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Fintech As A Financing Solution For Micro, Small and Medium Enterprises

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ABSTRACT

In 2020, more than 50 new fintech companies were formed, this financial business competed with 140 other startups that had previously been in the Indonesian financial scene. This research will focus on how fintech can become a prima donna that grabs the attention of many financial industry players, using the literature review method we will compare previous studies as a reference. Fintech startup investments are in great demand, even some startups have received series A funding this year. Fintech is just getting started, and there are a lot of new products coming out. Meanwhile, the Office of Cooperatives and Small and Medium Enterprises (Small and Medium Enterprises) has released 3.81 million Small and Medium Enterprises (SMEs) which are now using web-based platforms to advertise their goods. This accounts for about 8% of the total 58.9 million small and medium-sized organizations in Indonesia. Lack of access to capital is a long-standing problem that hinders the growth of SMEs that do not have access to bank finance. SMEs cannot create innovations to increase output due to lack of financial resources. However, the increasing expansion of the fintech financing business, such as peer-to-peer lending, opens up other options for lenders. Peer-to-peer lending is a type of loan that focuses on the lower-middle market segment.

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1. INTRODUCTION

Limitless mechanical advancements in the present computerized time, are more finished with the presence of fintech. The term fintech is a monetary assistance by utilizes

an innovation base which obviously will make our exchanges simpler anyplace and whenever [1].



Figure 1. fintech illustration

Fintech models As of late, fintech was initially begun in 2004 by Zopa, which is a monetary organization in the UK running credit administration cash. Then continue with Bitcoin started by Satoshi Nakamoto in 2008. Monetary innovation (FinTech) is transforming into a bigger field of the Web of Things (IO) and will be changed dramatically in the approaching ten years by quantum figuring. New resource classes and innovations are being made that will adjust current strategic approaches [2]. As a type of innovation application data in the monetary area. Fintech has different capacities, which are accepted to be prepared to do quickly developing. As of now, fintech can serve electronic cash, virtual records, aggregators, loaning, crowdfunding, and other internet based monetary exchanges [3]. As for fintech that has been operating, some of them were founded by based companies, but not a few are start-up companies or startups. However, the development of fintech in Indonesia remains under the supervision of Bank Indonesia (BI) as the central bank [4]. The innovations that develop here are an adaptation of computer network principles applied to finance. Even at the beginning of this Peer to Peer financial concept intended for start-ups (entrepreneurs) new in seeking investors to finance their business [5]. But in its development Peer to Peer finance has become crowdfunding, so that financial utilization Peer to Peer is not limited to start-ups. With the emergence of the financial innovation, virus Internet-based P2P network then, Of course, the spread is very fast globally until it finally appears various crowdfunding services in Indonesia such as www.kitabisa.com, www.ayopeduli.id, www.hasilkan.com Etc. This was likewise expressed by Paul Schulte and Gavin Liu in his examination which introduced in his article entitled Fintech is Converging with IoT and computer based intelligence to Challenge Banks: How Dug in Intrigued Can Plan, they stated: "Alibaba, for instance, can quickly create in internet business and go about as the foundation of banks on account of beneficial items from its cloud business, which houses billions of advanced information on clients. Subterranean insect Monetary can have a worth of \$59 billion and proposition credit scores on 850 million individuals and 20 million little and medium-sized ventures (SMEs), testing conventional rating organizations" [6]. Therefore, the law must play a role in anticipating problems that arise from this FinTech innovation product. One of them is about the legality of the implementation of crowdfunding. Then, what is the business model? This FinTech be free from illicit money (money laundering)? It is these legal issues that are still in the grey area according to positive law in Indonesia. Joseph Schumpeter (1934) argued with his theory of creative destruction that values entrepreneurship will give rise to new markets through a new method. If Schumpeter banged with instrument law, then of course the law cannot pursue the dynamics of a very running business [7]. Currently, FinTech is not only known only among entrepreneurs but is already well known by society in general. Utilization This FinTech, of course, needs to be addressed immediately through good legal

instruments. One of the fastest-growing Fintech phenomena is the existence of online transportation such as Go-Jek through its Go-Pay, Grab with GrabPay, and so on. The impact of Go-Jek is booming because its existence threatens the conventional transportation business. If the FinTech phenomenon is equated with the Go-Jek phenomenon, then it doesn't close probably in the next 2-3 years. Fintech can dispose of the job of banks or monetary establishments in offering monetary types of assistance to clients, assisting clients with settling on monetary choices, decreasing functional expenses and hazard of misfortune, for instance, because of terrible credit, and fostering the market [8], [9]. However, some policies are still a concern, namely data security, electronic hand, know your organization, digital business, payment electronification, and legal certainty of online-based loans. In line with these developments, many e-commerce trends in Indonesia are also predicted to continue to increase from Rp 150 trillion in 2014 to Rp 210 trillion in 2025. The situation of e-commerce in Indonesia is potentially the market is huge, but unfortunately financial infrastructure and delivery are still not enough[10].

