



## Chapter 4

# Digital Finance Acceleration during COVID-19 Pandemic in Indonesia

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### A. Indonesia Digital Economy

Indonesia's digital economy has rapidly grown and is the largest in Southeast Asia (World Bank, 2021). Therefore, the acceleration of digital financing has been expected to have a huge economic potential, and it has been projected to support economic recovery while reducing inequality simultaneously. Digital transformation in the financial services sector has provided many custom-made alternative services, such as settlement, financing, insurance, and asset formation. It has facilitated cashless services and improved financial access to a low-cost and convenient environment. Globally, financial services are expected to contribute to economic stability and economic freedom, as well as improve higher living standards and income equality.

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The exponential growth of smartphone usage in Indonesia has led to immense improvement in digital financial services. Central Bureau of Statistics (2020) reported that Indonesia's household internet use reached 78.18% in 2020. It had significantly increased compared to 2016 when only 25.37% of the residents had internet access. Moreover, Indonesia ranks 4<sup>th</sup> among smartphone users, following China, India, and the USA in the 2020 survey (Pusparisa, 2021). It has been reported that there were 160.23 million smartphone users in 2020 (Pusparisa, 2021).

In 2020 the COVID-19 pandemic forced many countries, including Indonesia, to strictly lock their country down to prevent the spread of the virus. This condition has caused a downturn in the economy and the global economy went through an abrupt halt. People must do activities, work from home, and even their children must study from home. As a result, the considerable increase in smartphone usage in 2020 is also affected by this pandemic.

This economic change from the conventional way to the digital way may offer many opportunities, thus, this chapter will assess the implementation of digital finance acceleration as the instrument to reignite Indonesia's economy during and post the COVID-19 pandemic. The term acceleration in this chapter is defined as the utilization of digital finance amidst the COVID-19 pandemic to maintain the smoothness of their activity.

This chapter notably examines the fintech payment and lending transaction value development during the COVID-19 pandemic. Besides, this chapter analyses the fintech industry's contribution to boosting national economic recovery and the future of Indonesia's economy. This chapter also suggests that the fintech payment and lending transaction values relatively show resilient trends during COVID-19. On the other hand, internet banking transaction values provide the highest contribution compared to the other fintech instruments. It also finds that the contribution of fintech development has supported the national economy recovery through National Cashless Program, Pre-employment cards, digital marketplace integration

through QRIS, and financial education through digital platforms. This chapter covers some key components that might need to be considered in accelerating digital finance in Indonesia, especially during pandemic that could offer valuable inputs for governments, educational institutions, industry, and the community.

## **B. Review on National Digital Finance based on National Statistical Data**

The Financial Stability Board (FSB) defines *fintech* as part of technology innovation in financial services that could result in new business models, applications, processes, or products with an associated significant effect on financial markets and institutions and the provision of financial services (FSB, 2019). From a global perspective, fintech has potentially benefits financial stability from many aspects. First, fintech may optimize the decentralization and diversification function in many areas. Second, fintech may create innovation in financial services that boost efficiency. Third, fintech encourages transparency by enhancing data potency and avoiding information asymmetries. Lastly, fintech offers more comprehensive access and convenience in financial services (FSB, 2017).

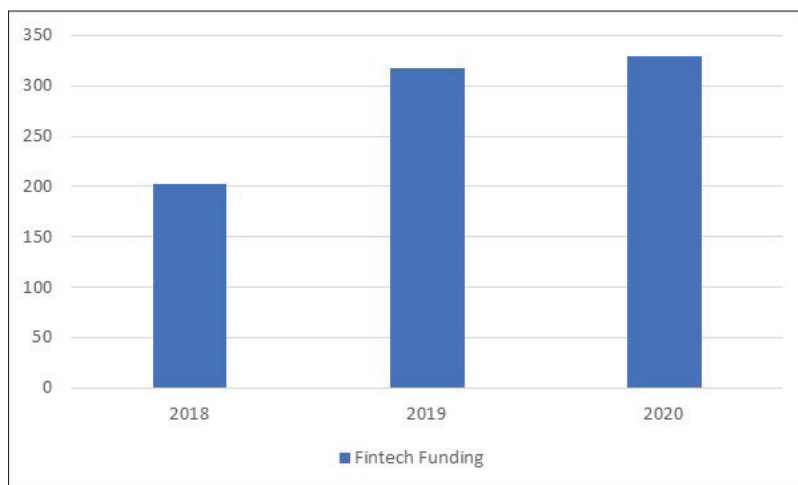
The development of fintech is in line with the growth of internet access, mobile phone penetration, and digital financial services, such as e-banking and other online platforms. Digital finance innovation in Indonesia is categorized into four major clusters: digital payments, digital banking, peer-to-peer lending, and crowdfunding. As the regulator, Financial Services Authority (Otoritas Jasa Keuangan-OJK) has conducted several strategies to accelerate the development of fintech in Indonesia, which are establishing research, policies, and regulations, creating business models and business governance samples, conducting workshops and seminars, facilitating co-working space and consultation, as well as expanding the collaboration among regulators, fintech hubs, and international organizations (OJK, 2020c).

