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Abstract Tokenization refers to the process of creating a virtual representation of a real asset by creating fungible tokens which enables fractional ownership. If such tokens are created on a public and permissionless blockchain such as the Ethereum blockchain, they are immediately tradeable worldwide 24/7. Established token standards and immediate settlement are further benefits of this novel technology. Tokenization has the potential to remedy the illiquidity problems of real estate investments. However, outdated regulatory frameworks and regulatory uncertainties currently still limit a broad adoption of the technology.

Keywords: blockchain technology, smart contracts, fractional ownership, tokenization of real estate, security token, token regulation

1 Introduction

Tokenization refers to the process of creating a digital representation of an asset, which enables fractional ownership, digital transfer and management of these real assets on a blockchain. The digitisation of an asset is not a new idea, but using blockchain technology opens new opportunities to create and trade tokenized real assets on a public and permissionless network.

An illiquid asset cannot be quickly resold or exchanged for cash without a significant loss in the short term. The most common examples of illiquid assets are real estate, art, cars, and antiques. In particular, the real estate market is characterized by long transaction times as well as high transaction costs and low transparency.¹

In this paper, we focus on the technology and regulation of tokenizing real estate. The promise of tokenization is that it remedies the previously mentioned illiquidity problem of real estate investments.² Tokenization allows a real estate owner to raise liquid funds quickly and easily. From the perspective of the token buyer, the advantage of tokenization is that the tokens are immediately tradable worldwide on a publicly accessible and permissionless platform in small denominations, 24/7. Further advantages discussed in the paper are standardization, transparency, and flexibility.

Tokenized real estate has vast market potential. In 2016, the estimated value of all real estate worldwide was approximately \$217 trillion.³ The size of the professionally managed global real estate market expanded from \$8.9 trillion in 2018 to \$9.6 trillion in 2019 going from the smaller to larger number aids in the visualization after a world like expanded.⁴ Despite this rapid growth, tokenization is only at its onset. The first property whose tokens were globally tradable on a publicly accessible platform was tokenized in 2019.⁵

This paper first presents the theoretical foundations of tokenization. We then discuss the advantages and disadvantages of this new technology and present the regulatory challenges. Finally, we present a practical example.⁶

2 Real Estate tokenization

From a regulatory perspective, securitization and tokenization of an asset are very similar. The main difference lies in the infrastructure and the technology for issuing and trading tokenized assets. In this section, we present the main technological aspects of tokenization and we highlight the advantages of tokenizing real estate from the point of view of a real estate owner and from the point of view of a potential investor.

The focus will be on the Ethereum blockchain, which is currently the standard for issuing tokens. The Ethereum blockchain was launched in 2015 and has very quickly established itself as the dominant blockchain for smart contracts and for decentralized applications.⁷

2.1 Technology

Tokenization refers to the process of creating fungible virtual tokens which allows for fractional ownership of an illiquid asset. Ownership of these tokens is recorded on the Ethereum blockchain. Once created they can be traded peer-to-peer. The term peer-to-peer means that all nodes participating in the network can communicate directly with each other. They are equal and share the burden of providing network services.⁸ With a peer-to-peer transaction, the transfer of ownership of a token takes place directly between two parties without an intermediary.

The main difference between a traditional security and a cryptographic token is that ownership of a digital token is established using cryptographic methods. The token owner can transfer it by creating a transaction message, signing it with his

private key, and then broadcasting it to the Ethereum network. The ownership transfer can take place worldwide at any time (24/7) and is possible without intermediaries. In contrast, trading of a traditional security is only possible via financial intermediaries.

On the Ethereum blockchain, tokens are created by using different token standards such as the widely used ERC-20 token standard.⁹ Technically, issuing a token involves the deployment of a smart contract on the Ethereum blockchain.¹⁰ A smart contract for a token is a program that includes functionality such as minting and burning tokens, and transferring ownership. One can imagine such a smart contract as a database whose most important task is to maintain an accurate record of ownership of the issued tokens. The smart contract is immutable because it is deployed on the Ethereum blockchain which itself is maintained by thousands of independent computer nodes.¹¹

Each smart contract has a unique public Ethereum address. A user who wants to interact with a smart contract sends a transaction message to this address that contains instructions of which functions of the smart contract should be executed. All past and future interactions with a smart contract are public and can be viewed with a blockchain scanner such as etherscan.io.