2. Literature review

2.1. Financial Technology (Fintech) Definition of Fintech

The expression "fintech" is gotten from "finance innovation" or "monetary innovation." Fintech is characterized as "development monetary administrations" or "advancement in fintech monetary administrations" by The Public Computerized Exploration Place (NDRC) in Dublin, Ireland. An advancement in the monetary business consolidates contemporary innovation [11]. Fintech exchanges incorporate installments, ventures, cash credits, moves, monetary plans, and monetary item correlations. There are presently 142 fintech organizations that have been perceived. In the present advanced period, the monetary innovation area (fintech) is one of the methods of monetary administrations that is developing conspicuousness. Advanced installments are one of the FinTech business quickest developing sections in Indonesia. This is the area that the public authority and the overall population most need to see fill to extend the quantity of people with admittance to monetary administrations [12].

2.2. The Role of Fintech

Fintech with monetary administrations, for example, crowdfunding, versatile installments, and cash move administrations is causing an upset in the new company. With crowdfunding, it is not difficult to get assets from everywhere the world, even from individuals you have never met. Fintech additionally permits worldwide or global cash moves [13]. Installment administrations, for example, PayPal consequently change cash trade rates, so those in America can undoubtedly purchase products from Indonesia, Fintech additionally plays a significant part in changing shopper conduct and assumptions including Can get to information and data whenever and anyplace, Summing up huge and private ventures so they will quite often have elevated standards in any event, for independent companies that are simply being constructed. All around the world, the Fintech business keeps on developing quickly. It is obvious from the rise of new businesses in this field and the huge worldwide interest in it. Particularly in Indonesia, this business is becoming quickly to draw in the consideration of all money managers in Indonesia[14].

2.4. Global Fintech Development

Universally, fintech shows that fintech is filling quickly in different areas, beginning from installment new businesses, loaning, monetary preparation (individual accounting), retail speculation, crowdfunding, guarantors, monetary examination, and others. Indonesian FinTech players are as yet prevailing in the installment digital business (40%), advances (15%), and the rest are as aggregators, crowdfunding, and others.

2.5. Inclusive Finance

After the 2008 Financial emergency, financial incorporation turned into a pattern, inferable from the effect of the emergency on bunches at the lower part of the pyramid (sporadically low earnings, living in distant regions, individuals with incapacities, laborers

without legitimate character records, and underestimated networks) who are by and large unbanked and have high rates outside created nations [15]. Even though they belong to the bottom of the pyramid and do not have savings, it can be trusted that they still have unproductive movable objects (holdings) that are used daily such as rings/necklaces, etc. that can be cashed and used for productive things such as for non-formal micro-business capital or farming and raising livestock, etc. Even at this thought sometimes they forget. Cashing the holding is expected to be one way to solve the problem. Especially if they are helped and nurtured. For some people, this may be impossible to do [16]. Indeed, creating a lower-class society (at the bottom of the pyramid) is more difficult than creating an upperclass one (middle and high income). They have a restricted, narrow perspective and are unconcerned about the future, preferring to take shortcuts. They need to be nourished in these conditions because they contain a force that has to be straightened up for future life. This negative mindset must be eradicated in order for them to become self-sufficient communities based on their abilities [17].

2.6. Understanding MSMEs

MSMEs or commonly known as small and medium enterprises is a term that refers to a type of business that is established by individuals and has a net worth of at most Rp. 200,000,000.00 (not including land and buildings).