The fact that the transaction values of phone banking, mobile banking, internet banking, electronic money, and peer-to-peer lend-

ing are not directly impacted by the COVID-19 pandemic (Sugandi, 2021) means that this industry can potentially support Indonesia's national economic recovery. For example, it has contributed to a pre-employment card program to distribute cashless social aid to people impacted by COVID-19 (Sugandi, 2021).

Furthermore, innovation development is fundamental to creating a stable, contributed, inclusive, and sustainable digital financial environment. The synergy among fintech companies, financial institutions, microfinance, cooperatives, and community agents are crucial aspects to be conducted. Nonetheless, the inclusive and sustainable financial sector should be supported by stakeholders' shared vision and clear strategy (Batunanggar, 2019).

The utilization of fintech before and amid the COVID-19 pandemic is explained in Figure 4.1.

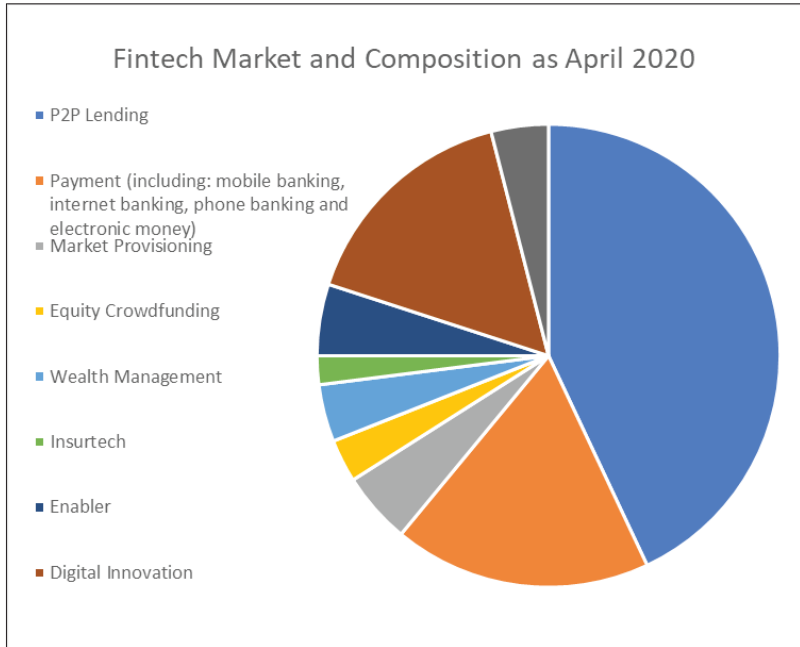


Source: Medici (2021)

**Figure 4.1** Fintech Transaction (Values in USD million)

According to Medici (2021), the total fintech transaction values have gradually increased from 2018 to 2020. Fintech contributed 203 million USD in 2018. This trend significantly increased 56% or 317 million USD in 2019. Then, it was slightly increased to 3.79% or 329

million USD in 2020 as described in Figure 4.1. The critical factor of the gradual growth is the massive internet penetration and number of smartphone users in Indonesia (Medici, 2021)<sup>1</sup>.



Source: OJK (2020c)

**Figure 4.2** Fintech Market Composition

Figure 4.2 illustrates the fintech market compositions in Indonesia by category. As per April 2020, among the 364 fintech companies in Indonesia, Peer-to-Peer (P2P) lending has the largest proportion covering 43% or 161 registered companies in OJK<sup>2</sup>. The second position was placed by fintech payment companies with 18% of the total proportion. The types of fintech payment recorded by Bank Indonesia are phone banking, mobile banking, internet banking, and electronic

1 152 million internet users in Indonesia in 2019; Compared to 92 million in 2015, it almost doubled for 5 years (Indonesia Fintech Report, Medici, 2021)

2 87.71 trillion IDR fund has been distributed to society (OJK, 2020b).

money. Meanwhile, the rest of the compositions consist of market provisioning, wealth management, crowdfunding, insurtech, enabler, digital finance innovation, and others.