From the user's perspective, owning and transferring a token requires a compatible wallet. A software wallet allows for the uncomplicated storage and transfer of tokens using computers and mobile devices. Hardware wallets are devices for securely storing private keys without permanent connection to the Internet.¹²

To transfer ownership of a token, the sender generates a transaction message, signs it cryptographically, and broadcasts it to other network participants. Among other information, the message includes the address of the recipient of the token, the contract address, and the number of tokens to be transferred. Such a transfer of ownership is recorded in the Ethereum blockchain within a few seconds. Any ownership transfer on the Ethereum blockchain requires the sender to pay a fee in the native Ether coin.

The issuer of a token must specify various parameters. The most important parameters are the number of tokens, the number of tokens offered for sale, the issue price of a token, the divisibility of the token, the accepted means of payment when selling, the sales window, and trading restrictions. Typically, the issuer allows payment to be made with cryptocurrencies such as Bitcoin or Ether and/or fiat currencies such as the US dollar. In any case, the buyer must provide an Ethereum address to which the purchased tokens are credited.

As we will discuss further below, in many countries tokens are considered to be securities thus, relevant security laws apply. For this reason, the issuer might want to restrict the tradability of a token and/or only allow certain users to buy them at the token issuing event. Trading restrictions can also be implemented via a smart contract. For example, the issuer can create a smart contract that stores the whitelisted public addresses that are allowed to receive tokens. The smart contract, which manages the ownership of the tokens, then only permits transactions between addresses that are listed on this contract.

As the issued tokens are classified as security tokens when tokenizing a property, the corresponding legal provisions, such as know-your-customer (KYC) requirements as well Anti Money Laundering (AML), apply. Compliance with these requirements requires an elaborate registration process comparable to the KYC requirements for opening an account in the traditional financial system. This includes residence and identification checks as well as appropriate measures to prevent money laundering.

2.2 Advantages of tokenization

In this subsection, we discuss briefly aspects such as costs, liquidity, standardization, transparency, and flexibility.

At the moment, tokenization of real estate is still in its early stages. The effort required to comply with all regulatory requirements is expensive and thus raising capital via tokenization is not necessarily cheaper than traditional capital raising.

However, we expect that the cost of tokenizing real estate will decline rapidly once the legal uncertainties are addressed by the various national regulators. In Switzerland, for example, legislative changes were already proposed in 2019 to remove many legal hurdles. Then, in June 2020, the Swiss National Council unanimously approved these changes. The new Swiss DLT law aims to increase legal certainty, remove hurdles for blockchain applications, and limit risks of abuse.¹³

Many steps of the process of tokenizing a property can be standardized and automatized. For example, the ERC-20 token contract is open source and can therefore be legally copied and adapted. The legal documents required for tokenization will also be standardized and available cheaply in the medium term. As a result, in the long term, fewer intermediaries (banks, lawyers, brokers, etc.) will be needed and, the costs of raising capital via tokenization will decrease.

Liquidity is one of the many advantages of tokenization. Any ERC-20 token is immediately transferable worldwide 24/7 after its issuance. Furthermore, secondary trading is also immediately possible on decentralized trading venues such as Uniswap or Sushiswap. On these decentralized exchanges, the issuer or any other person can list the token without having to ask a central authority for permission. Once the token is listed, any person with an ERC-20 token compatible wallet can purchase the token, if the issuer has not added any trading restrictions.¹⁴

Standardization is another advantage of tokenizing real estate. There are many templates for smart contracts that can be used out of the shelf. They can also be adapted to one's own needs in a very short time. This greatly reduces the time between the decision to tokenize a property and the issuance of the token. In the future, it will be possible to acquire ownership of real estate worldwide via tokens created under the same standard.

Transparency is one of the biggest advantages of blockchain technology. The Ethereum blockchain is a public database that can be viewed by anyone. In particular, anyone can study the smart contract code that is used to tokenize an asset. This only requires that the issuer verifies the smart contract on etherscan.io, for example. A verified smart contract allows anyone to verify that the smart contract fulfills the contractual obligations promised by the issuer.

Flexibility is another benefit of blockchain technology. Ethereum allows the coding of a smart contract of any complexity. This permits many processes to be automatized. For example, smart contracts can be programmed to make payments that are linked to certain conditions, such as a holding period. Monthly, weekly or even daily payments are also conceivable. Such payments can be made using the native currency of the Ethereum platform (Ether) or also with a stablecoin such as DAI.¹⁵

3. Regulation of a tokenized Asset

As discussed above, tokenizing a property is relatively straightforward from a technological point of view. In contrast, outdated security regulations and regulatory uncertainties currently still limit a broad application of this technology.¹⁶ In this section, we discuss the legal aspects that need to be considered when tokenizing a property.