Based on Law Number 20 of 2008, the definition of Micro, Small, and Medium Enterprises (MSMEs) is

- 1. Another word for a business entertainer is a business visionary (business venture). In basic terms, business venture can be characterized as a business visionary who can see valuable open doors by looking for reserves and different assets expected to chip away at these open doors, thinks for even a moment to face challenges connected with the execution of the business he is occupied with, and maintains the business with a development and extension plan.
- 2. What is implied by little and medium undertakings are business exercises with a size of action that isn't excessively huge, the board is still exceptionally basic, the accessible capital is restricted, the market that is reached isn't at this point boundless.
- 3. Micro-endeavors are useful organizations claimed by people and additionally individual business elements that meet the models for miniature ventures as specified in the law of this regulation.
- 4. Medium business is a useful financial business that remains solitary, which is done by people or business elements that are not auxiliaries or parts of organizations that are claimed, controlled, or become a section either straightforwardly or in a roundabout way with private companies or enormous organizations with all out resources. net or yearly deals results as managed in this regulation. The digital business world is miniature ventures, limited scope organizations, medium-sized organizations, and huge organizations that do monetary exercises in Kudus and are domiciled in Kudus.
- 5. A private venture is a useful financial business that works freely and is worked by people or business substances that are not auxiliaries or parts of organizations that are claimed, controlled, or become a piece of a medium or huge business, either straightforwardly or by implication, and that meets the independent company models as characterized by this regulation.

3. METHOD

The research method used is a descriptive analysis using a qualitative approach. The data collected is secondary data by conducting literature and literature studies.

No	Business	Asset Criteria	Turnover Criteria
1	Micro business	Max. 50 million	Max 300 Million

Tabel 1. MSME Criteria

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2	Medium Enterprise	> 50M-500M	> 300 Million – 2.5 Billion
3	Small business	> 500 million–10 billion	> 2.5 Billion – 50 Billion

No	Name	Method	Title	Result
1	Fitri Nuraini, Rieska Maharani, Andrianto	Literature Review	Strategy to Increase the Competitiveness of SMEs and Cooperatives in Facing the AEC (Asean Economic Community): A Qualitative	The role of MSMEs is very important in creating job opportunities for the community and contributing to the export of non-oil and gas products that can increase the country's foreign exchange income.
2	Novia Nengsih	Qualitative	Banking Role Sharia in Implementing Finance Inclusive In Indonesia	Banking growth Sharia seen from the increase assets, Third Party Funds (TPF) rose 15% to 45% per year, financing too Experience Increase Which Significant Reach 50.05% per year
3	Nofita Wulansari, Wahyu dan Yunus Kurniawan	Qualitative	Acceleration Economic growth Through Synergy MSMEs and Good Governance In Indonesia	The role of MSMEs in Indonesia is an important point in encouraging economic growth. UM KM is able to survive and save the nation's economy when there is a crisis
4	Budi Wibowo	Qualitative	Analysis Regulation Fintech In Building Economy in Indonesia	Presence Service finance based on technology (FinTech) in Indonesia has become a necessity in line with develop and information and communication technology.
5	Muhammad Said Hannaf, Wimpi G ea Seprina Putri	Qualitative	Linkage Financing And Management Risk based on Social Capital in Financial Technology: Strategy Enhancement Financing Inclusive	business strategy with do linkage financing in the fintech industry is form of financing sustainability efforts as well as solutions to financing problems consumptive and trapped pattern financing using the contract murabahah.

Tabel 2. Previous Studies

4. **RESULTS AND DISCUSSION**

Development of MSMEs in Indonesia Based on data compiled from the Ministry of Cooperatives and MSMEs, the number of MSMEs from 2009-2013 is as follows:

- 1. 2009 the number of MSMEs is 52,842,620 units with a share of 99.99%
- 2. 2010 the number of MSMEs 54,231,922 units with a share of 99.97%
- 3. 2011 the number of MSMEs is 54,901,430 units with a share of 99.99%
- 4. 2012 the number of MSMEs is 55,193,199 units with a share of 99.99%
- 5. 2013 the number of MSMEs was 57,919,561 units with a share of 99.99%

Even in 2014-2016 the number of MSMEs in Indonesia has reached more than 57,800,000 units and in 2017 the number of MSMEs is estimated to grow to more than 58,000,000 units [18]. This was also conveyed by the President of the Republic of Indonesia Joko Widodo that MSMEs that had high resilience would be able to support the country's economy, even during a global crisis [19]–[21]. President Jokowi really hopes that MSME actors will be at the forefront of building the people's economy.

The existence of MSMEs has now become the backbone of the Indonesian and ASEAN economies. Around 87.8-99.7% of business forms in ASEAN are MSMEs with an absorption workforce reaching 52.7-97.3%. MSMEs have a proportion of 99.97% of the

total business actors in Indonesia or 56.53 million units. This is where the need for cooperation for the development and resilience of MSMEs needs to be prioritized [22].