**Table 4.1** Fintech Ranking Index in ASEAN countries

2019 Rank	Country	Score 2019	Rank 2018	Score 2018	Rank 2017	Score 2017
1	Singapore	51.83	1	44.35	1	37.47
2	Indonesia	51.47	2	39.37	2	30.40
3	Thailand	30.91	4	24.29	4	18.52
4	Malaysia	29.28	3	24.70	3	20.92
5	Philippines	23.99	5	18.65	5	13.85
6	Vietnam	18.61	6	15.20	6	11.77
7	Brunei Darussalam	10.59	7	9.60	7	8.50
8	Cambodia	9.34	9	6.57	9	4.90
9	Myanmar	9.13	8	7.65	8	6.02
10	Laos	6.19	10	4.93	10	3.86

Source: Huong, et al. (2021)

Table 4.1 shows the fintech ranking among ASEAN countries. We can see that Indonesia occupied the second highest position after Singapore, with an index score of 51.47 in 2019. The score has significantly increased from 39.37 and 30.40 in 2018 and 2017, respectively, although Indonesia also ranked second then. The ranking was based on an index of fintech indicators such as mobile post-payment, digital commerce, crowdfunding, crowd investing, digital remittances, Robo-advisors, crowdlending, and market lending. The formulation is measured based on the transaction values of each instrument, the number of users, and the average transaction value per user (Huong et al., 2021).

### C. Digital Finance and Economic Growth

As we may have ever heard the term “disruptive technology” at the beginning of the 2000s when massive technological developments evolved, we now might could learn the correlation between digital

financial and economic growth, which currently represents a growing interest. By using mathematical analysis<sup>3</sup>, Yoshino and Kaji (2020) argue in general that fintech has several impacts on society and the economy, as follows:

- 1) Fintech would likely improve bank efficiency, which leads to increased interest rates on deposits and improves households' utility.
- 2) Fintech could reduce the cost of the bank, which is likely to reduce the loan rate and increase the deposit rate.
- 3) Fintech also may reduce the transaction cost of capital, which increases the possibility of a country raising money from abroad.

Khiewngamdee and Yan (2019) suggested that fintech impacts the APEC countries' economy, particularly encouraging growth and productivity through e-payment, as well as lowering price volatility and inequality. Furthermore, Khere et al. (2021) found that the component of digital finance has a positive correlation with the GDP per capita growth rate, suggesting that its inclusion is likely to speed up economic growth. In country-level studies, Narayan (2019) indicated that fintech start-ups in Indonesia have a positive association with its economic growth in the second year forward; based on the fact that, in the first year, fintech has disruptive effects. Moreover, a study on the innovation of fintech in China would likely stimulate the green economic growth (Zhou et al., 2022).

Even though the study on the impact of digital finance on economic growth is still limited, it can be inferred that digital finance is likely to promote the economy's growth through inclusiveness. Even though this study only focuses on the utilization of digital finance during the COVID-19 pandemic, it could encourage more scholars to conduct further research on digital finance and economic growth.

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3 The detail can be found in Yoshino & Kaji (2020), The Macroeconomic Effects on Fintech.

## D. Analysis of Fintech Acceleration during COVID-19 Pandemic

### 1. Fintech Payment and Lending Transaction Values during Pandemic COVID-19

**Table 4.2** Fintech Transaction Values during COVID-19 Pandemic (Quarterly)

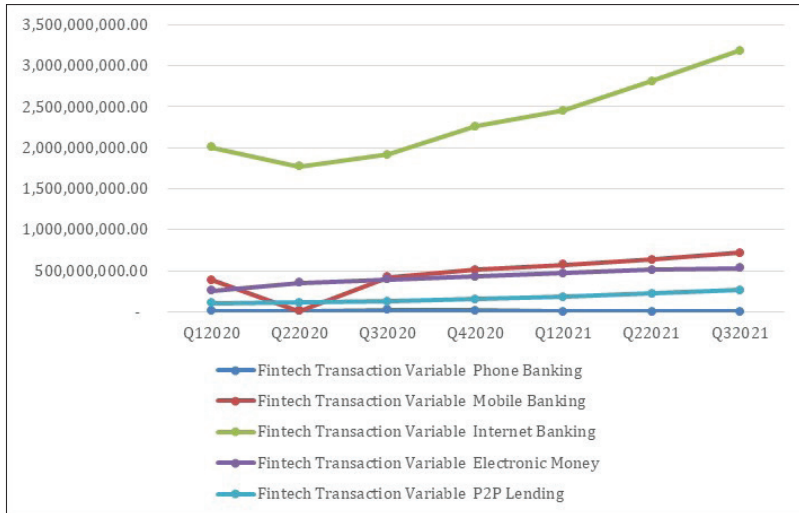
Period	Phone Banking	Quarterly Growth	Mobile Banking	Quarterly Growth	Internet Banking	Quarterly Growth	Electronic Money	Quarterly Growth	P2P Lending	Quarterly Growth
Q12020	9760785,85		384266352,14		2008612364,33		257078749,00		102534393,51	
Q22020	11628791,04	19,14%	11628791,04	-96,97%	1772741172,91	-11,74%	353587670,00	37,54%	113460536,67	10,66%
Q32020	20717937,85	78,16%	422985815,77	3537,40%	1914178379,74	7,98%	393904001,00	11,40%	128698493,17	13,43%
Q42020	18875762,93	-8,89%	511185320,76	20,85%	2263296023,17	18,24%	432281380,00	9,74%	155902554,22	21,14%
Q12021	194519,11	-98,97%	571089198,02	11,72%	2454558017,29	8,45%	470811351,00	8,91%	181671309,83	16,53%
Q22021	130605,21	-32,86%	637594343,08	11,65%	2809674007,91	14,47%	511254525,00	8,59%	221566741,07	21,96%
Q32021	110066,04	-15,73%	717661993,14	12,56%	3186963938,26	13,43%	530664510,00	3,80%	262933664,82	18,67%