3.1 Description of the conventional capital market

In most countries, legislators distinguish between professional investors and retail or private investors. In the European Union, for example, the group of professional investors are investors who "...possesses the experience, knowledge and expertise to make its own investment decisions and properly assess the risks that it incurs."¹⁷ Only professional investors have direct access to the capital market.

In contrast, retail investors do not have direct access to the capital market. They only have access via financial intermediaries. The role of financial intermediaries is to provide retail investors with information about financial products and to strengthen investors' confidence in these markets. The purpose of capital market law¹⁸ is to protect investors and ensure the stability of the financial system. A discussion of whether the existing capital market laws are successfully attaining these goals and/or whether by excluding retail investors from direct access to capital markets are responsible for cementing and increasing wealth inequality is outside the scope of this paper.

In many countries, the basic principle of financial market regulation is that financial products are regulated in a technology-neutral manner.¹⁹ This means that financial products with comparable risks should be regulated identically. The regulation of blockchain-based financial instruments therefore depends primarily on their characteristics and risks. Since each token is freely programmable and can therefore assume different functions and properties, there is not yet a generally legally recognized classification of tokens.²⁰ The most common classification is to distinguish between payment tokens, utility tokens and security tokens.

- (i) Payment tokens are only used for payments. A classic example is Bitcoin.
- (ii) Utility tokens represent a type of virtual voucher intended to convey a functional benefit to the holders in the form of access to a network. These tokens may carry special rights, such as the ability to exchange the tokens for products or services later.
- (iii) Security tokens²¹ are financial instruments that represent ownership or right to dividends that are associated with the underlying asset and comparable with conventional securities pursuant to Art. 4 (1) No. 44 of Directive 2014/65/EU.²²

The token categorization from (i) to (iii) is used primarily for simplification purposes and does not imply any binding evaluation. Therefore, in practice, each token must be reviewed to determine its characteristics. Frequently, tokens have hybrid forms, meaning that a utility token or a security tokens also serves as means

of payment within their network. Consequently, they must also be regarded as payment tokens.²³

3.2 Prospectus requirement for security tokens

The provisions of the European securities law stipulate that securities with a right to ownership or to dividends must be classified as regulated securities pursuant to Article 4 (1) No. 44 of Directive 2014/65/EU. This generally includes tokens created when an asset is tokenized. This has various consequences for issuance and trading. In particular, the issuers are obliged to publish a prospectus.

In what follows, we discuss the German Securities Prospectus Act (WpPG). In order to publicly offer²⁴ and admit to trading a security²⁵ on an organized market (e.g. MTF²⁶ or OTF²⁷), the issuer must publish a prospectus that is approved by the supervisory authority²⁸. A violation of this constitutes an administrative offense that leads to an immediate prohibition of the offering by the German Federal Financial Supervisory Authority (BaFin).²⁹ With an approved prospectus the issuer can offer the security in all EEA states ("European passport").³⁰

A prospectus is an official communication to the public containing sufficient information in an easily understandable form. In particular, a securities prospectus must contain the following information:³¹

- Presentation and explanation of risk factors specific to the issuer and its industry.
- Presentation of business and financial position (operating and financial review), pro forma disclosures based on historical data of the issuer, forecasts of future business development.
- Statement on the sufficiency of business capital for current needs and information on raising capital needed in the future.
- Information about the persons involved in the management of the securities.

The prospectus contains a summary, a registration document and a securities note. The summary is a document that concisely and legibly describes the offer on a maximum of seven A4 pages. If the tokenization of a real estate property creates a token with the characteristics of a security and is offered to the public, it is comparable to the securitization of assets.³² In this case, the prospectus requirements for this token are indispensable.³³

4 Example of a Real Estate Token (Realtoken)

The real estate tokenization is in its pioneering phase. To the best of our knowledge, the tokenization of the '9943 Marlowe' property is worldwide the first tokenized property, where the token was subsequently also made tradable 24/7 on the public and permissionless Ethereum blockchain. In what follows we discuss the process of tokenizing the '9943 Marlowe' real estate.