The improvement of the capability of MSMEs in Indonesia can't be isolated from banking support in loaning to MSME entertainers. As per information from Bank Indonesia, consistently credits to MSMEs experience development. Albeit in 2015, around 60%-70% of the whole MSME area didn't approach supporting through banking. Bank Indonesia has given guidelines expecting banks to assign credit/supporting to MSMEs beginning in 2015 at 5%, 2016 at 10%, 2017 at 15%, and the finish of 2018 at 20%. In this time of globalization, everybody should contend to run MSMEs and jump all over existing business chances. Thus, great business monetary game plans are expected to help its manageability [23].

4.1. The development of Fintech Startups in Indonesia

Monetary innovation or Fintech has filled quickly in Indonesia. Shared loaning (P2PL) is a Fintech stage that offers online capital advances or funding. Aside from being a web-based store supplier, distributed loaning (P2PL) additionally has an assignment, specifically risk investigation. The enormous requirement for assets in Indonesia makes the distributed loaning stage grow quickly contrasted with other Fintech stages [24]. A portion of the Monetary advancements with shared loaning stages that overwhelm in Indonesia are as per the following:

1. Amartha

Amartha is a Fintech company that also brings together small entrepreneurs or SMEs with investors. The Marketplace function is also implemented in Amartha. Financing at Amartha starts with a nominal value of IDR 3,000,000 to IDR 10,000,000. Amartha has received funding from the largest investor in the amount of Rp. 26,000,000,000. The joint venture system is a system that distinguishes Amartha from Fintech companies in Indonesia [25]. System joint responsibility, that is, when there are 10 to 20 people who have been fostered or mentored by Amartha in various villages, then Amartha will provide capital or financing, if one member cannot fulfill his obligations, the other members will bear the responsibility of the members the group.

2. Invested

Contributed is one of the commercial centers, where contributed just cycles assets from financial backers by uniting them with borrowers on the site, later the financial backers themselves will pick the borrowers to be subsidized. The largest financing offered by the invested for the benefit of individual customers is up to Rp. 50,000,000 while for business purposes up to Rp. 2,000,000,000. Investments provide loan interest of 0.9% per month and returns for investors of up to 20% per month.

3. My Modal

Modalku is a web-based advance with a shared loaning (P2PL) stage. Modalku is a stage that gives supporting help to SMEs who are encountering monetary hardships. The loan funds offered by Modalku start from Rp. 50,000,000 to Rp. 500,000,000 with a tenor of 3 to 12 months. The system used in SME financing by Modalku is by collecting funds from investors, if the application for funding by SMEs has been approved by Modalku, then Modalku will collect funds. The amount of funds that has been collected is needed by Modalku, then the funding can be immediately disbursed. If the funds needed by SMEs have not been met as well, then the next step will be carried out.

Of the three distributed loaning new companies that overwhelm in Indonesia, as portrayed above, they are more centered around SME funding and more on the commercial center. Nonetheless, there are still a great deal of shared loaning new businesses in Indonesia that additionally serve customer credits [26]–[28]. The blossoms he gives differ from level blossoms to dynamic blossoms. These shared loaning new companies incorporate Uangteman.com, tantalite, and amar bank. The quantity of Fintech in 2016 delivered by OJK in the press (2016) has arrived at 165 organizations or new businesses. This mirrors the extremely quick development of new companies in Indonesia. In only 2 years, new businesses have developed and overwhelmed the loaning market in Indonesia.

Aside from shared loaning, there are as yet numerous Fintechs in Indonesia, to be specific internet business crowdfunding. Internet business is a fintech organization that is

occupied with trading on the web. The stage is explicitly utilized for commercial centers. Next is crowdfunding, which is a fintech that is like shared loaning, however the thing that matters is that crowdfunding will gather assets from financial backers first prior to dispensing advance assets to clients whose advance applications have been supported. Not quite the same as distributed loaning is a web based loaning stage that quickly dispenses advance assets to supported advance candidates in the wake of going through the credit scoring process.

4.2. The Important Role of Startup Financial Technology in Financing MSMEs in Indonesia

In the current era of digitalization, all activities require the use of technology for cost efficiency. Digital business in the financial sector makes financial sector institutions compete to increase financial technology innovation to increase efficiency and market share. Banking is the most aggressive institution in implementing and developing financial technology (fintech). The aim is none other than to increase efficiency in serving its customers.

