

STO: Equity Crowdfunding Innovation for Indonesian Start-Up

Clara Valentine Febiolla¹, Erinne Yeolencia², and Samantha Meidelin Lavenda Rimba³

^{1,2,3} Accounting Department, Faculty of Economics and Business,
Atma Jaya Yogyakarta University

samanthameidelin@gmail.com

Abstract

Blockchain and crowdfunding are innovations that have brought significant changes to business and funding activities around the world. The existence of blockchain has created cryptocurrency, which is currently popular among many investors worldwide, without exception for domestic investors. On the other hand, crowdfunding tools such as equity crowdfunding could develop a blockchain-based funding system. This system uses a cryptocurrency security token as an investment instrument, where the initial offering is referred as a Security Token Offering (STO). This study aims to analyse a blockchain-based equity crowdfunding system using cryptocurrency security tokens and design the system for start-up companies in Indonesia. This study used a descriptive method with qualitative approach used SWOT analysis and quantitative approach with questionnaire as supporting data. This study indicates that the existence of blockchain-based equity crowdfunding provides opportunities for start-ups in Indonesia to obtain funds for developing their business.

Keywords: blockchain, crowdfunding, cryptocurrency, start-up company, security token offering

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1. INTRODUCTION

The business phenomenon that occurs today is start-up development that offers the latest products and services. However, according to Deputy for Access to Capital, Ministry of Tourism and Creative Economy, Mr. Fadjar Hutomo, there are five problems in the development of start-ups in Indonesia, namely capital (38.82%), human resources (29.41%), facilities (15%), regulation and laws (8.82%), and the last is market (7.94%). The financing of economic creative still dominated by personal capital, which is the reason most start-ups bankrupt due to lack of capital (Adiwijaya, 2020). Along with the dynamic development of science and technology, start-ups continue to innovate to today's needs. The innovation that is mainly done in the current digitalization era is the existence of system automation, one of which can be done by blockchain. Blockchain is a system that allows us to create a digital ledger and share it with business network parties independently (Laurence, 2019). In addition, the presence of blockchain has begun to change the existing order in the financial sector.

Changes in the financial sector can be proved by a blockchain-based digital currency, namely cryptocurrency. Cryptocurrency is a digital currency with a decentralized payment system that makes it possible to send money without a third party (Goleman, 2018). There are several cryptocurrencies, including bitcoin, ethereum, ripple, and others. The development of cryptocurrencies continues to occur until now, and it has become one of the most sought-after investment facilities. In fact, in 2020, the value of cryptocurrency transactions in Indonesia reached IDR 64 trillion, which shows Indonesia's good market potential (Ramadhansari, 2021).

Today, the role of cryptocurrencies as an investment tool can be a funding opportunity for companies. This can be done by utilizing one type of cryptocurrency token, a security token through a Security Token Offering. Security tokens are defined as digital representations of investment products, recorded on a distributed ledger, subject to regulation under securities laws, and most security token offerings are conducted by start-up companies (Lambert, Liebau, and Roosenboom, 2020).

The start-up business has become an innovation in the business industry in Indonesia. Almost every year, maybe even every month, many start-up businesses of various types and circles in the technology field. Until now, there have been thousands of local start-ups in Indonesia. Indonesia must utilize this progress to develop start-ups as part of the creative economy. According to Ratnawati (2018), the creative economy is a new economic concept that intensifies information and creativity through ideas and knowledge. The creative economy can help economic growth because many creative entrepreneurs have succeeded in combining ideas and creativity with the values of art, technology, knowledge, and culture as an alternative to economic development in order to improve people's welfare.

Financial technology or commonly known as fintech in the business world, is proliferating. One fintech that is currently starting to be known by the public is equity crowdfunding. Since 30 November 2019, OJK has granted permits to two equity crowdfunding platforms, namely Santara and Bizzare. This proves that various companies and MSMEs in Indonesia have officially used equity crowdfunding as a means of crowdfunding which can be an opportunity to get capital financing opportunities for business continuity.