Sources: BI (2021 a & b) and OJK (2021b)

Table 4.2 illustrates the fintech transaction values from Q1 2020 to Q3 2021, which are categorized as payment and lending transaction values. Phone banking, mobile banking, internet banking, and electronic money are identified as fintech payment transactions. Meanwhile, fintech peer-to-peer lending is recognized as fintech lending transactions. This classification considers because fintech payment and lending dominate the total fintech market composition. Besides, these variables are periodically reported to BI and OJK.

Q1 2020 and Q3 2021 is the COVID-19 pandemic period. During this period, the trend of internet banking transactions was increasing, and the values were the highest trend among other variables. On the contrary, the trend of phone banking transactions decreased, and the values were identified as the lowest. In addition, in Q2 2020, there is a decrease in fintech usage, especially mobile banking and internet banking, likely due to the post-Chinese New Year season (Sugandi, 2021). However, this trend gradually increased by Q3 2021. This was likely due to the limitation of people's mobility during COVID-19, which encourages internet utilization. Overall, the fluctuations of the transaction value movements, except for phone banking, constantly increase amid the COVID-19 shock. It shows that the transaction values of fintech payment and lending were relatively resilient during the COVID-19 period, as depicted in Figure 4.3.





Sources: Author, BI (2021a), OJK (2021b)

**Figure 4.3** Fintech Transaction Values during Pandemic

This chapter categorized fintech payment into phone banking, mobile banking, internet banking, and electronic money. Essentially, these instruments utilize the digital system or internet connectivity in their service transactions. The utilizations are distinguished from the access. Internet banking access only through the bank’s website, meanwhile mobile banking access through the application. In another hand, electronic money is defined as payment in electronic from where the value of money is stored in certain electronic media. Users must first deposit their money to the issuer and store it in electronic media. The use of electronic money is widely believed as an innovative and practical means of payment. It is expected to help payment transactions for mass, fast, and micro economic activities such as tolls, public transportation, minimarkets, food court, or parking (Bank Indonesia, 2020). Lastly, phone banking also categorizes as fintech because it’s a part of digital banking. Phone banking provides transaction services through bank’s contact center (OJK, n.d.).

*Internet Banking* service, the most contributed fintech variable, is a banking customer service that provides information and transactions from an internet connection through the bank's website. This service is accessible through computer desktops, laptops, tablets, or smartphone devices. Internet banking features encompass saving accounts, deposits, credit cards, account mutation information, and interest rates. Internet banking also provides payment and transfer transactions ranging from daily routine until the scope of business (OJK, n.d.).

During the COVID-19 pandemic, internet banking's transactions values experienced a slight shock at Q2 2020. However, the movement was gradually rising to Q3 2021. This fact is in line with the implementation of a large-scale social restriction for most physical activities in early Q2 2020. The policy urges society to utilize contactless financial transaction instruments such as internet banking to sustain day-to-day activities, for instance, daily food orders, grocery shopping, regular payment, and banking transfer.

*Phone Banking*, a banking call center service, provides information and banking transactions through the bank's contact center. The features of the phone banking consist of the information services about interest rates, a bank's product, ATM and bank's branch's location, banking transactions, payment transactions, and transfer transactions (sikapiuangmu.com). According to Table 4.2 and Figure 4.3, phone banking transaction values are relatively stable until they undergo a significant drop from Q4 2020 to Q1 2021.

*Mobile Banking* is a transactions service that utilizes applications downloaded through smartphones. The benefits include banking information, transfer, and payment transactions (sikapiuangmu.com). Mobile Banking transaction values constantly increased during the period, except in Q2 2020, which the trend was drastically dropped. The declining might occur due to the external factors such as economic fluctuations that impact economic transactions and people preference to utilize another financial instrument.