As another supporting model which is the aftereffect of a blend of monetary administrations and FinTech innovation, it has changed the plan of action from ordinary to direct, which at first needed to pay eye to eye and convey a specific measure of money, presently having the option to complete distant exchanges by creating installments that can be made in a moment. simply an issue of seconds.

FinTech shows up as individuals' way of life changes, which are right now overwhelmed by clients of data innovation, which requests a quick moving life. With FinTech, issues in trading exchanges and installments, for example, having opportunity and willpower to search for products to shopping places, to banks/ATMs to move reserves, hesitance to visit a spot due to terrible administrations can be limited. As such, FinTech assists with purchasing and offer exchanges and installment frameworks to be more proficient and efficient yet powerful.

It is undeniable that the existence of FinTech can certainly move the joints of the economy. Through various creativity and innovations, FinTech is developed by entrepreneurs to answer market needs and market access in the financial sector. Currently, there are two FinTech regulatory models, namely: rule-based and principlebased. An example of this regulatory principle when it is formulated into the rule of law is rule-based (rule-based regulation). For example, the funds collected from the public cannot be more than 100 billion. While the other principle is the Principle-based (principle-based arrangement). For example, funds raised from the community must not cause an economic impact. Apart from the advantages and disadvantages of the two types of arrangements above, in essence, the rules are made to regulate the situation towards the ultimate goal of justice in the financial sector. FinTech guideline today is a worldwide interest for the monetary digital business. Right now, the issue looked by created nations and nonindustrial nations like Indonesia is something similar, in particular how to foster FinTech. This implies that the level-battleground likenesses among created and non-industrial nations ought to be a chance for non-industrial nations to find guidelines. It is trusted that later on the development of FinTech in Indonesia can foster well and securely.

In Indonesia, guidelines in regards to FinTech have been obliged by the Financial Services Authority Regulation Number 77/POJK.01/2016 concerning Information Technology-Based Lending and Borrowing Services and Regulation Number 31/POJK.05/2016 concerning Pawnshops. This demonstrates that the Government of Indonesia has viewed in a serious way the advancement of FinTech in Indonesia. With guidelines that oblige, obviously, it will make lawful conviction and a feeling of safety for financial backers and asset searchers. The standards gave by Bank Indonesia through Bank Indonesia Regulation Number 18/40/PBI/2016 concerning the Implementation of Payment Transaction Processing are made to help the execution of FinTech and E-Commerce in Indonesia. This BI guideline manages a few things in regards to the convenience of FinTech and E-Commerce developments, shopper security and solace as well as keeping up with the value of FinTech industry players in Indonesia.

Notwithstanding guidelines, obviously, there are different viewpoints that should be considered by the FinTech business players in Indonesia. In principle, there are 6 legal aspects that need to be considered in developing FinTech business in Indonesia, namely Licensing; Articles of Association of the Company; Agreement/Contract; Proof of Asset Ownership; Legal and Tax Disputes. By paying attention to these six things, FinTech business development in Indonesia can run well. The advantages of FinTech can be felt by:

- 1. For FinTech players (item or administration brokers), FinTech gives the advantages of working on the exchange chain; Diminishing functional expenses and capital expenses, and freezing the progression of data.
- 2. For shoppers, FinTech gives benefits, like better assistance, more decisions; and lower costs.
- 3. For the Public authority, FinTech gives advantages to empowering the transmission of monetary arrangements, speeding up cash flow to work on the local area's economy, and empowering the Public Procedure for Monetary Incorporation.

As a result of this effectiveness and efficiency, FinTech has changed the payment system in society and has helped start-up companies to reduce capital costs and high operational costs at first. Therefore, FinTech is now able to replace the role of formal financial institutions such as banks. Even as a new payment system, FinTech has played a role in;

- 1. Become an instrument for installment, settlement, and clearing.
- 2. Aiding the execution of more productive speculation.
- 3. Provide a business opportunity for business entertainers, particularly MSMEs who depend on computerized media as their promoting base.
- 2. Helping those deprived to save, acquire reserves and put resources into capital.
- 3. Mitigation of dangers from regular installment frameworks. The strong flow of technology in the payment system is what drives Bank Indonesia

as the central bank of the Republic of Indonesia to ensure that payment traffic that has been penetrated by technology continues to run in an orderly and safe manner and supports the pillars in achieving the vision and mission of Bank Indonesia. Bank Indonesia's policy in maintaining, payment traffic orders related to FinTech are as follows:

- 1. In terms of investment funds, advances, and value cooperation, Bank Indonesia requires each business entertainer to agree with macroprudential guidelines, extending of monetary business sectors, installment frameworks to help tasks, and network safety to protect buyer information and data.
- 2. In terms of giving a market to business entertainers, Bank Indonesia guarantees assurance for customers, especially in regards to the assurance of the classification of buyer information and data through digital protection organizations.
- 3. In terms of installment, settlement, and clearing, Bank Indonesia guarantees assurance for customers, especially in regards to ensures for the classification of buyer information and data through digital protection organizations.
- 2. In terms of speculation and chance administration, Bank Indonesia likewise requires each business entertainer to consent to macroprudential guidelines, extending of monetary business sectors, installment frameworks to help activities, and digital protection to defend purchaser information and data.

Bank Indonesia guarantees the security and orderliness of payment traffic by being:

- 1. Intelligent business examiner, through joint effort with worldwide specialists and specialists, Bank Indonesia turns into an investigator for business entertainers connected with FinTech to give perspectives and bearings on the best way to make a protected and methodical installment framework.
- 2. Facilitator, Bank Indonesia turns into a facilitator as far as giving area to installment traffic
- 3. Coordination and Correspondence, Bank Indonesia keeps up with associations with significant specialists to keep on supporting the presence of FinTech installment frameworks in Indonesia. Bank Indonesia is likewise dedicated to supporting business entertainers in Indonesia by giving standard direction on FinTech.
- 4. Assessment, Bank Indonesia conducts observing and evaluation (appraisal) of each business action including FinTech and its installment framework utilizing

innovation.

4.2.1. The existence of Fintech for MSME

Entertainers expect Little, Miniature, and Medium Undertakings (MSMEs) in fostering their business. One of them is connected with MSME players getting to funding. "Fintech as P2P (shared) loaning makes unbankable MSMEs available. Eventually, this fintech can increment business limit. In endlessly supporting MSME entertainers, the public authority has many projects One of them is Individuals' Business Credit (KUR). Since its send off in 2007, the acknowledgment of the dissemination of KUR and indebted individuals has kept on expanding [29].

In 2016, the KUR loan fee was recorded at 9.0 percent each year. In 2017, the acknowledgment of KUR circulation arrived at Rp. 94.4 trillion from the objective of Rp. 100 trillion. In the interim, during the current year, the acknowledgment until August 2017 was Rp. 61.14 trillion from the objective of Rp. 110 trillion with 2.7 million account holders. Be that as it may, MSME entertainers who need to get to KUR through banks should have one significant part, in particular security. The shortfall of guarantee makes it challenging for them to get capital.

Refering to explore results from the Establishment for Improvement of Financial matters and Money, as of now, there are still around 60 million MSME players. Of this number, just 11 million MSMEs are bankable. The leftover 49 million SMEs are as yet not unbanked. Still from similar information, the all out public funding need for MSMEs is Rp. 1,649 trillion. In the mean time, the financial limit is just Rp 660 trillion. Consequently, there is a hole of IDR 989 trillion [30].

Individuals who are not great educated, in addition to the enormous requirement for public supporting for MSMEs, are open doors for fintech digital business entertainers. The presence of innovation has made monetary administrations less expensive, quicker, and simpler. These three components are at times challenging to get when MSME entertainers come to the bank. This is the place where the job of fintech can be an answer for creating MSME organizations later on. The test is to boost the job of fintech in supporting MSMEs. The principal challenge is the Indonesian public's admittance to monetary administrations. In light of a review led by the Monetary Administrations Authority, just 67.8 percent of Indonesians have utilized monetary items. This intends that there is as yet 32.2 percent who have not utilized monetary items

5. CONCLUSION

The development of cooperatives in Indonesia is very concerning. This is clearly seen in the absence of Indonesian cooperatives on the global 300 list and developing 300 projects. This makes PR for the ministry of cooperatives and MSMEs. One of the steps that will be taken so that cooperatives do not continue to decline is to apply financial technology in the cooperative's operational system. The financial technology system applied to cooperatives has a system that is not much different from the financial technology applied by banks in Indonesia.