2. LITERATURE REVIEW

2.1. Blockchain

Blockchain is a system that allows creating digital ledger and sharing it with business network parties independently (Laurence 2019). Information in the general ledger operates with encrypted data to implement identification, authentication, and authorization of access to information. The main goal of blockchain technology is the integrity and trustworthiness of the data present in the information system. There are two types of blockchain: permissionless is a blockchain network where any party can join the network, and any party that transacts without the need for verification, and permission is a blockchain network where only authorized users can make transactions (Acharya, Yerrapati and Prakash, 2019).

2.2. Cryptocurrency

According to Goleman (2018), cryptocurrency can be defined as a digital currency with a decentralized payment system that makes it possible to send money without a third party. The existence of cryptocurrency cannot be separated from cryptography, which helps prevent third parties from seeing private transactions through the code provided. Cryptography can ensure the legitimacy of every transaction that occurs.

2.3. Security Token

Today's digital assets have many types and terminology, so that explaining the meaning of each is not easy. According to Lambert, Liebau, and Roosenboom (2020), a security token is a digital representation of an investment product recorded on a distributed ledger, subject to regulation under securities laws. A security token represents a different class of digital assets, and the issuance process is called a Security Token Offering. Security tokens are ideal for start-up and mature companies. The issuance can be done at the beginning of the company's establishment using an equity token or later using a debt token. However, most of the Security Token Offering is made by start-up companies.

2.4. Start-Up

2.4.1. Start-up Definition

According to Ries (2011) a start-up is a company that has just been initiated or a company that has not been operating for a long time. Start-ups are organizations designed to innovate products and services amidst extreme uncertainty. Start-up was programmed to adopt a repetitive and scalable business model (Blank, 2014).

2.4.2. Start-up Life Cycle

While start-ups are naturally complex and diversified, these entities have a life cycle. The start-up life cycle is divided into three stages, namely, the bootstrapping stage where the owner of the company looks for a support mechanism to develop the company starting a series of activities to turn his idea into a profitable business. This early stage (seed stage) is marked by seeking support mechanisms such as accelerators and incubators and investments to develop the company as well as the creation stage when the entity has been formed and corporate finance is considered the main choice of corporate funding.

Venture capital can facilitate the creation stage, by funding the venture (Dash, 2019).

2.5. Crowdfunding

According to Hutomo (2019), crowdfunding is defined as a funding technique for projects or business units that involve the wider community. Meanwhile, according to Irawati (2019), crowdfunding is a funding scheme in which the collection of funds comes from a large community via the internet. So, it can be concluded that crowdfunding is a funding method that is raised collectively by the community. There are two types of crowdfunding, including community crowdfunding, which is the organizer or site manager, which in this case is a party collecting donations which is also the beneficiary of the recipient of funds or the project owner who applies for funding and investment crowdfunding is part of fintech or financial system operations technology-based. There are two types of investment crowdfunding, namely peer-to-peer lending (P2P) which is an information technology based on borrowing service and equity crowdfunding which is a crowdfunding service through the offering of shares or corporate debt securities based on information technology (Hutomo, 2019).

3. RESEARCH METHOD

3.1. Research Design

This research is a descriptive study that uses a qualitative approach with SWOT analysis and a quantitative approach with questionnaires and surveys to check public interest. In the SWOT analysis, the researchers determine the rating given based on the influence on the STO. On internal factors of strength and external factors of opportunity, the greater the influence of factors on STO, the greater the rating given. Meanwhile, for internal factors, weaknesses, and external threats, the greater the influence, the smaller the rating given. This study discusses the funding of start-up companies through equity crowdfunding by utilizing a security token offering. This paper provides a flowchart design of the equity crowdfunding funding system through a security token offering to be applied to start-up companies in Indonesia.

3.2. Data collection technique

Methods of data collection using secondary data sources. Secondary data is data that is not directly given to researchers. The data was obtained by using a literature study conducted on references and sources obtained from previous research. In support of the research results, the authors surveyed public interest in the STO funding system through a Google Form questionnaire as research supporting data. Respondents to this questionnaire are Indonesian citizens aged 17 to 60 years who are potential investors. The number of respondents who were successfully obtained was 53 respondents.

