asset, SEF Mercari Pty Limited: the Challenge(s) of the Present Status Quo

Mercari is an Australian limited liability company with a share capital structure, regulated under the *Corporations Act 2001*. Pursuant to the *Corporations Act 2001*, Mercari is obligated to maintain a registry of members (shareholders) with names and addresses and date of first entry as member as well as information on the shares including allotment, number of shares per allotment, class of shares, amount paid/unpaid. The registry can be in an electronic form albeit with the proviso that it can be provided on request “as a delimited text file produced by a commercially available spreadsheet or database application and copied onto a CD-ROM or a USB portable memory device”.<sup>19</sup>

In Australia, a company must ensure that each share in a company is distinguished by an appropriate number or are issued a certificate each distinguished by an appropriate number, unless the operating rules of the clearing and settlement facility provides otherwise for the purpose of transferring a share. The importance of these regulations lie in the recognition of the provisions as governing the admissibility as evidence in any litigation.

The challenge is to translate the requirements under the *Corporations Act 2001* to the tokenized securities model. As part of its continued development, Mercari intends, together

<sup>18</sup> ASX in Australia has announced a blockchain-based replacement of its registry and settlement facility, CHESS, to one based on DLT technology developed by Digital Asset (<https://www.asx.com.au/services/chess-replacement.htm>). But ASX has also announced a delay to the go-live date, now projected to be March-April 2021.

<sup>19</sup> *Corporations Regulations 2001* (Cth) 2C.1.02.

with the rest of the industry, to lobby and petition for regulatory changes to ensure Australia's regulatory system remains internationally competitive in this changing landscape, as financial products move to tokenization. Mercari's focus will be to seek appropriate regulatory change to ensure that once the tokenized warrants are exercised by token holders into shares, Mercari's share register may legitimately be maintained using dApps or "smart contracts" and DLT. Further, subject to regulatory approval, the Mercari Shares, now tokenized, will be able to be traded on exchanges with appropriate regulatory approval to trade tokenized equity securities in comparable and compliant jurisdictions (Designated Exchanges).

### 6.3. An Advanced Structure: The Tokenized Warrant Model (TWM)

As a partial solution to the challenges iterated above and an enhancement to the STO model, this Whitepaper proposes a tokenized warrant convertible to shares in Mercari, such tokens tradeable (after prescribed restricted period) on approved facilities including the Mercari Tokenized Securities Market and other designated exchanges in comparable, compliant jurisdictions.

A warrant is in essence a *call option*, ie the right, but not the obligation, to take a *long* position in an underlying financial asset at a fixed cost at any time prior to and including a fixed date in the future. There are at least two kinds of options, the *American* option and the *European* option. The tokenized warrant model (TWM) presented here is based on the American option, ie an option which can be exercised at any time point prior to and including the expiration date. There two significant features of an American option relevant to the TWM: time (duration) and intrinsic value or immediate exercise value.

The moneyness of a warrant (call option) is also critical to the model. Assuming the following:

Let  $t$  be the current time,  $T$  the expiration date of the warrant,  $S_t$  the current price of the underlying financial asset or scenario, and  $E$  the exercise price of the warrant.

A warrant is said to be,

- (a) *in-the-money [ITM]* at time  $t$  if  $S_t > E$ .
- (b) *at-the-money [ATM]* at time  $t$  if  $S_t = E$ .
- (c) *out-of-the-money [OTM]* at time  $t$  if  $S_t < E$ .

A warrant's *Intrinsic Value (Immediate Exercise Value)* at a specific time  $t$  is,

$$\begin{aligned} \text{MAX}[S_t - E, 0] &= S_t - E \text{ if } S_t \geq E \\ &= 0 \text{ if } S_t < E \end{aligned}$$

The Intrinsic Value of a warrant as its immediate value *if* one could exercise it immediately, i.e. if one could exercise the warrant at time  $t$ , then one buys the underlying for  $\$E$  per unit by exercising the warrant. One could then sell the underlying asset at its market price,  $S_t$  to realize the warrant's value.

A warrant's *Time Premium* is the value associated with the ability to exercise the warrant at *any time in the future* (not immediately) prior to and including the expiration date.

A warrant confers on the holder two rights:

- (a) the right to exercise the warrant *immediately*, which is the intrinsic value;
- (b) the right to exercise the warrant in the *future*, which is the time premium.

There is a possible third right: the right to sell the warrant to someone else, the *liquidity* option. But this is considered as part of transactional costs rather than embedded rights feature.

The basic warrant pricing model is the following, where  $C^w_t$  denotes the current (time  $t$ ) value:

$$C^w_t = (\text{Call Intrinsic Value})_t + (\text{Call Time Premium at time})_t$$

$$C^w_t = IV(C^w_t) + TP(C^w_t)$$

There are two more sophisticated warrant (option) pricing models:

- (a) The *rational option process* (ROP) – which begins by not making any assumptions about the process generating the underlying's prices. It does this by trying put bounds on options prices without attaching actual, unique numbers or formulas to them, i.e. looks for relationships between puts and calls. The net result of ROP is usually a range of option prices rather than specific option prices. ROP only holds for *all* arbitrage-free processes underlying the warrant.
- (b) The *model-based option pricing* (MBOP) – this includes the *binomial* and the *Black-Scholes* models, of which the binomial model is more suitable for American options.

### Rational option process (ROP)

If a warrant price is above the upper bound or below the lower bound, then there are profitable opportunities for arbitrageurs.

A warrant gives the holder the right to buy one share of a stock for a certain price. No matter what happens, the option can never be worth more than the stock. Hence, the stock price is an upper bound to the option price:

$$C^w \leq S_t$$

If this relationship was not true, an arbitrageur could easily make a riskless profit by buying the stock and selling the warrant.

The nominal lower bound is intrinsic value  $IV_t = \text{MAX}[S_t - E, 0]$ . A lower bound ROP result for warrants is:

$$C_w(S_t, \tau, E) \geq \text{MAX}[S_t - E, 0] \text{ (Lower Bound Warrants (LBW))}$$

for all underlying stock prices  $S_t$  and all times  $t$  prior to the maturity date.

According to the Warrant Pricing Model, at maturity it is clear that:

$$C_w(S_T, 0, E) \geq \text{MAX}[S_T - E, 0]$$

because there is no time premium. If the LBW does not hold, there would be an arbitrage opportunity.

### Binomial Option Pricing Model

The Cox, Ross, and Rubinstein binomial option pricing model was developed in 1979 using an iterative procedure, allowing for the specification of nodes, or points in time, during the time span between the valuation date and the option's expiration date. The model reduces possibilities of price changes and removes the possibility for arbitrage. It is also based on assumption of an efficient market.

Due to its simple and iterative structure, the binomial option pricing model presents certain unique advantages. For example, since it provides a stream of valuations for a warrant for each node in a span of time, it is useful for valuing warrant. It is also much simpler than other pricing models such as the Black-Scholes model.