Fintech development is very fast in Indonesia. The fintech that is experiencing the fastest growth in Indonesia is peer-to-peer lending. Three peer-to-peer lending startups dominate the financing market in Indonesia, namely Modalku, Investee, and Martha. The high growth of peer-to-peer lending startups in Indonesia is motivated by the high need for funds by the unbanked community. Fintech has an important role in the performance of cooperatives, namely in the form of increasing efficiency both from cooperative operations and the efficiency enjoyed by its members. Not only that, Fintech can also be used as a marketplace for production cooperatives or buying and selling cooperatives. Fintech can provide other income to cooperatives from purchasing credit, electricity tokens, PDAM payments, and so on.

The use of Fintech in cooperatives has its own opportunities and challenges, the opportunity from implementing Fintech in cooperatives is in the form of market expansion targeted by cooperatives, namely targets for the unbankable community. On the other

hand, the application of Fintech in cooperatives also has its own challenges. Looking at the population structure and literacy in Indonesia, Fintech has challenges including low public trust in cooperatives, low human resources, and low cooperative capital, as well as the low capacity of adequate internet networks throughout Indonesia or in other words the uneven economic growth. Therefore, in the future, with research on fintech, it is hoped that it will be able to improve the fintech-based economy in Indonesia and also add to the development of more advanced fintech in the Indonesian economy.

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REFERENCES

- [1] L. Abdillah, "An Overview of Indonesian Fintech Application," 2019.
- [2] N. Iman, "Assessing the dynamics of fintech in Indonesia," *Investment Management and Financial Innovations*, vol. 15, no. 4, pp. 296–303, 2018.
- [3] A. Lagna and M. N. Ravishankar, "Making the world a better place with fintech research," *Information Systems Journal*, vol. 32, no. 1, pp. 61–102, 2022.
- [4] S. Blakstad and R. Allen, "FinTech Revolution," *Cham, Switzerland: Springer*, pp. 121–132, 2018.
- [5] I. Pollari, "The rise of Fintech opportunities and challenges," *Jassa*, no. 3, pp. 15–21, 2016.
- [6] K. Gai, M. Qiu, and X. Sun, "A survey on FinTech," *Journal of Network and Computer Applications*, vol. 103, pp. 262–273, 2018.
- [7] Y. Shino, C. Lukita, K. B. Rii, and E. A. Nabila, "The Emergence of Fintech in Higher Education Curriculum," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, 2022.
- [8] U. Rahardja, T. Hariguna, Q. Aini, and S. Santoso, "Understanding of behavioral intention use of mobile apps in transportation: An empirical study," *International Journal of Advanced Trends in Computer Science and Engineering*, vol. 8, no. 1.5 Special Issue, pp. 258–263, 2019, doi: 10.30534/ijatcse/2019/4581.52019.
- [9] S. Watini, Q. Aini, Alfiah. Khoirunisa, and U. Rahardja, "Assessment System for Testing the Evaluation of Diversity in Traditional Malay Dance by Early Childhood Students," *International Journal of Psychosocial Rehabilitation*, vol. 24, no. 8, pp. 2721–2729, 2020, doi: 10.37200/IJPR/V24I8/PR280291.
- [10] M. Aulia, A. F. Yustiardhi, and R. O. Permatasari, "An overview of Indonesian regulatory framework on Islamic financial technology (fintech)," *Jurnal Ekonomi dan Keuangan Islam*, vol. 6, no. 1, pp. 64–75, 2020.
- [11] A.-L. Mention, "The future of fintech," *Research-Technology Management*, vol. 62, no. 4. Taylor & Francis, pp. 59–63, 2019.
- [12] H. Nusantoro, R. Supriati, N. Azizah, N. P. L. Santoso, and S. Maulana, "Blockchain Based Authentication for Identity Management," in 2021 9th International Conference on Cyber and IT Service Management (CITSM), 2021, pp. 1–8.
- [13] A. S. Anwar, U. Rahardja, A. G. Prawiyogi, and N. P. L. Santoso, "iLearning Model Approach in Creating Blockchain Based Higher Education Trust," *International Journal of Artificial Intelligence Research*, vol. 6, no. 1, 2022.
- [14] N. Septiani, A. S. Bist, C. S. Bangun, and E. Dolan, "Digital Business Student Development for Entrepreneurs with Software," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, 2022.
- [15] P. Gomber, J.-A. Koch, and M. Siering, "Digital Finance and FinTech: current research and future research directions," *Journal of Business Economics*, vol. 87, no. 5, pp. 537–580, 2017.
- [16] P. A. Sunarya, F. Andriyani, Henderi, and U. Rahardja, "Algorithm automaticPrawira, M., Sukmana, H. T., Amrizal, V., & Rahardja, U. (2019). A Prototype of Android-Based Emergency Management Application. 2019 7th International Conference on Cyber and IT Service Management, CITSM 2019. https://doi.org/10.1109/CI," International Journal of Advanced Trends in Computer