RealToken LLC, located in Aventura, Florida, USA, is a registered limited liability company managed by RealToken Inc. The very first token issued by RealToken LLC in 2019 is called "RET-9943-MARLOWE-STREET-MI" Tokenized was a single family home that can be found at the address 9943 Marlowe St, Detroit, MI 48227.³⁴ The price of the property was 57,300 USD. One thousand tokens were issued and sold at the price of 63.75 USD per token. The proceeds amounted to 63,750 USD. The tokens are currently traded in secondary trading on the Uniswap platform at the price of 76.73 USD.³⁵

The token was issued based on the ERC-20 token standard. By purchasing a token, one acquires a right to a fraction of the rental income. The annual payment is currently 7.9 USD. According to the information on the RealToken LLC website, this amount corresponds to a return minus taxes and administrative costs of 13.0 percent. All dividends are paid by using the stablecoin DAI.

Potential cost savings are often cited as an advantage of tokenization. However, it is far too early to make a definitive judgment on the subject of cost savings. In our example, the issuing costs were approximately ten percent.³⁶ However, interpretation is difficult because all costs were subsumed under the cost object "working capital", as shown in the following Table 1 "Use of proceeds to issuer" from the official document.

Table 1: Use of proceeds to issuer

Uses	Dollar Amount	Percentage of Gross Cash Proceeds
Purchase Price of the Underlying Asset	\$57.300,00	89.88%
Investment Banking Advisor Fees	\$0,00	0.00%
Offering Expenses	\$0,00	0.00%
Acquisition Expenses	\$0,00	0.00%
Working Capital	\$6.450,00	10.12%
Total Fees and Expenses	\$63.750,00	100.00%
Total Proceeds	\$63.750,00	100.00%

Source: Private Placement Memorandum Amended August 5, 2019 p. 35

The document also mentions that the bank fees (Investment Banking Advisor Fees) were 0 USD. In the fine print it states that there was a "5% Cash Service Fee" of 3,187.5 USD, which was assumed by the seller of the house. In addition, it also lists another fee of \$20,000 that was absorbed by the "Managing Members." Furthermore, from the table "Use of proceeds to issuer" it can be seen that there have been no "Offering Expenses" because the offering costs (prospectus costs etc.) have also been taken over by the "Managing Members". The only cost item listed in the "Use of proceeds to issuer" table is the amount of USD 6,450 for "Working Capital".³⁷

An interesting aspect of the 9943 Marlove example is that the issuers of the token were willing to bear certain costs themselves in order to make the tokens more attractive to investors and to establish themselves as technology pioneers on the market.

Following the tokenization of the 9943 Marlove property, RealToken LLC has tokenized many more properties as shown in Table 2.

Table 2: RealToken LLC

Property/ token name	Token Price (USD)	Token total	Rental income per Token/ year % and (USD)
9943 Marlowe	65,75	1000	12,34 (7,90)
16200 Fullerton	161,84	3800	12,76 (20,65)
9336 Godparents	62,70	1000	10,25 (6,42)
20200 Lesure	69,40	1000	10,25 (7,11)
5942 Audubon	77,73	750	10,38 (8,07)
10024-28 Appoline	145,56	4000	11,82 (16,70)
8342 Schaefer	50,83	3000	12,59 (6,40)
25097 Andover	53,13	1400	11,06 (5,88)
18276 Appoline	52,32	1400	11,90 (6,23)
18900 Mansfield	51,31	1100	11,09 (5,69)
15634 Liberal	48,98	1200	13,04 (6,39)
15048 Freeland	49,02	1300	11,66 (5,72)
272 42nd Court	57,96	3000	7,00 (4,06)
9165 Kensington	52,91	1300	11,63 (6,15)
10084 Grayton	50,73	1300	11,27 (5,67)

Source: Own presentation based on <https://realt.co/marketplace/> (as of June 20, 2021)

In this pioneering phase, it is difficult to make a cost comparison to a traditional real estate investment product. The issuing costs of open or closed-end funds are between five and fifteen percent (the so-called soft costs). This means that raising capital via tokenization is currently likely to be more expensive for an issuer than financing with traditional financing instruments.

Because RealToken LLC tokenizes new properties on an ongoing basis, the tokens of the individual properties must be distinguishable. Each property has its own legal construct (called a series) and the associated token has a unique identification number (UIN).³⁸ This means that tokens from two different properties are not fungible. However, all RealTokens with the same identification number are fungible.

