

Negative Impact of Financial Technology: A Case Study of Illegal Peer to Peer (P2P) Lending "Pinjol"

^{*1}Annisa Arifka Sari,²Agustina Nurul Hidayati,
³Siti Wardah Pratidina Nasution,⁴Martanto,
⁵Franco Benony Limba, ⁶Kamilah Sa'diah

¹Sekolah Tinggi Ilmu Ekonomi Perbankan Indonesia Padang, Padang, Indonesia

²Faculty of Civil and Planning, Institut Teknologi Nasional, Malang, Indonesia

³Universitas Al Washliyah Medan, Indonesia

⁴Study Program Agro Industry, Politechnic State of Ketapang, Ketapang, Indonesia

⁵Faculty of Economics and Business, Universitas Pattimura, Ambon, Indonesia

⁶Universitas Binaniaga Indonesia, Bogor, Indonesia

Author's email:

^{*1}annisaarifka@gmail.com; ²anhidayati21@gmail.com;

³pratidina.bachrain@gmail.com; ⁴martanto2000@yahoo.co.id

⁵francob.limba@gmail.com; ⁶sadihkamila@gmail.com

*Corresponding author: annisaarifka@gmail.com

Abstract. Financial Technology ("Fintech") is a new paradigm in the non-bank financial sector in Indonesia. One of the popular "Fintech" products is Peer to Peer (P2P) lending or called Online Loans (hereinafter "Pinjol"). There are two types of "Pinjol", namely legal "Pinjol" which is registered with the Financial Services Authority (OJK) and illegal "Pinjol" which is not registered with the OJK. According to OJK records, as of August 2022, the number of illegal "Fintech" companies was 3,786 platforms. This number shows that illegal "Pinjol" continues to proliferate, which has a negative impact on the development of "Fintech" and micro-economy. In 2021, "Pinjol" loan funds that have been disbursed amount to IDR 295.85 trillion with a total of 73.24 million borrowers. Legal "Pinjol" charges a daily interest rate around 0.3% -0.4%/day but illegal "Pinjol" interest rates are very high, around 0.8%/day. This study uses a qualitative approach using the case study method, which examines the negative impact of illegal loans on micro business and non-bank financial activities. The findings show that the negative impact of illegal "Pinjol" high interest rates has caused most borrowers to be unable to pay. As a result, there are many cases of forced withdrawals by illegal "Pinjol" operators using debt collectors or confiscating valuables belonging to borrowers who fail to pay. Therefore, the OJK needs to carry out tighter supervision of illegal "Pinjol" organizers. The existence of illegal "Pinjol" is due to the lack of public understanding of "Fintech", weak regulatory oversight and law enforcement.

Keywords: "Fintech"; Peer to Peer (P2P) Lending; Pinjol.

1. INTRODUCTION

Financial technology (hereinafter "Fintech") has expanded dramatically in recent years (Nguyen and Dang, 2022). The term "Fintech" first appeared to characterize how established players in the financial services industry employed a variety of information technologies to improve the effectiveness, efficiency, and/or value of their current products (Breidbach and Keating, 2019). The emergence of "Fintech" innovations in a variety of financial sectors, including investment management, retail finance, insurance, wholesale payments, equity capital raising, and credit supply, is not just encouraging banks to innovate and adapt their core services (Nguyen and Dang, 2022).

The “Fintech” is a new paradigm in the non-bank financial sector in Indonesia. The amount of funds disbursed by “Fintech” companies is IDR 295.85 trillion as of December 31, 2021 with 809 thousand lenders and 73.24 million borrowers (Intan, 2022). Therefore, Indonesia's “Fintech” market has significant growth potential (Narayan, 2019) which may result in more equal income development (Chinoda and Mashamba, 2021). Payment platform scheme, internet finance, online/internet insurance, peer-to-peer (P2P) lending, and crowd finance are a few examples of “Fintech” products in Indonesia (Riyanto, 2018). OVO, LinkAja!, Go-Pay, Dana, Mandiri e-money, and I-pocket are among the “Fintech” companies (Armilia and Isbanah, 2020). Bank Indonesia, the Financial Services Authority (hereinafter OJK), and Ministry of Communication and Informatics (KOMINFO) are a few of the regulators in Indonesia that control the development of the “Fintech” industry (Suryono, 2019).

One of the “Fintech” most popular products in Indonesia is Peer to Peer (P2P) Lending or called as *Pinjaman Online* (hereinafter “Pinjol”). In fact, “Pinjol” product is the most in demand by consumers. In 2021, “Pinjol” loan funds that have been disbursed amounted to IDR 295.85 trillion, 809 thousand lenders, and 73.24 million borrowers (Intan, 2012). In Indonesia there are two types of “Pinjol”, namely legal and illegal. The “Pinjol” legal providers registered with the OJK. The illegal “Pinjol” company is a non-bank financial company that is not registered with the OJK. The results show that the number of legal “Pinjol” providers is increasing but the number of illegal “Pinjol” providers is increasingly mushrooming. From 2018 to October 2021, amount 4,096 illegal “Pinjol” have been blocked by the Investment Alert Task Force (SWI). According to OJK records, as of August 2022, the number of illegal “Fintech” companies is 3,786 platforms. In 2023 there will be 102 illegal “Pinjol” closed by OJK. It shows that illegal “Pinjol” continues to grow so that it has a negative impact on the development of “Fintech” and microeconomics.