*Electronic Money* is a payment instrument in banking computer systems that may facilitate electronic transactions. Electronic Money is mainly used for mass economic activities such as toll road transactions, transportation transactions, and groceries transactions (sikapiuangmu.com). According to Figure 4.3, Electronic Money transaction values have a stable and constant trend during the period. This trend describes the electronic money utilization in society has provided convenience for cashless transactions. In line with the statement from CNBC (2020) that E-money is very applicable for mass transactions with small values of transactions but high frequency, such as transportation, parking, toll roads, fast food, and supermarket. Moreover, in the big cities, business communities utilize various e-money payment methods, which offer faster connections. Meanwhile, from the side of the government, many programs such as non-cash social assistance uses e-money as a distribution instrument.

*Peer-to-peer* (P2P) lending is a lending transaction service that connects the lender and borrower directly through digital technology. P2P lending provides an immediate submission process and non-underlying assets as a guarantee. The growth of fintech P2P lending is currently growing rapidly and is easily accessible to people who are still finds difficult to access loan funds and for MSME actors for business development capital. P2P lending fintech provides access to loans for those who need education and health care funds with their respective standards, ranging from loan creditworthiness, loan nominal and tenor, interest rates, and security levels. According to the statistic, per February 19, 2020, the total P2P lending fintech registered in OJK was 161 companies (OJK, 2020c).

## **2. Fintech Regulation in Indonesia**

The two supervisory bodies, the Bank of Indonesia (BI) and Otoritas Jasa Keuangan (OJK), regulate Indonesia's fintech industry. BI governs the fintech industry of payment policy, digital financial service, digital identity, and fraud sharing databases. Meanwhile, OJK regulates digital financial innovation, equity crowdfunding, online mutual funds

agents' transaction, and fraud sharing database (OJK, 2020c). In terms of statistic data, BI also records the transaction values and volume transactions of phone banking, mobile banking, internet banking, and electronic money in Indonesia. On the other hand, OJK records peer-to-peer lending, marketplaces, balance sheet lending, crowdfunding platforms, insurtech, investment and personal financial management providers, and market aggregators.

Furthermore, OJK has appointed AFTECH as an association of the digital finance innovation organizer as the representative of the industry side. In terms of function, AFTECH accommodates fintech's shareholder's contributions to drive innovative technology and strengthen the national fintech's industry competitiveness (AFTECH, 2020).

Along with the journey, in 2021, OJK has issued Digital Finance Innovation Road Map and Action Plan 2020–2024. The roadmap explains the OJK strategies to support digital financial innovation in Indonesia, enabling a balanced framework, agile regulations, and market conduct supervision (OJK, 2020c). BI and OJK have issued regulations that cover most of the fintech categories. The existing fintech regulation in Indonesia are classified in detail as follows:

**Table 4.3** Existing Fintech Regulation in Indonesia

<b>Verticals</b>	<b>Regulations</b>	<b>Regulator</b>	<b>Description</b>
Online lending	POJK 77/ POJK.01/2016	OJK	Regulate the fintech-lending platforms.
Digital Financial Innovation	POJK 13/ POJK.02/2018	OJK	Fintech regulatory sandbox provides regulatory clarity for fintech categories that have not been specifically regulated by BI/OJK/other ministries.
Payment Gateway	PBI 18/40/ PBI/2016	BI	Regulates the licensing policy and procedure that apply to all payment systems, including payment gateway, e-wallet, switching, and clearing.
E-wallet	PBI 18/40/ PBI/2016	BI	

<b>Verticals</b>	<b>Regulations</b>	<b>Regulator</b>	<b>Description</b>
E-Money	PBI 20/6/ PBI/2018	BI	Regulates the e-money operation, including the licensing and transactions.
Remittance	PBI 19/12/ PBI/2017	BI	Regulates the payment gateway system through financial technology
Security Crowdfunding (SCF)	POJK 57 POJK.04/2020	OJK	POJK 57 is the latest FinTech regulation published, which flesh out the POJK 37. It essentially regulates three main stakeholders involved in the SCF business model: the SCF platform, the equity issuer, and retail investors.

Sources: AFTECH (2020)

As explained in Table 4.3, fintech regulations in Indonesia have been relatively established in a comprehensive manner. The respective regulators have created the frameworks and reached the fintech industry's general scope, including online lending, digital financial innovation, payment gateway, e-wallet, e-money, remittance, and equity crowdfunding. The high demand for fintech products and the market dynamics are expected to align with the solid and balanced regulations. However, this digital platform does not necessarily run without any risks, such as shadow banking, fraud, cyber-attack, and money laundry that would be treated as challenges in the digitalization era for the country. In mitigating those digital challenges, in terms of regulatory and sup, OJK has established action plan strategies to be implemented and evaluated yearly. Among of key initiatives of the actions are, first, enhancing consumer protection in the digital age, including digital financial literacy and complaint management practices. Second, providing data privacy and protection. Third, enhancing regulation and supervision fintech, including the regulatory and supervisory aspects. Fourth, improving dialogue and support for innovation such as innovation hub, knowledge-sharing sessions and dialogues, regulatory sandbox, regional, and global coordination. Fifth, focusing on improving safety and soundness practices in the emerging fintech industry including cybersecurity, fraud prevention, and risk management, etc. (OJK c, 2020).