## Trading Strategies

The above warrant pricing model assumes an arbitrage-free scenario. Because of the unique enhanced\_STO proposed in this Whitepaper, ie, the SEFtoken warrant, there is created opportunities for arbitrating trading as well as development of other derivatives based on the trading of the SEFtoken warrants.

The extra trading generated improves liquidity for the SEFtoken itself as well as for the underlying security, i.e. the Mercari shares.

## 6.4. The Future: the DLT Exchange<sup>20</sup>

The SEC in its November 16 Statement has made it very clear that “A platform that offers trading in digital asset securities and operates as an “exchange” (as defined by the federal securities laws) must register with the Commission as a national securities exchange or be exempt from registration.”<sup>21</sup> The SEC recognizes the innovation brought about by DLT as a main catalyst for advancements in the exchange trading environment.

Platforms colloquially referred to as “decentralized” trading platforms, for example, combine traditional technology (such as web-based systems that accept and display orders and servers that store orders) with new technology (such as smart contracts run on a blockchain that contain coded protocols to execute the terms of the contract). These technologies provide the means for investors and market participants to find counterparties, discover prices, and trade a variety of digital asset securities.<sup>22</sup>

In addition to the above, and apart from real time settlement and transparent records to increase effectiveness of monitoring and surveillance, an additional advantage that DLT exchanges have over traditional exchanges is the provision of more concrete guarantees of security to participants against hacking since there is no longer a central body holding funds allowing users to trade in a trustless manner (without a person in the middle). The burden of securing the transaction remains solely with the individual rather than relying on a single central custodian.

“Ox is an open protocol for decentralized exchange on the Ethereum blockchain. It is intended to serve as a basic building block that may be combined with other protocols to drive increasingly sophisticated dApps [4]. Ox uses a publicly accessible system of smart contracts that can act as shared infrastructure for a variety of dApps”.<sup>23</sup>

The innovation which Ox has adopted in order to counter/overcome the chief deficiency of existing attempts at decentralized exchanges, namely “high friction costs on market makers”, is an “off-chain order relay with on-chain settlement”. This utilizes state channels to scale up the Ethereum blockchain in terms of speed of transactions as well as automated market maker smart contracts as an alternative to an on-chain order book.

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<sup>20</sup> Will Warren, Amir Bandeali, “Ox: An open protocol for decentralized exchange on the Ethereum blockchain, February 21, 2017.

<sup>21</sup> See note 10.

<sup>22</sup> Ibid.

<sup>23</sup> See note 20.

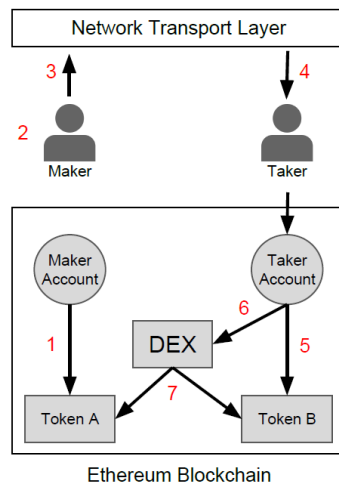


Figure 2: Off-chain order relay, on-chain settlement diagram. Gray rectangles and circles represent Ethereum smart contracts and accounts, respectively. Arrows pointing to Ethereum smart contracts represent function calls; arrows are directed from the caller to the callee. Smart contracts can call functions within other smart contracts. Arrows external to the Ethereum blockchain represent information flow.

1. Maker approves the decentralized exchange (DEX) contract to access their balance of Token A<sup>2</sup>.
2. Maker creates an order to exchange Token A for Token B, specifying a desired exchange rate, expiration time (beyond which the order cannot be filled), and signs the order with their private key.
3. Maker broadcasts the order over any arbitrary communication medium.
4. Taker intercepts the order and decides that they would like to fill it.
5. Taker approves the DEX contract to access their balance of Token B.
6. Taker submits the makers signed order to the DEX contract.
7. The DEX contract authenticates makers signature, verifies that the order has not expired, verifies that the order has not already been filled, then transfers tokens between the two parties at the specified exchange rate.

The Ox protocol utilizes the off-chain order relay to include data such as order parameters and an associated signature. The order parameters are secured by cryptographic hashing, the Keccak SHA3.

Point-to-point orders allow two parties to directly exchange tokens between each other using just about any communication medium they prefer to relay messages. The packet of data that makes up the order is a few hundred bytes of hex that may be sent through email, a Facebook message, whisper or any similar service. The order can only be filled by the specified taker address, rendering the order useless for eavesdroppers or outside parties.

Swap<sup>24</sup> is a protocol to facilitate a true peer-to-peer ecosystem for trading tokens on the Ethereum blockchain. It is a protocol for a dApp to fill a trading order on the blockchain. It follows Ox in utilizing an “off-chain order relay with on-chain settlement”. The order API is off-chain. Swap also includes an Indexer protocol which is an off-chain service that aggregates and matches peers based on their intent to trade. Swap also makes use of Ox off-chain order relayers concept. Airswap<sup>25</sup> is the implementation of the Swap protocol.

An easier implementation of the DLT is in the area of clearing and settlement, and registry. Various securities exchanges and banks around the world have announced projects to build

<sup>24</sup> Michael Oved, Don Mosites, “Swap: A Peer-to-Peer Protocol for Trading Ethereum Tokens”, 10 May 2017.

<sup>25</sup> <https://www.airswap.io/>; <https://www.fluidity.io/airswap>

a settlement system for both securities assets and tokenized assets and digital currencies, including the SGX<sup>26</sup> and the ASX.<sup>27</sup>

Mercari intends to implement a clearing and settlement process onto its platform utilizing DLT with the goal of a T+0 settlement thus eliminating bilateral counterparty credit risk for participants trading on the Mercari FMI.

## 6.5. The Future: Tokenizing Securities/Assets

Tokenizing the warrants is merely a first step into improving the STO/TAO/CSO market. There is every intention to pursue a conversation with all relevant regulators from appropriate jurisdictions to proceed with tokenizing securities themselves to allow trading on approved electronic facilities including those based on DLT.

The Delaware Senate Bill 69<sup>28</sup> in 2017 amended Title 8 of the Delaware Code relating to the General Corporation Law (the Delaware Bill) to authorize “Delaware corporations to use networks of electronic databases (examples of which are described currently as “distributed ledgers” or a “blockchain”) for the creation and maintenance of corporate records, including the corporation’s stock ledger.”<sup>29</sup> An Ethereum EIP-884 has been set up on GitHub to produce an ERC-20 compatible token, ERC-884 token, which conforms to the Delaware amendments.<sup>30</sup>

The Ox protocol also includes a Token Registry dApp which will be used to “store a list of ERC-20 tokens with associated metadata for each token: name, symbol, contract address, and the number of decimal places needed to represent a token’s smallest unit (needed to determine exchange rates). The registry will serve as an official on-chain reference that may be used by market participants to independently verify token addresses and exchange rates before executing a trade.”<sup>31</sup>

As previously mentioned, it is the intention of Mercari to have its shares tokenized in a regulatory compliant manner. The legislative framework proposed by the Delaware Bill provides a blueprint for other jurisdictions, such as Australia, to adopt provided they are mindful to expand the concept of a company register to encompass dApps or “smart contracts” and DLT.