Holding tokens of a certain series of RealToken LLC yields a proportional share of the cash flow of the property assigned to the series. The deed of a series shows which property it includes, as well as all important information about the acquisition of this series. This deed is deposited in the district where the property is located and then publicly registered.³⁹

Token owners receive daily payouts generated from rental income. This is achieved by the smart contract crediting a micropayment every day to the public addresses that have a token balance. This is an offset that takes place within the smart contract. For this purpose, the issuer must ensure that the payout address has a sufficiently large balance of the DAI cryptocurrency.⁴⁰

According to the Securities and Exchange Commission (SEC), trading of the RealTokens is not permitted in the United States under the Securities Act 1933, as currently amended.⁴¹ As a result, the RealTokens are restricted and may only be sold in the United States to accredited investors.⁴² The RealTokens official document contains a list in Appendix A that enumerates the selling restrictions for approximately twenty additional countries.

When purchasing a RealToken through the RealToken platform or through a secondary market, each investor is verified to ensure that the investor's accreditation requirements (if any) are met. In addition, investors must identify themselves (KYC) and sign the AML anti-money laundering procedure. The KYC procedure is used to verify the identity of RealToken buyers, while the AML procedure is designed to ensure that payments for RealTokens do not come from illegal sources.

5 Conclusion

This article provides insights into the technology and regulation involved in tokenizing property. It highlights the potential benefits of this new technology but also emphasizes the many regulatory hurdles that are hampering its widespread adoption.

The key benefit of tokenization is liquidity. Tokens can be immediately traded worldwide and 24/7 on a public and permissionless network such as Ethereum. On Ethereum settlement is fast since the ownership record is updated within minutes. A token buyer only needs a compatible wallet to make the purchase. There are no gatekeepers and there is permissionless access. Further advantages of tokenization discussed in this article are standardization, flexibility, high security, and transparency.

The tokenization project 9943 Marlowe presented in this paper demonstrates that some of the theoretical advantages have not yet come to fruition in practice because of uncertainties regarding the financial market regulation of tokens. Many countries have not yet developed comprehensive legislation that can be relied upon as a token issuer or investor. This currently leads to many token issuers still restricting tradability at the current time.

In addition to regulatory uncertainties, there are other challenges. The Ethereum platform is currently in high demand, resulting in high transaction fees. Furthermore, the energy consumption of the proof-of-work consensus mechanism currently used on Ethereum is an issue. Ethereum is soon implementing the Ethereum 2.0 software which will drastically lower its energy consumption. Further improvements such as L2 and sharding will soon address the congestion problem. This will lead to higher technology acceptance in the broader society.

The Internet has shown that new models and behaviours emerge when the costs of communication become negligible. Its history has also taught us that the impact of such a development on society and the economy is unpredictable. Blockchain technology, allows for the global exchange of value on public and permissionless networks such as Ethereum. Blockchain technology improves liquidity, enables faster and cheaper transactions, offers a high degree of transparency and worldwide 24/7 access. As for the Internet, it is foreseeable that Ethereum or a similar technology will rapidly become mainstream, but it is unpredictable how it will affect society and the economy.

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¹ The cost of illiquidity is studied, for example, in Damodaran (2005), Cheng et al. (2013), Anson et al. (2011), and Ang (2014). Damodaran (2005) finds a liquidity discount of between 20 and 30 percent. Among these costs is the agent's commission, which averages between five and six percent of the property value when selling a property.

² Real estate belongs to the group of alternative investments. An alternative investment is an investment in any asset class excluding stocks, bonds, and cash.

³ Tostevin (2016).

⁴ Teuben and Neshat (2020).

⁵ RealToken Whitepaper (2019).

⁶ Berentsen and Markheim (2021)

⁷ Other blockchains that also allow tokenization are Avalanche, Fantom, Binance Smart Chain, Polygon, etc.

⁸ Antonopoulos (2017) and (2018).

⁹ Github (ERC20) and Buterin and Vogelstellert (2015).

¹⁰ The term smart contract goes back to Nick Szabo (1996). He describes the idea that contractual obligations, such as a promise to pay, are not recorded on a piece of paper but as code in a computer network and are then executed autonomously if certain conditions are met.