The synergy among the fintech industry is also essential in fintech development and supervisory. AFTECH, a fintech association, has collaborated with 335 registered fintech companies, eight financial institutions, and seven technology partnerships. The related regulators and technology authorities include the Bank Indonesia, OJK, National Financial Inclusion Strategy, the Ministry of Communication and Information, the Ministry of Industry, and the Ministry of Finance. Therefore, the collaboration among industry, regulators, and associations would be beneficial in providing interconnected databases, exchanging the current and updated information, as well as in exposing transparent interaction among fintech players and regulators.

### **3. Fintech Contribution to National Economic Recovery**

The fintech industry has supported the government in the national economic recovery program. According to Ardianto (2021), per end of 2020, P2P lending has distributed 262.26 million IDR national economic recovery funding. The funding was allocated to 48.629 borrowers' accounts (Ardianto, 2021).

Amid the COVID-19 pandemic, the government also has involved fintech industry in the national economic program. The government controls the fintech companies to support the distribution of non-cash social aid for poor societies impacted by COVID-19, named the Pre-employment card (Sugandi, 2021). The mechanism of Pre-employment cards is that the government distributes the cards to 5.3 million recipients. The program provides skill/competence development and entrepreneurship training to the participants. After joining the training or the courses, the funds are transferred through a fintech instrument such as a digital account or e-wallet (Sugandi, 2021). The program also optimizes the digital marketplace utilization to associate job seekers and SMEs.

Cashless National Action is one of the government's national economic programs that specifically regulate fintech during the national economic recovery. The Government interconnects customers and marketplaces through Quick Response Code Indonesian

Standard (QRIS). As a follow-up to the QRIS initiative, many fintech e-money platforms support this program, such as ShopeePay, Dana, and Kredivo.

*ShopeePay*, on the other hand, provides cashback and discount promotion programs to encourage customer preference to do contactless shopping/transactions. Moreover, *Dana*, a fintech e-wallet company, enable cashless transaction in society. Dana provides applications as a platform for shopping and delivery service transactions. Besides, Dana reached the regional market and created an ecosystem to educate the community.

Another program called *Kredivo*, a peer-to-peer lending company, provides a credit restructuring program for the society affected by COVID-19. In addition, *Kredivo* initiated financial literacy action named *Generasi Jempolan*. The program aims to educate millennial consumers about technology savvy and financial education.

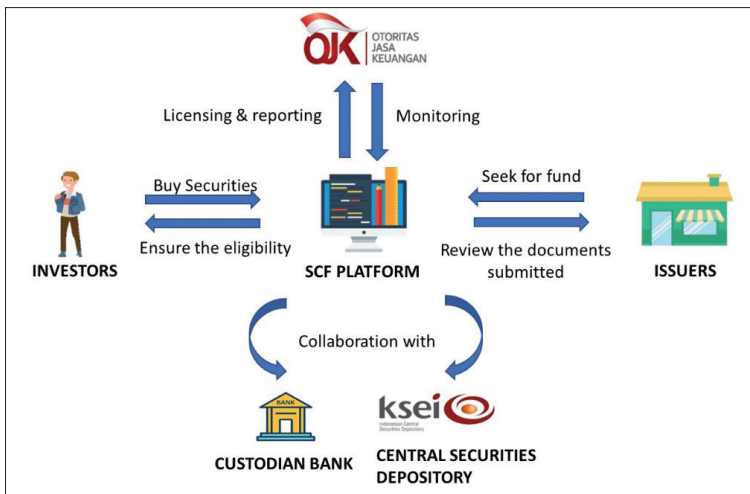
## **E. The utilization of Securities Crowd Funding (SCF): Case Study in Indonesia**

Apart from what has been discussed previously, this chapter sheds light on the acceleration in the fintech industry, “the crowdfunding”. Crowdfunding in Indonesia started when the regulation for peer-to-peer lending was released in 2016. As the demand for financing-based technology increased, at the end of 2018, OJK released a regulation for Equity Crowdfunding (ECF) as alternate funding for SMEs to obtain financing from the capital market sector.

According to POJK 37/2018, ECF is a digital service of share offering conducted by the issuer to sell shares or stocks directly to the investors through an electronic system (platform) that is open to the public. Investors would get a dividend as a profit from their investment. However, ECF has limited scope as it is only applied to the issuance of stocks. On the other hand, SMEs have a high demand for the issuance of project bonds. Consequently, at the beginning of 2020, OJK fleshed out ECF regulation into Securities Crowdfunding (SCF) and issued a new regulation named POJK 57/2020.