## 6.6. The Future: Tokenizing Debts

An even bigger market than the equities securities market is the debt market. Despite misgivings about collateralized debt obligations since the GFC 2007-2008, debt involving securitization and asset-backed securities remains a tradeable asset, albeit usually only within the OTC market on very large scale. Collateralized debt obligations (CDOs), fixed income securities and other forms of debt can be tokenized for the purpose of retirement financial planning, superannuation, pension and annuity.

The Dharma protocol defines a procedure for issuing, funding, administering, and trading debt assets using a set of smart contracts, keeper marketplaces, and standardized interfaces.<sup>32</sup> The Dharma protocol is based on Ox protocol as well.

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<sup>26</sup>

[http://www.sgx.com/wps/wcm/connect/sgx\\_en/home/highlights/news\\_releases/MAS\\_and\\_SGX\\_partner\\_Anquan\\_Deloitte\\_and\\_Nasdaq\\_to\\_harness\\_blockchain\\_technology\\_for\\_settlement\\_of\\_tokenized\\_assets](http://www.sgx.com/wps/wcm/connect/sgx_en/home/highlights/news_releases/MAS_and_SGX_partner_Anquan_Deloitte_and_Nasdaq_to_harness_blockchain_technology_for_settlement_of_tokenized_assets)

<sup>27</sup> <https://www.asx.com.au/services/chess-replacement.htm>

<sup>28</sup> 149<sup>th</sup> General Assembly effective 21 July 2017.

<sup>29</sup> <https://legis.delaware.gov/BillDetail?LegislationId=25730>

<sup>30</sup> <https://github.com/ethereum/EIPs/blob/master/EIPS/eip-884.md> and <https://github.com/davesag/ERC884-reference-implementation>

<sup>31</sup> Op cit note 14.

<sup>32</sup> Nadav Hollander, “Dharma: A Generic Protocol for Tokenized Debt Issuance”, Version 2.0



CDx<sup>33</sup> is a protocol that enables the issuance, trading, and resolution of tokenized credit default swaps on the Ethereum blockchain. The protocol serves as an open standard for participants to both price and trade different types of credit risk in a fully trustless, peer-to-peer setting. It follows the lead of Ox in utilizing off-chain relaying of orders and on-chain settlement of contracts. CDx builds upon the previous protocol standards developed by Ox and Dharma.

In relation to the issuance of corporate bonds via DLT, in August 2018 the World Bank engaged the Commonwealth Bank of Australia to issue a bond using a private Ethereum blockchain. The Blockchain Offered New Debt Instrument (bond-i) will be issued by the World Bank in Washington<sup>34</sup>.

The project has been spearheaded by the World Bank, which is looking to use blockchain technology to improve the way it issues bonds around the world, to provide a more transparent and lower-cost process for debt capital issuance and more liquid markets for the trading of corporate bonds.

## 6.7. The Future: Tokenizing Derivatives

Historically, derivatives served an essential function within the finance sector, namely the hedging of risks, and remains so to the present time. The chief instruments classed as derivatives are forward contracts, futures contracts, options and swaps.

Presently, bitcoin futures are tradeable on the Cboe Futures Exchange, LLC (CFE) and the CME Globex electronic trading platform. Cryptocurrency derivatives, fully collateralized, physically-settled, bitcoin swaps and options, are traded on LedgerX, a CFTC-registered SEF and CDO (note that this is an OTC facility). TeraExchange, also a SEF, allows trades in Bitcoin forward contracts. Others in the planning or testing stages include SharesPost,<sup>35</sup> However, these are not DLT-based platforms or facilities. There are DLT-based exchanges and facilities which are currently in planning or testing stages including SIX Digital Exchange,<sup>36</sup> Blocktrade.com,<sup>37</sup> Open Finance Network,<sup>38</sup> Templum Markets,<sup>39</sup> Hyperion Exchange,<sup>40</sup> SMART VALOR,<sup>41</sup> Bakkt,<sup>42</sup> tZERO,<sup>43</sup> EMX,<sup>44</sup> SeedCX,<sup>45</sup> Tradewind,<sup>46</sup> and δY/δX.<sup>47</sup>

The published Remarks of Commissioner Brian Quintenz at the 38th Annual GITEX Technology Week Conference on October 16 2018<sup>48</sup> outlines the possible approach of the US Commodity Futures Trading Commission (CFTC) on tokenized derivatives. The Commissioner pointed out the challenges DLT brings to the regulatory world of derivatives.

In the past, the CFTC has supervised the derivatives markets through the registration of market intermediaries. For example, much of the CFTC's regulatory structure for promoting market integrity and protecting customers revolves around the regulation of exchanges, swap dealers, futures commission merchants, clearinghouses, and fund managers. However, this supervisory framework is not applicable in the disintermediated world of blockchain, which raises several complex

<sup>33</sup> Andrew Young, Julian Wilson, "CDx: Credit Default Swaps on the Ethereum Public Blockchain", Version 0.5, September 4th, 2018.

<sup>34</sup> <https://cointelegraph.com/news/world-banks-blockchain-based-bonds-a-step-toward-adoption>

<sup>35</sup> <https://sharespost.com/>

<sup>36</sup> <https://www.six-group.com/en/site/digital-exchange.html>

<sup>37</sup> <https://blocktrade.com/>

<sup>38</sup> <https://www.openfinance.io/>

<sup>39</sup> <https://www.tradetemplum.com/>

<sup>40</sup> <https://hyperion.exchange/>

<sup>41</sup> <https://smartvalor.com/>

<sup>42</sup> <https://www.bakkt.com/index>

<sup>43</sup> <https://www.tzero.com/>

<sup>44</sup> <https://www.emx.com/en/>

<sup>45</sup> <https://www.seedcx.com/>

<sup>46</sup> <https://www.tradewindmarkets.com/index>

<sup>47</sup> <https://dydx.exchange/>

<sup>48</sup> <https://www.cftc.gov/PressRoom/SpeechesTestimony/opaquintenz16>

legal and policy issues. In the context of decentralized blockchains, like ethereum, on top of which multiple applications can run autonomously via smart contracts, it requires identifying who is responsible for ensuring that activity on the blockchain complies with the law.<sup>49</sup>

In addition to regulating the *actors* and the difficulties that presents, the Commissioner discussed the hypothetical instance of “a smart contract protocol that may implicate its regulations”. The Commissioner recommended the following steps in analysis:<sup>50</sup>

- (1) the first step in the analysis is defining the basic nature of the contract. Is it a contract for sale or a rental agreement? Or, does it have the essential characteristics of a swap, future or option? If so, is the product accessible by U.S. persons? If the contract is a product within the CFTC’s jurisdiction, then regardless of whether it is executed via a written ISDA confirmation or software code, it is subject to CFTC regulation;
- (2) is the method by which it is being transacted on the blockchain compliant with CFTC regulations? If the contract is a swap, is it being offered to retail participants? Is it a product that must be traded on an exchange? Does the protocol itself perform exchange-like functions by facilitating trading, thereby potentially implicating registration requirements?
- (3) If the hypothetical product at issue is within CFTC’s jurisdiction, but is not being executed in a manner compliant with CFTC rules. Who should be held responsible for this activity? How should the CFTC enforce its regulations against a software code, rather than a registered intermediary or an exchange?