¹¹ Buterin (2013)

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- ¹² Schär and Berentsen (2020) explores all details of safely owning and transacting cryptoassets.
- ¹³ Wälti (2020).
- ¹⁴ The transfer of ownership on the Ethereum blockchain is completed in a matter of seconds. In the traditional financial world, transferring ownership of a security can take several days.
- ¹⁵ A stablecoin is a cryptocurrency that has low price volatility. DAI, for example, is a cryptocurrency that is pegged 1:1 to the US dollar (Berentsen and Schär, 2019).
- ¹⁶ The term "regulatory uncertainty" refers to the uncertainty that can arise when financial market regulators have not yet developed comprehensive legislation that can be invoked by a token issuer or investor (Voshmgir, 2019).
- ¹⁷ EU Directive 2014/65/EU (Annex II) regulates the criteria for professional investors.
- ¹⁸ There is no generally applicable codification of capital market law; instead, there are various written documents such as laws, ordinances, statutes, guidelines, circulars, directives, etc., which in large part regulate not only supervisory law but also, in part, civil and criminal law issues as well as individual areas of capital market law.
- ¹⁹ Hufeld (2018), p. 53ff.
- ²⁰ The German Federal Financial Supervisory Authority (BaFin) and the Swiss Financial Market Supervisory Authority (FINMA) have set out this classification in Schindele (2019) and FINMA (2018) ICOs guidelines respectively. BaFin defines a (crypto) token as follows: "Crypto tokens are digitized images of assets stored in a decentralized manner on a blockchain." See Fußwinkel and Kreiterling (2018).
- ²¹ On January 31, 2019, BaFin approved the first security token with a securities prospectus for retail investors, signaling that a regulatory-compliant token issuance is possible.
- ²² EU Directive 2014/65/EU of the European Parliament.
- ²³ Schindele (2019).
- ²⁴ The term "offer of securities to the public" is defined in Section 2 No. 4 WpPG.
- ²⁵ The term "securities" is defined in Section 2 No. 1 WpPG.
- ²⁶ The definition of MTF (Multilateral Trading Facility) is defined in Article. 4 (1) No 22 of Directive 2014/65/EU.
- ²⁷ Definition of OTF (Organised Trading Facility) is in Article 4 (1) No 23 of Directive 2014/65/EU.
- ²⁸ In Europe, there is no single institution that is solely responsible for financial market supervision; rather, each member state has the responsibility to supervise its own market, following its own regulatory philosophy. In Germany, this duty lies with the Federal Financial Supervisory Authority (BaFin), in Switzerland with the Swiss Financial Market Supervisory Authority (FINMA), in Liechtenstein with the Financial Market Authority Liechtenstein (FMA), etc.
- ²⁹ Section 26 (4) sentence 1 WpPG.
- ³⁰ The "European passport" is regulated in Section 11a (WpÜG).
- ³¹ Article 6 (1) Prospectus Regulation (EU 2017/1129). The exemptions from the obligation to publish a prospectus are set out in in Article 1 (6) Prospectus Regulation (EU) 2017/1129. The minimum information and the format of a prospectus, which serve to protect investors, are set out in Article 13 Prospectus Regulation (EU) 2017/1129.
- ³² Jobst (2008).
- ³³ Schindele (2019).
- ³⁴ Information about the object at <https://realt.co/product/9943-marlowe-st-detroit-mi-48227/>.
- ³⁵ Information retrieved on 2020-02-19 from: <https://uniswap.info/token/0xe5f7ef61443fc36ae040650aa585b0395aef77c8>.
- ³⁶ In response to our inquiry about issuance costs, a RealT employee said that they charge a flat fee per token of ten percent at issuance. To cover their running costs, 2.5 percent of the gross is charged as another fee.

³⁷ RealToken (2019): The official document: Private Placement Memorandum Amended August 5, 2019 p. 35.

³⁸ A series is similar to a special purpose vehicle (SPV) in traditional securitization.

³⁹ All tokens of a series have the same UIN, which is stored in the token as well as in the certificate of incorporation of RealToken LLC. The certificate of incorporation is continuously expanded by the addition of new series. This information is also backed up on the Ethereum blockchain.

⁴⁰ The market price of a security that pays a dividend usually falls after the dividend is paid. These price fluctuations become smaller the more often a dividend is paid. The advantage of a daily dividend is that the value of the security fluctuates little before and after a dividend is paid.

⁴¹ SEC information is at <https://www.sec.gov/files/dlt-framework.pdf>.

⁴² This refers to investors with a special status. The definition of an accredited investor (if any) and the consequences of being classified as such vary from country to country. The definition of an accredited investor in the United States is available at <https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=8edfd12967d69c024485029d968ee737&r=SECTION&n=17y3.0.1.1.12.0.46.176>.