SCF is a mechanism of securities offering services through an electronic system network that is opened to the public to issue securities such as limited stock and debt issuance. The process is similar to the Initial Public Offering (IPO); however, the scope is limited, and SCF is conducted through a platform, not an Exchange. POJK 57/2020 regulates the licensing process for the SCF platform, as well as the definition and limitation for Issuers and Investors. Several economic terms are required to be understood in this process, as follows:

- 1) **Platform** is an Indonesian business entity that provides, manages, and operates crowdfunding services.
- 2) **Issuers** is an Indonesian business entity in the form of a legal entity or any other business entity that issues Securities through crowdfunding services.
- 3) **Investor** is an individual and/or a firm that purchases Securities through crowdfunding services.
- 4) **Securities** that can be offered include the debt acknowledgments letter, commercial securities, shares, bonds, proof of debt, participation units in collective investment contracts, futures contracts on Securities, and other Securities derivatives.



Source: OJK (2020a)

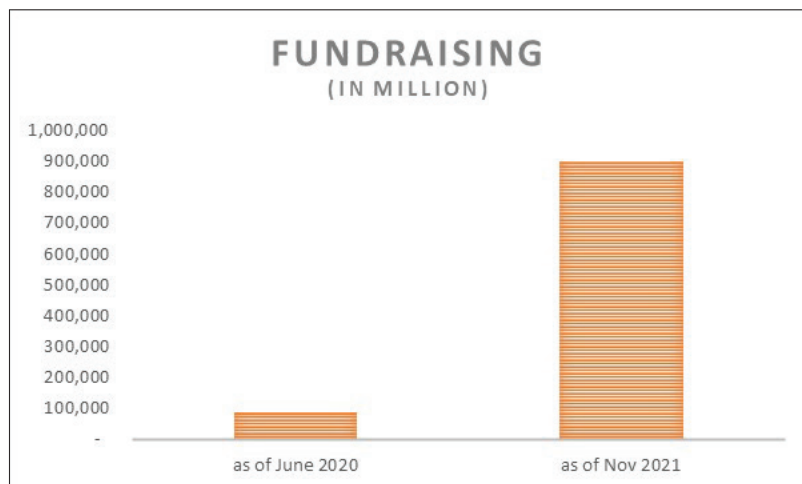
**Figure 4.4** Securities Crowd Funding Business Process

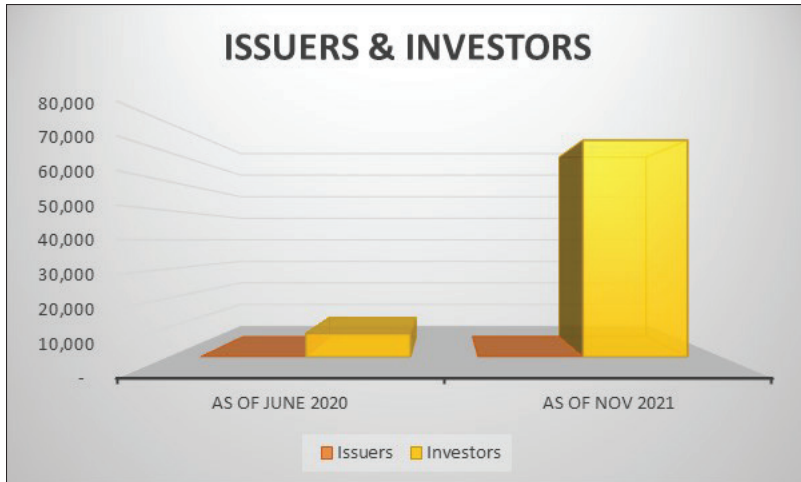


Figure 4.4 shows the workflow of the Securities Crowd Funding (SCF) business process. The first step is to get a license from OJK and collaborate with the Custodian Bank and KSEI for the securities depository procedure. The platforms should satisfy some required documents and information to get a license and be registered in Indonesia FSA. All those requirements are stated in the POJK 57/2020. Once the platform gets the license, it then plays a role as an intermediary, connecting the issuers to the investors to get the funds by using SCF instruments.

### SCF Business Process

Upon release, just three ECF platforms obtained the license from OJK. However, the total fundraising from these three platforms was approximately 88 billion IDR, 69 issuers, and 7.928 investors (as of June 2020). This amount grows significantly during COVID-19 recovery, as illustrated in Figure 4.5.