3.3. Data analysis technique

The data analysis technique used is descriptive with a quantitative-qualitative approach. This technique is implemented through the following steps. After the data series is collected, then data analysis is carried out with several data processing procedures and techniques as follows:

1. Perform data selection and classification.
2. Create and distribute questionnaires.
3. Perform data editing.
4. Confirm and verify data.
5. Conducting data analysis by the discussion of the researcher's.

4. DATA ANALYSIS AND DISCUSSION

As an effort to create blockchain-based equity crowdfunding innovation by adopting a security token as an investment instrument through a security token offering called a security token offering. Researchers use SWOT analysis to determine the strengths, weaknesses, opportunities, and threats of the STO so that the funding system through this STO becomes effective and efficient to be implemented in Indonesia. This funding system is presented in Indonesia with the hope of becoming a strategy for start-up companies which during the Covid-19 pandemic era experienced many difficulties amid the rapid growth of crypto asset investment.

Table 1. SWOT Analysis

Internal Factors				
Code	Strenght	Weight	Rating	Total
S1	Good token liquidity due to unlimited token issuance by the company are unrelated to the amount of asset owned by the company	0,15	8	1,20
S2	Investor protection is guaranteed by the existence of a smart contract, so in the sale and purchase of security tokens, there is no third party that connects the token issuer and the investor.	0,25	9	2,25
S3	Information and user data from the funding process cannot be used without the knowledge of the owner by using the blockchain feature as the basis for the security token system so that the system is more transparent.	0,10	7	0,70
	Total strength weight-calculation	0,50		4,15
Code	Weakness	Weight	Rating	Total
W2	Token valuation is difficult because each token has a different structure and design.	0,15	3	0,45
W3	The entire STO process is carried out by the start-up independently. So it requires competent human resources and major cost	0,35	2	0,70
	Total weakness weight-calculation	0,50		1,15
	Total internal factors calculation	1,00		5,30

External Factors				
Code	Opportunity	Weight	Rating	Total
O1	Digitalization of funds for start-up companies by building a system that utilizes blockchain technology and security tokens in the funding process.	0,2	8	1,60
O2	STO funding opportunities are becoming wider due to government support in the form of setting regulations and increasing public interest as seen from the increased volume of investment in cryptocurrencies.	0,3	9	2,70
	Total opportunity weight-calculation	0,50		4,30
Code	Threat	Weight	Rating	Total
T1	Limited public knowledge of the security token-based funding system which has an impact on the number of security token investors.	0,10	3	0,3
T2	Disruption of new funding technologies that could threaten the existence of STOs over time.	0,40	2	0,8
	Total threat weight-calculation	0,50		1,10
	Total external factors calculation	1,00		5,40

Table 2. Matrix General Electric

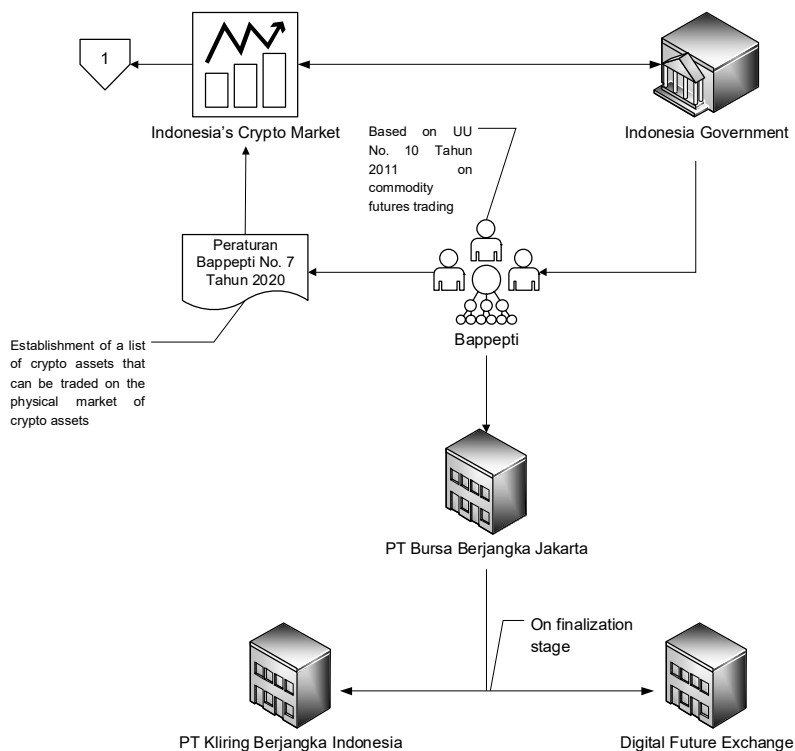
Internal Factors				
		6	3	0
		Strong	Average	Weak
External Factors	Opportunity	9 1. Growth (vertical growth)	2. Growth (horizontal integration)	3. Retrenchment (turnaround strategy)
	Average	6 4. Stability (pause on proceed with caution)	5a. Growth (horizontal integration) 5b. Stability (no change profit strategy)	6. Retrenchment (captive company strategy)
	Threats	3 7. Diversification (concentric diversification)	8. Diversification (conglomerate unrelated)	9. Retrenchment (liquidation)