In answer to the third analytical point above and after discussing and dismissing the possibilities of the core developers of the blockchain code, miners and general users of the blockchain as being held responsible, the Commissioner suggested the developers of the smart contract code as persons responsible.

I think the appropriate question is whether these code developers could reasonably foresee, at the time they created the code, that it would likely be used by U.S. persons in a manner violative of CFTC regulations. In this particular hypothetical, the code was specifically designed to enable the precise type of activity regulated by the CFTC, and no effort was made to preclude its availability to U.S. persons. Under these facts, I think a strong case could be made that the code developers aided and abetted violations of CFTC regulations. As such, the CFTC could prosecute those individuals for wrongdoing.

In addition to the above, the Commissioner also pointed out that the CFTC will also look to the bigger picture and where market integrity is clearly threatened through widely adopted smart contracts (eg credit default swap (CDS)), the CFTC will investigate for fraud or manipulation.

Smart contract applications on blockchain networks hold great promise. They have the potential to open up new markets and create efficiencies in existing ones. At the same time, they also raise novel issues of accountability that users and policy makers alike must consider.

Perhaps in the future of the DLT-inspired innovation in tokenization of derivatives (and securities), we must remember Lawrence Lessig’s “Code is Law” also means that “Law is Code”, meaning that Law also has to be codified.

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<sup>49</sup> Ibid.

<sup>50</sup> See *ibid* for application to prediction market and swaps.

Futures contracts traded on exchanges rely on a clearing and settlement system based on margin trading and financing.  $\delta Y/\delta X$  has created a set of protocols based on the ERC-20 standard within an “off-chain order relay with on-chain settlement” model which allows for the operation and execution of options and margin trading.

In a further development of margin trading,  $\delta Y/\delta X$  has created margin tokens, i.e. short and leveraged long tokens.<sup>51</sup>

A dYdX margin token is a freely tradable ownership interest in a dYdX margin position based upon the ERC-20 standard. Each type of margin token has a specified interest rate, expiration date, and amount of held token locked in the position per unit owed token sold through the dYdX margin position. Each token is fungible, transferable, and can be traded in any amount.

Adaption of this open source protocol will be available to Mercari in the development of a regulatory compliant Mercari DLT Execution System.

## 7. Investment Opportunity: Crypto-Security Tokenized Warrant

### 7.1. SEFtoken Security Token Offering

The SEFtoken Security Token Offering is an advanced structured covered warrant with the underlying asset being a fully licensed electronic Swap Execution Facility (“SEF”) in an existing FMI. Its fully licensed SEF derivatives trading infrastructure facility, which is being tokenized and offered as an investment security infrastructure asset to sophisticated and professional investors who are accredited investors under SEC regulations. The SEFtoken provides an opportunity for investment exposure to a security in an industry with high regulation and high barriers to entry.

### 7.2. SEFtoken exempted under Reg D 506(c) and Reg S

SEFtoken is structured as a warrant with a right to convert to a security in an operating and regulated Australian Market Licence holder, the Mercari FMI. The SEFtoken offering for domestic fundraising in the US is relying on the exemption granted pursuant to the regulations, Reg D 506(c). There is also a concurrent offering for persons outside of the US pursuant to the exemption under Reg S.

### 7.3. Accredited Investors

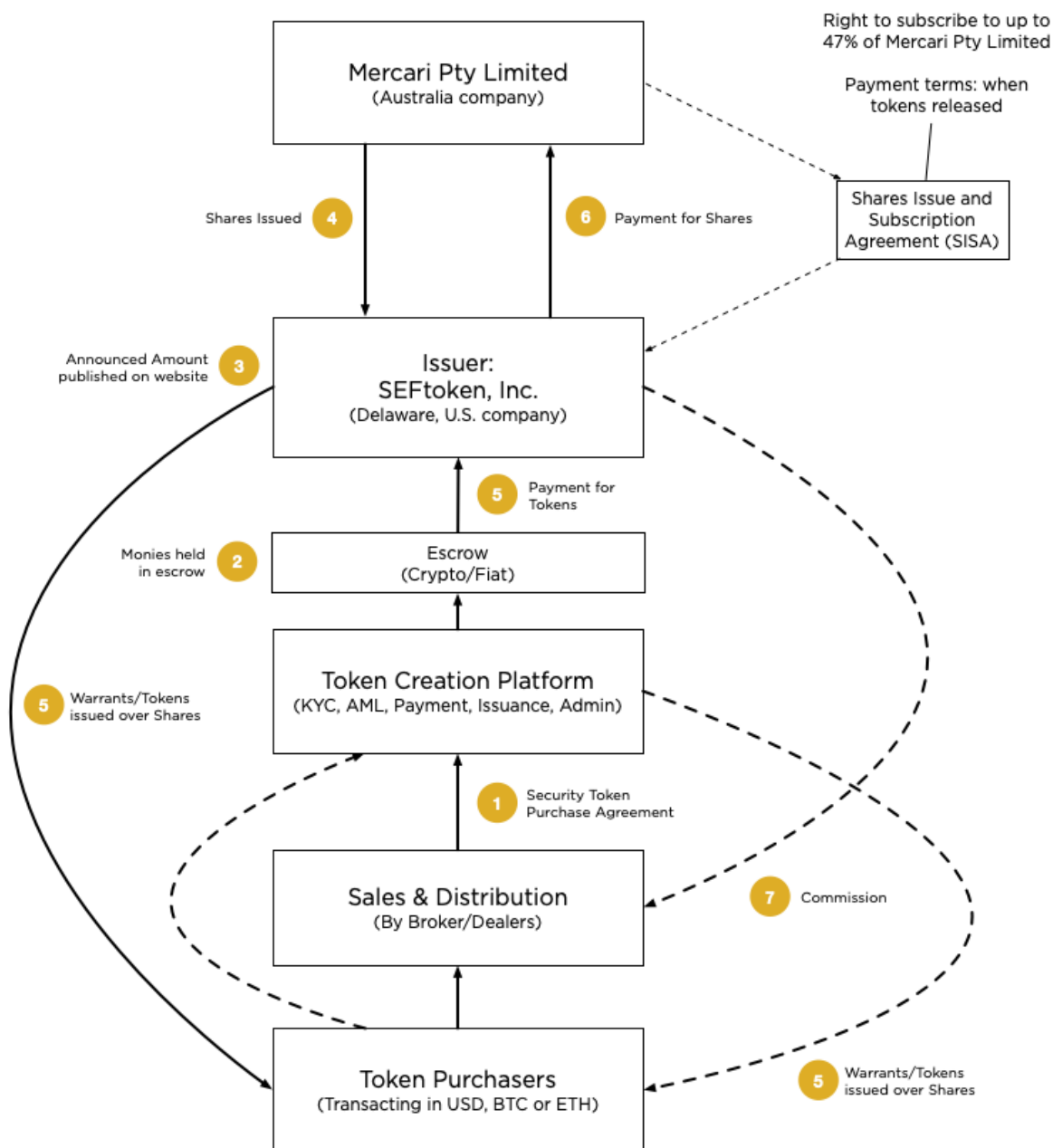
The SEFtoken security token offering offered under Reg D 506(c) can only be made to persons who are accredited investors. An accredited investor under US securities regulations is a person whose net worth (not including their primary home) is more than USD 1 million or whose income is more than USD 200,000 respectively for the last two years (or USD 300,000 for a couple).