Source: OJK SCF Statistic (2021a)

**Figure 4.5** Securities Crowd Funding Statistics

In 2020, Institute for Development of Economics and Finance (INDEF) released a report on their study on Equity Crowdfunding (ECF). It was conducted before the SCF was released. According to the report, the profile of the ECF issuers was dominated by the food & beverages sectors. It accounted for 42%, followed by the property sector for 34%. INDEF (2020) suggested that 97% of ECF issuers were non-bankable, while only 3% that bankable. On the other hand, the profile of ECF inventors was dominated by the group of age 26–30 years at 34% and followed by the group of age 20–25 years at 26% (INDEF, 2020). Therefore, it can be inferred that millennials are more likely to be interested in this type of investment. Furthermore, this report indicates that ECF positively impacts the national economy by lowering the unemployment rate and increasing the income rate. The report also suggests that ECF has the potential impact on reducing poverty in several areas.

As the utilization of ECF/SCF proliferated during COVID-19, SCF can be considered an alternative solution in supporting Indonesia's SMEs to reignite their business. SCF also becomes an alternative

investment for investors to own a company with a smaller amount than investing directly in the stock or bond market. The data above indicates that the millennials dominate SCF investor profiles; thus, the demography of the Indonesian population dominated by the young generation also offers a potency to be an investor in SCF.

In the greater objective, SCF indirectly induces start-ups and financial technology companies to grow, which has been expected to boost economic growth in the foreseeable future. However, to reach this goal, it might be important to consider the application of a credible and valid supervisory technology system in the platforms to gain investor trust, as well as the introduction and the improvement of financial and digital literacy to improve the knowledge of millennial investors on financial technology.

## **F. Summary and Recommendations**

The statistics showed that the development of fintech payment and lending transaction values was resilient during COVID-19. The considerable growth of this digital finance can be identified through the transaction values during the COVID-19 period as well as in the increasing growth of fintech companies from 2019 to 2020. The most significant number of transaction values among the variables is internet banking. The necessity for digital transactions in all aspects of life during COVID-19 has become the primary factor of internet banking utilization. In addition, the large-scale social restriction urges digital utilization in many ways. As a result, fintech will likely undertake the traditional digital transaction from daily routine to business transactions.

The fintech utilization contributes positively to national economic recovery in Indonesia during COVID-19. Fintech can accelerate funding distribution to MSMEs through peer-to-peer lending utilization and non-cash social aid to help poor society through the fintech e-wallet. In promoting the application of fintech in national economic recovery programs, the Government as the policymaker has initiated action programs, including cashless national action, Pre-employment

cards, digital marketplace integration through QRIS, and financial education through digital platforms.

Overall, the digital finance utilization during COVID-19 is relatively accelerated. It has been shown by optimizing the fintech industry's potential and the mushrooming fintech instruments as an alternative economic transaction during COVID-19. Fintech payment, lending, and Securities Crowdfunding are among fintech instruments that contribute greatly during COVID-19. They play a crucial role in boosting the financial transaction, distributing social aid, and encouraging start-ups and financial technology companies to grow.

Although digital finance has been well accelerated, there is still an opportunity for improvements in the current fintech, which includes comprehensive regulation and supervisory arrangements, as well as greater collaboration among fintech stakeholders. Below are some possible improvements that the related institutions can commence.

## **1. Recommendation for Regulators**

- a) Strengthening the technology safety standards in the fintech industry.

Cyber-attack, data misuse, and high interconnectivity are the major challenges in the fintech industry. Besides conducting a balance of regulatory technology and supervisory technology, the government should strengthen technology safety. The enhancement of technology safety might be done by the established standard of the safety system in the fintech industry. Solid cooperation from technology partnerships is also essential to be achieved.

- b) Creating an adaptive and balanced regulatory ecosystem

The basic digitalization characteristics are wide range, dynamic, and multi-dimension. Implementing an adaptive and balanced regulatory system is the key to answering those challenges. Adaptive means that the regulatory concept should be flexible and adjustable to the market situation, politics, economy, and recent issues. Cooperation among institutions at national and

international levels is also essential to ease exchanging information and study comparison regarding digitalization issues.

c) Continuous fintech socialization and education.

Fintech nowadays has become a need and a lifestyle for society. However, the massive development of fintech is still centered in big cities and not equally distributed in Indonesia; whereas still many potential unbanked societies. Continuous socialization and education in the community are needed to enhance their digital finance literacy to ensure they understand the services they need to access properly. Besides, adequate information and regulation are also critical to protect them from the potential risk of fintech such as illegal investment, cybercrime, shadow banking, etc.

## 2. Recommendation for Society

Optimizing the role of fintech association to enhance cooperation and synergy among stakeholders.

Synergy among stakeholders is essential to create solid collaborations and innovations in the fintech industry. Fintech stakeholders include industry, institutions, technology partnerships, and academicians. Fintech association's primary function is to optimize the role of each stakeholder and address the related issues. Fintech associations should be capable to accommodate policy advocacy, initiate community collaboration, transfer updated information, and developing knowledge and innovation. A solid and accommodative fintech association is expected to encourage self-governance and supervision in the industry.

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