Based on the results of the SWOT on STO in Table 2, it shows the company's competitive position in cell 5a growth with horizontal integration. It states that the STO product itself can be developed through market expansion. After that, the researchers designed a flowchart based on the SWOT analysis in Table 1. This flowchart will explain the STO system recommended by researchers to be implemented in Indonesia with a more effective and efficient system so that it

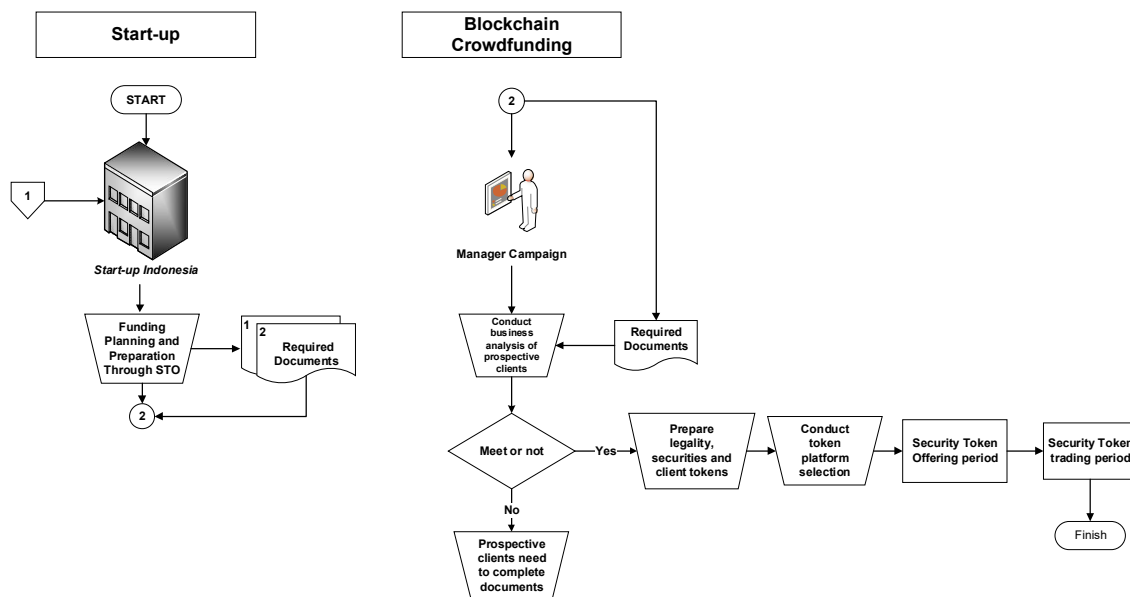
can attract the attention of start-ups to be able to use STO as their funding solution.