Science and Engineering, vol. 8, no. 1.5 Special Issue, pp. 387–391, 2019, doi: 10.30534/ijatcse/2019/6281.52019.

- [17] M. R. Anwar, M. Yusup, S. Millah, and S. Purnama, "The Role of Business Incubators in Developing Local Digital Startups in Indonesia," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, pp. 1–10, 2022.
- [18] I. U. Rahardja and S. Raharja, "Artificial informatics," 2009 4th IEEE Conference on Industrial Electronics and Applications, ICIEA 2009, pp. 3064–3067, 2009, doi: 10.1109/ICIEA.2009.5138764.
- [19] U. Rahardja, Q. Aini, and A. Khoirunisa, "The Effect of Rinfogroups as a Discussion Media in Student Learning Motivation," *Aptisi Transactions on Management (ATM)*, vol. 2, no. 1, pp. 79–88, 2018.
- [20] U. Rahardja, A. Moeins, and N. Lutfiani, "Leadership, competency, working motivation and paerformance of high private education lecturer with institution accreditation B: Area kopertis IV Banten province," *Man India*, vol. 97, no. 24, pp. 179–192, 2017.
- [21] U. Rahardja, Q. Aini, and M. Iqbal, "Optimalisasi Reward Pada Penilaian Absensi Berbasis Gamifikasi Untuk Meningkatkan Motivasi Mahasiswa," *InfoTekJar: Jurnal Nasional Informatika dan Teknologi Jaringan*, vol. 5, no. 1, pp. 40–43, 2020.
- [22] U. Rahardja, Q. Aini, A. Khairunisa, and S. Millah, "Implementation of Blockchain Technology in Learning Management System (LMS)," *APTISI Transactions on Management (ATM)*, vol. 6, no. 2, pp. 112–120, 2022.
- [23] S. Watini, H. Latifah, D. Rudianto, and N. A. Santoso, "Adaptation of Digital Marketing of Coffee MSME Products to Digital Transformation in the Era of the Covid-19 Pandemic," *Startupreneur Bisnis Digital*, vol. 1, no. 1 April, pp. 23–32, 2022.
- [24] U. Rahardja, Q. Aini, and S. Maulana, "Blockchain innovation: Current and future viewpoints for the travel industry," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 3, no. 1, pp. 8–17, 2021.
- [25] H. Nusantoro, P. A. Sunarya, N. P. L. Santoso, and S. Maulana, "Generation Smart Education Learning Process of Blockchain-Based in Universities," *Blockchain Frontier Technology*, vol. 1, no. 01, pp. 21–34, 2021.
- [26] Q. Aini, A. Anoesyirwan, and Y. Ana, "Effect of Cloud Accounting as income statement on Accountant Performance," *Aptisi Transactions On Management*, vol. 4, no. 1, pp. 13–21, 2019.
- [27] Q. Aini, I. Dhaniarti, and A. Khoirunisa, "Effects of iLearning Media on Student Learning Motivation," *Aptisi Transactions on Management (ATM)*, vol. 3, no. 1, pp. 1–12, 2019.
- [28] Q. Aini, U. Rahardja, and A. Khoirunisa, "Blockchain Technology into Gamification on Education," *IJCCS (Indonesian Journal of Computing and Cybernetics Systems)*, vol. 14, no. 2, pp. 1–10, 2020, doi: 10.22146/ijccs.53221.
- [29] V. Rotondi, L. Stanca, and M. Tomasuolo, "Connecting alone: Smartphone use, quality of social interactions and well-being," *Journal of Economic Psychology*, vol. 63, pp. 17–26, 2017.
- [30] D. Aprilia and D. E. Susilo, "Pengelolaan Keuangan Desa Dalam Upaya Meningkatkan Pembangunan Desa dan Pemberdayaan Masyarakat Desa," *Technomedia Journal*, vol. 6, no. 2 Februari, pp. 197–211, 2022.

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