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<sup>51</sup> dYdX, “dYdX Short Tokens & Leveraged Long Tokens”, April 25, 2018.

## 7.4. Diagram

A simplified diagram of the SEFtoken security token offering is provided overleaf.



1. Sales and Marketing process runs until the close of offer (time or hard cap met)
2. Monies collected and held in escrow
3. Announced Amount published on SEFtoken, Inc. website regarding SEFtoken STO raise
4. Shares issued to SEFtoken, Inc. per terms of Shares Issue and Subscription Agreement (SISA)
5. Warrants over Mercari Pty Limited Shares tokenised, Tokens issued to Token Purchasers, Payment for Tokens to SEFtoken, Inc.
6. Payment for Shares to Mercari Pty Limited, less costs of fund-raising and ongoing compliance for SEFtoken Holders
7. Commission paid for sales distribution

## 8. Issuance, Trading and Conversion: Structure of Investment

### 8.1. Issuer, Trading and Conversion

The SEFtoken covered warrant will be issued by SEFtoken, Inc. (Issuer). The Issuer will be issued shares in Mercari sufficient to convert SEFtokens issues to Mercari shares. The SEFtoken will be a security pursuant to the Securities Act but is exempted from registration with the SEC. However, the SEFtoken will be a restricted security which means there will be a holding period of 12 months (Holding Period). On the expiry of the Holding Period, the SEFtokens will tradeable on Issuer-designated exchanges/platforms.

In accordance with the terms of the covered warrant encoded into the smart contract, the SEFtoken's exercisable right to convert to Mercari shares will only be exercisable two (2) years after issue. The SEFtokens will expire seven (7) years after issuance.

### 8.2. Structure

The Capital Structure of Mercari under Soft Cap and Hard Cap thresholds will be:

	Soft Cap (USD 31.25m)	Hard Cap (USD 125m)
Other Mercari Shareholders	88.25%	53%
SEFtoken warrant coverage	11.75%	47%

Directors and Management of the Issuer will not be receiving any compensation from the Issuer in relation to services provided by them to undertake the Offering.

Additional SEFtokens will be issued to the Issuer to be distributed at the sole discretion of the Issuer for purposes including, but not limited to, incentivizing Directors, Management and key persons of Mercari in relation executing to the Mercari Business Plan to align the interests of Directors, Management and key persons of Mercari with that of Mercari. Directors, Management and key persons of Mercari are not entitled to bonuses and management fees other than moderate salaries. Accordingly, the Issuer will distribute at its sole discretion, the Carried Interest to Directors, Management and key persons of Mercari to ensure that Directors, Management and key persons of Mercari's interests are aligned with that of Holders.

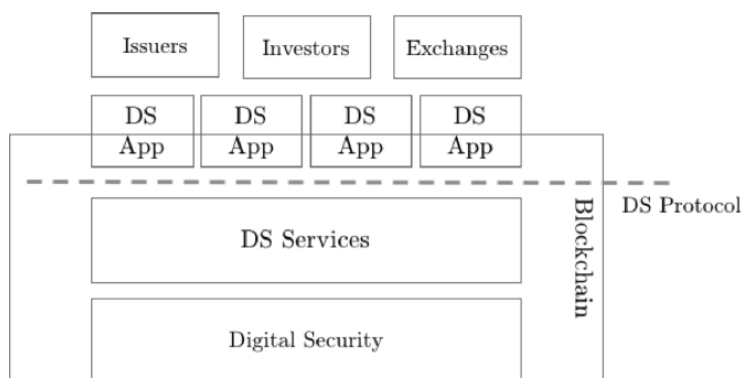
	Soft Cap (USD 31.25m)	Hard Cap (USD 125m)
Investor SEFtokens	31,250,000 (95%)	125,000,000 (95%)
Carried Interest SEFtokens	1,644,737 (5%)	6,578,947 (5%)
Total Issued SEFtokens	32,894,737 (100%)	131,578,947 (100%)

### 8.3. Digital Ownership Architecture<sup>52</sup>

The Issuer will use the services of Securitize which provides a platform to create the SEFtoken and administer registry services associated with SEFtokens. Securitize has developed its DS Services (Digital Securities Services) infrastructure which will support third

<sup>52</sup> This is Securitize's proprietary architecture used with permission: see Carlos Domingo, Shay Finkelstein, Jorge Serna, "DS Protocol - Securitize's Digital Ownership Architecture for Complete Lifecycle Management of Digital Securities", Version 1.0.0 (June 5th, 2018).

party DS Apps (Digital Securities Apps) to address all aspects of the Digital Security lifecycle. The interaction between the different elements is managed by DS Protocol (Digital Securities Protocol), a layered and extensible protocol.

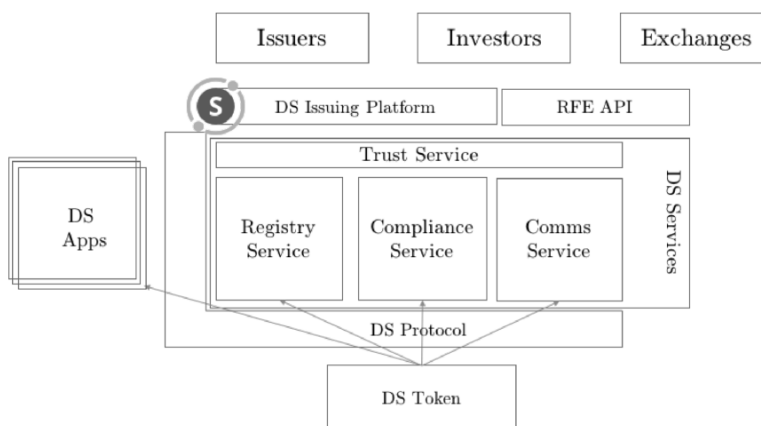


Securitize's Digital Ownership Architecture

The elements in Securitize DS Protocol ecosystem are:

- (a) DS Tokens: ERC-20 compliant tokens, extended with the capabilities of the DS Protocol.
- (b) DS Apps: Smart Contracts/dApps designed to manage specific lifecycle events for a Digital Security. Examples for this are issuance DS Apps, exchange-specific DS Apps, voting rights DS Apps or dividend issuance DS Apps.
- (c) DS Services: The basic infrastructure of the DS Protocol, enabling lifecycle management and compliance to DS Tokens. DS Apps can access these services to fulfil their goals. The DS Services include:
  - i. Trust Service: managing the relationships between the different stakeholders.
  - ii. Registry Service: an on-chain register of investor information.
  - iii. Compliance Service: which implements specific compliance rules applicable to a DS Token as per the Issuer requirements.
  - iv. Comms Service: enabling communication of relevant events to investors.