The first thing that needs to be considered in implementing blockchain-based equity crowdfunding with STO is the government regulation of the STO product itself, namely the security token derived from cryptocurrency as shown in Figure 1. Currently, regulations on STO products do not yet exist in Indonesia, but the development of the crypto market in Indonesia has shown a very rapid increase that requires the government to continue to adapt. The government's response to this is the formation of Bappepti or Badan Pengawas Perdagangan Berjangka Komoditi which is under The Ministry of Trade on Undang-Undang No. 10 Tahun 2011 concerning Commodity Futures Trading. One of the powers possessed by Bappepti is to ratify the rules and regulations of the Futures Exchange and Futures Clearing House and Futures Contracts to be traded on the Futures Exchange, including any amendments thereto. This authority resulted Peraturan Bappepti No. 7 Tahun 2020 which concern 229 crypto assets that can be traded on the physical crypto asset market in Indonesia and can be categorized as utility tokens. The existence of a utility token that has been officially used in Indonesia has become a fundamental in the development of security tokens due to, the creation of security tokens also through same platform as utility tokens such as Ethereum. Currently, Bappepti has collaborated with PT. Bursa Berjangka Jakarta to form a Digital Future Exchange and PT. Kliring Berjangka Indonesia which is currently in the process of being finalized. The collaboration aims to develop and expand the cryptocurrency market.

The second thing to note is the potential investors or investors from the STO. Prospective investors or investors in STO are accredited parties or individuals where in this study the researchers adjusted with the criteria stated in POJK No 57 Tahun 2020 in article 56 paragraph (1), where an investor who buys securities in crowdfunding services must have a securities account with a custodian bank that is specifically for storing securities and/or funds through crowdfunding services; have the ability to purchase the issuer's securities; and meet the criteria of investors and restrictions on the purchase of securities. The criteria for investors and the limit for purchasing securities include that every investor with an income of up to Rp. 500,000,000 per year can purchase securities up to a maximum of 5% of a year's income. Meanwhile, investors with annual income above IDR 500,000,000 can buy securities up to 10% of their annual income.



Picture 1. Government Regulation of Crypto Asset



Picture 2. Security Token Offering Process

The researchers recommend the STO design to be implemented for start-ups in Indonesia by carrying out several processes as shown in Figure 2. The process begins with preparations related to STO funding by start-ups. The preparation process is carried out by preparing several documents such as the deed of establishment of the legal entity of the issuer, details of the funds to be raised, the issuer's risk, description and business plan of the issuer, financial statements of

the issuing company, permits related to the issuer's business activities, the issuer's dividend policy is in accordance with the deed of the issuer's articles of association, and several other related documents. The document was submitted to blockchain crowdfunding as a platform for providing STO issuance services for start-ups in Indonesia.

Regarding the weaknesses of the previous STO in the SWOT analysis, which stated that the entire STO process was carried out by start-ups independently. Therefore, the researchers created a new systematic where all start-up STO publishing activities will be managed by a campaign manager. Each campaign manager will be responsible for one start-up company. Thus, start-up companies are more interested in conducting the funding process through STO because they do not need to directly prepare a special team to carry out this issuance process. After the campaign manager receives the documents, the campaign manager will determine whether the start-up has met all the requirements set by the crowdfunding blockchain. If the start-up income does not reach the minimum limit of IDR 5,000,000,000,000, then the campaign manager has the right to reject the client because it can be said that the business is less stable to follow the STO and has a greater risk of bankruptcy. In addition, for start-ups with incomplete documents, the campaign manager will return these documents to be completed. After the campaign manager has made the decision, the campaign manager will direct his team to prepare the client's legality, securities, and token needs. The legal requirements consist of the issuance of a prospectus, investor requirements, requests for legality of the STO mechanism, and adjustments to the STO regulations and existing regulations in Indonesia. The preparation of securities is carried out related to the determination of underlying assets such as shares, bonds, sukuk, and others that can be used in accordance with the start-up policy. In addition, token valuation and determination of softcap will be carried out (minimum limit of funds targeted by start-ups).