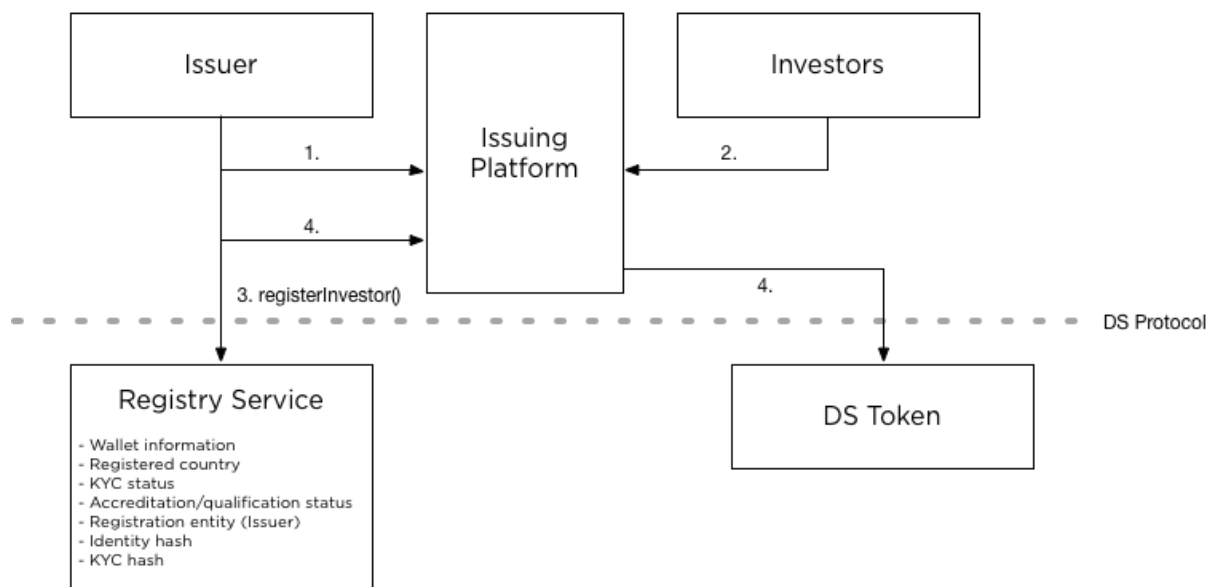
To improve the investor experience, Securitize's platform extends the DS Protocol with the Ready For Exchange (RFE) off-chain API.



Securitize's DS Protocol Ecosystem

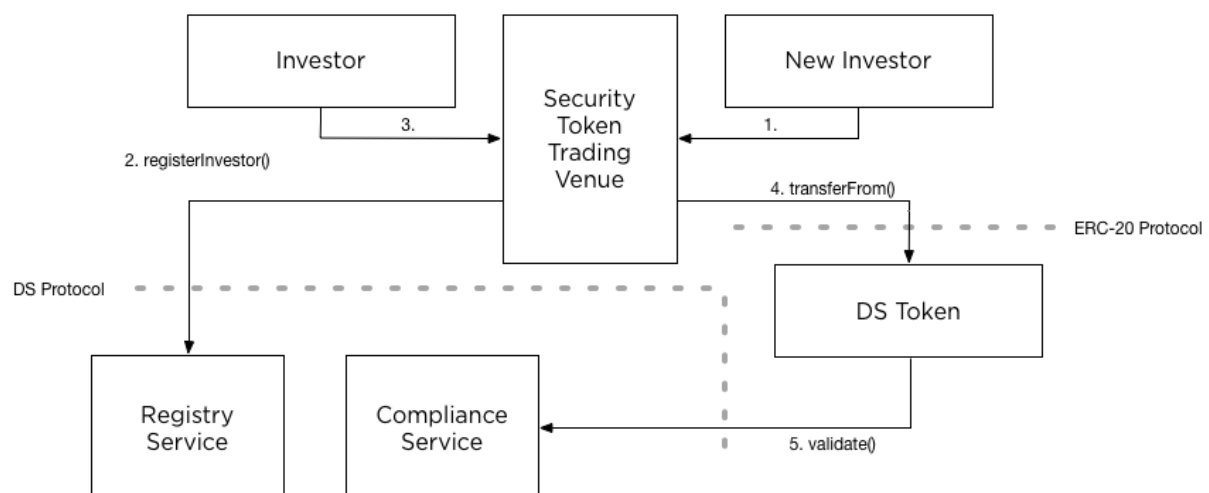
## 8.4. Issuance<sup>53</sup>

The process of SEFtoken issuance by Securitize on behalf of the Issuer is outlined below:



## 8.5. Trading<sup>54</sup>

The following diagram presents a simplified view of how trades may be executed via a Security Token Trading Venues (STTV) that allows direct wallet-to-wallet trades. Examples of this model are protocols like Swap, used by AirSwap, or the Ox protocol used by relayers like ERC dEX.



<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

## 9. SEFtoken: Smart Contract(s)/dApps

### 9.1. SEFtoken: ERC-20 Token Standard

Each SEFtoken created will be based on the ERC-20 Token standard or equivalent standard dApp supplemented with other dApps as is necessary in order to express the rights and conditions of the SEFtoken in line with Securitize's proprietary system.

### 9.2. dApp Features

Key features of the dApp that will reflect the warrant nature of the STO are below:

1. Essential terms for the dApp are:
  - a. The date of Issuance of the SEFtokens is the Issuance Date;
  - b. The Holding Period is twelve (12) months from the Issuance Date;
  - c. The date two (2) years from the Issuance Date is the Exercisable Date;
  - d. The date seven (7) years from the Issuance Date is the Expiry Date;
  - e. The period between the Exercisable Date and the Expiry Date is the Exercise Period.
  - f. Conversions means the process of converting SEFtokens to Mercari Shares.
  - g. A Holder is an entity that is issued a SEFtoken and/or retains property in the SEFtoken at any given time and has the key, and/or other sufficient acceptable proof, to the SEFtoken.
  - h. Liquidity Event includes declaration of dividend and a receipt of consideration by the Issuer as a result of a transfer of Mercari Shares.
  - i. Liquidity Event Entitlement is consideration received by the Issuer resultant from a Liquidity Event.
2. SEFtokens cannot be presented for Conversion to Mercari Shares before the Exercise Date.
3. Holders have the right to convert SEFtokens to Mercari Shares during the Exercise Period.
4. It is the Holder's obligation to provide the Issuer with sufficient information to identify how they want the Mercari Shares issued to them upon Conversion.
5. SEFtokens cannot be traded during the Holding Period.
6. At the expiry of the Holding Period ownership in SEFtokens may be transferred.
7. The rights and conditions attached to SEFtokens will be transferred together with the SEFtokens when SEFtokens are traded and settled on the blockchain/DLT.
8. A SEFtoken is not a Mercari Share, it is not entitled to any dividends or any other rights associated with a Mercari Share.
9. Where a Liquidity Event occurs prior to the Expiry Date, for any SEFtoken not presented for Conversion, the Issuer will hold in trust for the Holder, any Liquidity Event Entitlement which will be paid to the Holder upon presentation of any SEFtoken, prior to the Expiry Date.
10. SEFtokens are designed to have a limited life, the Holder must present SEFtokens to the Issuer by the Expiry Date for Conversion. If not presented for Conversion by the Expiry Date, the SEFtoken will be destroyed and all rights of the Holder will be forfeited.

As with all warrants, SEFtokens have an expiry date, and it is the Holder's responsibility to ensure SEFtokens are presented to the Issuer for conversion before the Expiry Date to ensure they receive the Shares or Liquidity Event Entitlement.

Any Shares or Liquidity Event Entitlement remaining with the Issuer after the Expiry Date, due to unconverted SEFtokens, will remain with the Issuer.



## 10. Use of Proceeds: DLT Integration of FMI

### 10.1. Use of Funds

The Issuer's obligations with respect to its use of proceeds is clear and absolute. The proceeds of the Offering are expected to be used for (i) payment of the Share Subscription Consideration to Mercari, (ii) general corporate purposes for the administration of the Issuer to provide services to SEFtoken holders until the Expiry Date and (iii) Offering, legal and accounting expenses.

If the Maximum Amount of SEFtokens offered under this Offering is purchased, Mercari will expect to receive Share Subscription Consideration of approximately \$116,000,000. If the Soft Cap is reached, the Share Subscription Consideration is expected to be approximately \$28,000,000. However, the Issuer cannot guarantee that it will sell all of the SEFtokens being offered by the Issuer. The following table summarizes how Mercari anticipates using the Share Subscription Consideration, depending upon whether the issuance reaches a Soft or Hard Cap

<b>Mercari Use of Funds</b>	<b>Soft Cap (USD)</b>	<b>Hard Cap (USD)</b>
Held for the significant regulatory capital and additionally the working capital to further expand and develop the current operational eSEF infrastructure. Build and deploy the Mercari DLT Execution System to cater for T+0 settlement on existing ASIC approved financial products as well as development of the Mercari Tokenized Securities Market being development of the proprietary DLT platform for trading of financial products and tokenized Securities (subject to regulatory approval).	15,480,438	52,195,500
Legal and Regulatory work on regulatory applications for license variation, rule changes and other regulatory applications for the approval of the listing of the meta class of tokenized securities. Design and development of new product categories to cater for Australian regulated framework	2,814,625	8,119,300
Participation and joint venture in regulated market infrastructure projects in first world jurisdictions.	7,036,563	46,396,000
Investment in FMI connectivity for expansion of sales distribution into global markets for current and proposed digital products (subject to regulatory approval) and general marketing for the exchange infrastructure.	2,814,625	9,279,200

## NOTICES

THIS SECURITY (THE “STPA”), AND ANY SEFTOKENS WHEN ISSUED PURSUANT TO IT (THE “SEFTOKENS”), HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR THE SECURITIES LAWS OF ANY STATE OR OTHER JURISDICTION. NEITHER THIS SECURITY, NOR ANY INTEREST OR PARTICIPATION HEREIN, MAY BE OFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED OR OTHERWISE DISPOSED OF UNDER ANY CIRCUMSTANCES. EACH HOLDER OF THIS SECURITY AND SEFTOKEN, BY ITS ACCEPTANCE HEREOF REPRESENTS THAT (A) IT IS AN “ACCREDITED INVESTOR” (AS DEFINED IN REGULATION D UNDER THE SECURITIES ACT) OR (B) IT IS NOT A “U.S. PERSON” AND IS ACQUIRING THIS SECURITY IN AN OFFSHORE TRANSACTION WITHIN THE MEANING OF REGULATION S UNDER THE SECURITIES ACT AND IN ACCORDANCE WITH THE LAWS APPLICABLE TO IT IN THE JURISDICTION IN WHICH SUCH ACQUISITION IS MADE.

HEDGING TRANSACTIONS INVOLVING THE SEFTOKENS MAY NOT BE CONDUCTED UNLESS IN COMPLIANCE WITH THE SECURITIES ACT.

### **FOR REGULATION D ONLY**

THE HOLDER OF ANY SEFTOKENS AGREES TO OFFER, SELL OR OTHERWISE TRANSFER SUCH SEFTOKENS, PRIOR TO THE EXPIRATION OF THE APPLICABLE ONE-YEAR HOLDING PERIOD WITH RESPECT TO RESTRICTED SECURITIES SET FORTH IN RULE 144 UNDER THE SECURITIES ACT (THE “HOLDING PERIOD”), ONLY (A) TO THE ISSUER OR ANY OF THE ISSUER’S SUBSIDIARIES, (B) PURSUANT TO A COMPLIANT REGULATION S SALE OR (C) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, SUBJECT, IN EACH OF THE FOREGOING CASES, TO ANY REQUIREMENT OF LAW THAT THE DISPOSITION OF ITS PROPERTY OR THE PROPERTY OF SUCH PURCHASER ACCOUNT OR ACCOUNTS BE AT ALL TIMES WITHIN ITS OR THEIR CONTROL AND, IN EACH CASE, IN COMPLIANCE WITH APPLICABLE SECURITIES LAWS, INCLUDING SECURITIES LAWS OF ANY U.S. STATE OR ANY OTHER APPLICABLE JURISDICTION.