In the preparation of client tokens, the researchers recommend Blockchain Crowdfunding to affiliate with blockchain companies in planning client tokens to be more effective and efficient, as opposed to creating a separate division to do this. Client token preparation consists of selecting the blockchain platform to be used, building the client blockchain to creating the client's security token. The campaign manager will select the token issuance platform by proactively communicating with the client. When this whole process is complete and the security token is ready, the campaign manager will prepare the security token offering period. During this offering period, start-up companies will be assisted by campaign managers in terms of marketing, content dissemination communications, and audience networks owned by both parties. Until the buying and selling period of security tokens, start-up companies will be assisted by campaign managers in transactions and distribution of sales proceeds to these start-up companies by utilizing smart contracts.

Table 3. Respondent's Age

Respondent's Age	Percentage
17-26 years old	84,9%
27-40 years old	5,7%
41-60 years old	9,4%

Table 4. Majority of Respondent's Types of Investment Instruments

Types of Investment Instruments	Percentage
Stock	53,8%
Mutual Funds	43,6%
Cryptocurrency	35,9%

The researchers also conducted a survey which was distributed in the form of a questionnaire and from the results of the questionnaire in Table 3, most respondents were 84.9% aged 17 – 26 years. Most respondents with an age range of 17 – 26 years are believed to be the driving force of the Indonesian economy in the future. His participation in STO investment activities is considered to have a good impact on the development of the start-up industry in Indonesia. In addition, in Table 4 most respondents have experience investing with types of instruments including stocks, mutual funds, and cryptocurrencies. This proves that the results of this questionnaire respondents indicate that there is a great opportunity for the expansion of the STO market in Indonesia because the characteristics of STO as a crypto asset investment with underlying assets in the form of securities such as stocks or bonds are similar to traditional investments made by the majority of research respondents.

Table 5. STO Implementation

Respondent's Opinion	Percentage
Strongly disagree	1,9%
Disagree	20,8%
Agree	45,4%
Strongly agree	32,1%

Table 6. Knowledge of Equity Crowdfunding

Respondent's Opinion	Percentage
Strongly do not knowing	18,9%
Do not knowing	45,3%
Knowing	26,4%
Strongly knowing	9,4%

In accordance with the results of the SWOT analysis which states that STO needs to be marketed, it is supported by the results of the questionnaire. In Table 5, 45.4% agree with the STO to be implemented in Indonesia as a means of funding for start-ups as well as a new form of investment for investors. In order to implement STO in Indonesia, various forms of socialization are needed to the public, both in terms of investors and start-up companies. This is related to the results of the researcher's questionnaire in Table 6 where 45.3% of respondents stated that they were not aware of equity crowdfunding investments and only 7.5% of respondents stated that they routinely invest through equity crowdfunding. Therefore, to be able to introduce STO more to the community, support from various parties is needed. The government can work with various financial

institutions or young investor organizations to promote new forms of crypto asset investment in Indonesia.

5. CONCLUSION

The blockchain-based equity crowdfunding funding system through STO is presented in Indonesia with the hope that it can be a strategy for start-up companies facing a crisis due to the Covid-19 pandemic at a time when crypto asset investment is growing rapidly. Researchers adopted Security Token Offering as an innovation of a blockchain-based equity crowdfunding system. In order to implement this funding system in Indonesia, the researchers conducted a SWOT analysis. The results of the SWOT analysis state that in developing STO, it is necessary to expand the market. Therefore, this research describes the flow of the system which can also include the expansion of the market. Market expansion can be done by creating a crowdfunding blockchain as an institution that can facilitate the funding process through STOs, which are generally carried out by start-ups independently. Thus, market expansion can occur because this system will be much easier to implement for start-ups that are developing in Indonesia. In addition, in response to a questionnaire regarding public interest in this funding system, it was found that 45.4% agreed with the STO to be implemented in Indonesia as a means of funding for start-ups as well as a new form of investment for investors. This also supports the expansion of the STO market in Indonesia.

This study found several limitations in the study, including the researchers did not distribute questionnaires to the owners of start-up companies as parties who needed funds. So that this research questionnaire is limited only from the point of view of the public as a potential STO investor. Therefore, the researchers suggest for further research that researchers can distribute research questionnaires to owners of start-up companies or those who work in start-up companies.

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