A “COMPLIANT REGULATION S SALE” MEANS A SALE, FOLLOWING THE ESTABLISHMENT BY THE ISSUER OF A SUFFICIENT PROCESS TO VERIFY THE IDENTITY OF SUBSEQUENT HOLDERS IN ORDER TO ENSURE COMPLIANCE WITH ALL REGULATORY REQUIREMENTS FOR DIVIDEND PAYMENTS (IF APPLICABLE) AND COMPLIANCE WITH APPLICABLE LAW (E.G., THROUGH THE APPOINTMENT OF AN SEC-REGISTERED TRANSFER AGENT) AND NOTICE TO HOLDERS THEREOF AND OF ALL APPLICABLE CONDITIONS, (1) TO A PERSON WHO IS NOT A “U.S. PERSON” THAT OCCURS IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH ALL OF THE REQUIREMENTS OF REGULATION S AND IN ACCORDANCE WITH THE LAWS APPLICABLE TO SUCH SALE IN THE JURISDICTION IN WHICH SUCH SALE AND PURCHASE IS MADE AND (2) FOR WHICH SELLER HAS A REASONABLE BELIEF THAT EACH PERSON TO WHOM THE SEFTOKEN IS TRANSFERRED WILL BE PRESENTED WITH NOTICE SUBSTANTIALLY SIMILAR TO THE “REGULATION S LEGEND” AND WILL HAVE AFFIRMATIVELY SIGNED HIS, HER OR ITS UNDERSTANDING; PROVIDED, THAT THE ISSUER AND THE TRANSFER AGENT, IF ANY, WITH RESPECT TO THIS SEFTOKEN SHALL HAVE THE RIGHT PRIOR TO PERMITTING ANY SUCH COMPLIANT REGULATION S SALE OCCURRING PRIOR TO THE RESALE RESTRICTION TERMINATION DATE TO REQUIRE THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION OR OTHER INFORMATION SATISFACTORY TO EACH OF THEM AS TO THE COMPLIANCE OF SUCH COMPLIANT REGULATION S SALE WITH ALL APPLICABLE SECURITIES LAWS.

IN ADDITION, AND INCLUDING FOLLOWING THE HOLDING PERIOD, ANY AFFILIATE OF THE ISSUER (OR PERSON WHO HAS BEEN AN AFFILIATE OF THE ISSUER WITHIN THE IMMEDIATELY PRECEDING THREE MONTHS) SHALL OFFER, SELL OR OTHERWISE TRANSFER SEFTOKENS ONLY (I) TO THE ISSUER OR ANY OF ITS SUBSIDIARIES, (II) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT OR (III) PURSUANT TO ANY OTHER AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT

(INCLUDING IN ACCORDANCE WITH RULE 144, IF AVAILABLE), SUBJECT IN EACH OF THE FOREGOING CASES, TO ANY REQUIREMENT OF LAW THAT THE DISPOSITION OF ITS PROPERTY OR THE PROPERTY OF SUCH PURCHASER ACCOUNT OR ACCOUNTS BE AT ALL TIMES WITHIN ITS OR THEIR CONTROL AND, IN EACH CASE, IN COMPLIANCE WITH APPLICABLE SECURITIES LAWS OF ANY U.S. STATE OR ANY OTHER APPLICABLE JURISDICTION. IN ADDITION, THE ISSUER WILL REQUIRE, PRIOR TO ANY OFFER, SALE OR TRANSFER PURSUANT TO CLAUSE (III), THE DELIVERY OF AN OPINION OF COUNSEL, CERTIFICATION OR OTHER INFORMATION SATISFACTORY TO THE ISSUER AND THE ISSUER'S TRANSFER AGENT, IF ANY. HEDGING TRANSACTIONS INVOLVING THE SEFTOKENS MAY NOT BE CONDUCTED UNLESS IN COMPLIANCE WITH THE SECURITIES ACT.

A "COMPLIANT REGULATION S SALE" IS RELIANT ON RULE 905 REGULATION S UNDER THE SECURITIES ACT:

§230.905 RESALE LIMITATIONS.

EQUITY SECURITIES OF DOMESTIC ISSUERS ACQUIRED FROM THE ISSUER, A DISTRIBUTOR, OR ANY OF THEIR RESPECTIVE AFFILIATES IN A TRANSACTION SUBJECT TO THE CONDITIONS OF §230.901 OR §230.903 ARE DEEMED TO BE "RESTRICTED SECURITIES" AS DEFINED IN §230.144. REALES OF ANY OF SUCH RESTRICTED SECURITIES BY THE OFFSHORE PURCHASER MUST BE MADE IN ACCORDANCE WITH THIS REGULATION S (§230.901 THROUGH §230.905, AND PRELIMINARY NOTES), THE REGISTRATION REQUIREMENTS OF THE ACT OR AN EXEMPTION THEREFROM. ANY "RESTRICTED SECURITIES," AS DEFINED IN §230.144, THAT ARE EQUITY SECURITIES OF A DOMESTIC ISSUER WILL CONTINUE TO BE DEEMED TO BE RESTRICTED SECURITIES, NOTWITHSTANDING THAT THEY WERE ACQUIRED IN A RESALE TRANSACTION MADE PURSUANT TO §230.901 OR §230.904.

#### **FOR REGULATION S ONLY**

(THE "REGULATION S LEGEND")

THE SEFTOKENS WHEN ISSUED WILL BE ISSUED IN A TRANSACTION EXEMPT FROM REGISTRATION UNDER THE SECURITIES ACT, AND MAY NOT BE TRANSFERRED IN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, ANY U.S. PERSON (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT ("REGULATION S")) EXCEPT PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND ALL APPLICABLE STATE SECURITIES LAWS. EXCEPT AS SET FORTH BELOW, THE SEFTOKENS SHALL NOT BE CONVERTIBLE FOR SEFTOKENS THAT ARE NOT SUBJECT TO A LEGEND CONTAINING RESTRICTIONS ON TRANSFER UNTIL THE EXPIRATION OF THE APPLICABLE ONE-YEAR "DISTRIBUTION COMPLIANCE PERIOD" (WITHIN THE MEANING OF REGULATION S) AND THEN ONLY UPON CERTIFICATION IN A FORM REASONABLY SATISFACTORY TO THE ISSUER AND ITS TRANSFER AGENT, IF ANY, THAT SUCH SEFTOKENS ARE OWNED EITHER BY NON-U.S. PERSONS OR U.S. PERSONS WHO PURCHASED SUCH INTERESTS IN A TRANSACTION THAT DID NOT REQUIRE REGISTRATION UNDER THE SECURITIES ACT.

THE HOLDER OF ANY SEFTOKENS AGREES TO OFFER, SELL OR OTHERWISE TRANSFER SUCH SEFTOKENS, PRIOR TO THE EXPIRATION OF THE APPLICABLE ONE-YEAR HOLDING PERIOD WITH RESPECT TO RESTRICTED SECURITIES SET FORTH IN RULE 144 UNDER THE SECURITIES ACT (THE "HOLDING PERIOD"), ONLY (A) TO THE ISSUER OR ANY OF THE ISSUER'S SUBSIDIARIES, (B) PURSUANT TO A COMPLIANT REGULATION S SALE, OR (C) PURSUANT TO A REGISTRATION STATEMENT THAT HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT, SUBJECT, IN EACH OF THE FOREGOING CASES, TO ANY REQUIREMENT OF LAW THAT THE DISPOSITION OF ITS PROPERTY OR THE PROPERTY OF SUCH PURCHASER ACCOUNT OR ACCOUNTS BE AT ALL TIMES WITHIN ITS OR THEIR CONTROL AND, IN EACH CASE, IN COMPLIANCE WITH APPLICABLE SECURITIES LAWS OF ANY APPLICABLE JURISDICTION. HEDGING TRANSACTIONS INVOLVING THE SEFTOKENS MAY NOT BE CONDUCTED UNLESS IN COMPLIANCE WITH THE SECURITIES ACT.