This research intends to examine the negative impact of illegal “Pinjol” on society, especially the micro economy. This research using a qualitative approach with the case study method. The results of the study show that the negative impact of illegal “Pinjol” has caused many losses to society as borrowers. In fact, several cases of illegal loans can be classified as criminal acts because they violate permits and the law. Therefore, the government needs to carry out extra strict supervision of illegal “Pinjol” activities.

2. LITERATURE REVIEW

2.1 Financial Technology (Fintech)

The commercial sector has recently experienced a challenge with an efficient payment system known as “Fintech” (Knewton and Rosembaum, 2020) which make purchasing transactions and payment systems more effective (Hidayat et al., 2020) because of affordability, speed, accessibility from anywhere and anytime with any device (Wulan, 2017) as a new issue in the financial sector (Leong and Sung, 2018) which present a new business strategy (Narayan, 2019). “Fintech” is a phrase that has lately appeared in business journals to represent the disruptive challenge that the advent of speedier, less expensive, and human-centered financial services is posing to the financial sector (Varga, 2017) which first appeared to characterize how established players in the financial services industry employed a variety of information technologies to improve the effectiveness, efficiency, and/or value of their current products (Breibach and Keating, 2019). According to Gai et al. (2018), the term “Fintech” has gained popularity as a result of a number of driving reasons, including technological advancement, expectations for business innovation (market), needs for cost-savings, and client demands (Visconti, 2020).

The “Fintech” business model has been adopted by the growth of start-ups (Suryono, 2019) that have emerged in recent years. Most have been evaluated by start-ups and market entrants (Kumar, 2016) who use the latest technological advances to provide new financial services (Thakor, 2020) these innovations have disrupted global financial markets (Arjunwadkar, 2018). For example, mobile payment services, money transfers, peer-to-peer lending, and crowdfunding are referred to as “Fintech” products (Teja, 2017). The ability to consistently lower customer acquisition expenses has been one of the main goals of the “Fintech” revolution (Gomber, Kauffman, Parker and Weber, 2018). Previously, “Fintech” has delivered on its promise to increase access to the financial system by offering services to groups that have been traditionally unserved (Mention, 2019). The sharing economy, which is upending traditional business, was the first important factor in the development of “Fintech” technologies (Albarrak and Alokley, 2021). People are using “Fintech” apps more

frequently as a result of the COVID-19 pandemic and lockdown (Nugraha, Setiawan, Nathan, and Fekete-Farkas, 2022). The United States and China are dominating in “Fintech” startups and companies. From Silicon Valley to London, Hong Kong, Beijing, Sydney, and Singapore, “Fintech” is a worldwide phenomena with significant international players (Varga, 2017). There were 20,000 “Fintech” companies in 2020, up from 10,000 in 2018. Amount 37% of these 20,000 start ups are located in Europe, the Middle East, and Africa (Albarrak and Alokley, 2021).

2.2 Fintech Peer to Peer (P2P) Lending

Online Peer-to-peer (P2P) lending has grown quickly in China during the past few years. It involves borrowing and lending money online, and both parties can do business online (Zhang, Li, Hai, Li, and Li, 2017). The first online P2P lending platform in China debuted in 2006 (Zhang, Li, Hai, Li, and Li, 2017). Zopa is the first online peer-to-peer lending business in the UK in 2005, Prosper started operating in the United States in 2006. P2P lending, cryptocurrencies, and blockchain applications are just a few examples of “Fintech” offerings that challenge the status quo of traditional banking (Breibach and Keating, 2019). The P2P payment market size was estimated at \$1,889.16 billion globally in 2020 and is expected to reach \$9,097.06 billion by 2030 (Belanche, Guinalu and Alba's, 2022). The amount of funds disbursed by “Fintech” companies is IDR 295.85 trillion as of December 31, 2021 with 809 thousand lenders and 73.24 million borrowers (Intan, 2022). The OJK (2020) reports that P2P Lending helped the Indonesian economy by IDR 60 trillion (Rahman, 2020) because P2P lending “Fintech” enables borrowing between people and companies (Suryono, 2019). Mobile payment services including mobile payments, money transfers, peer-to-peer lending, and crowdfunding are referred to as “Fintech” products (Teja, 2017).

The most popular “Fintech” product in Indonesia is “Pinjol”. The reason is that the “Pinjol” loan process is easier, faster, without requiring data verification or surveys by lenders. Borrowers only need to provide identity card data (KTP). Therefore, “Pinjol” is in great demand by borrowers from the lower classes of society such as traders, micro-entrepreneurs, housewives, informal workers and the like. Most of the use of “Pinjol” loans for urgent needs such as increasing business capital or daily needs because the average loan amount is between IDR 400.000 to IDR 15.000.000. In fact, based on OJK records until April 2023 that there were 2.38 legal “Pinjol” borrowers in Jakarta with a loan amount of IDR. 10.35 Trillion. This shows that “Pinjol” products are most in demand by consumers compared to other Fintech products. The “Fintech” can help small and medium-sized enterprises in Egypt –which make up around 80 percent of the country’s firms– bridge financial inclusion gaps, move into the formal economy, and effectively improve their capacity to grow and compete (Kamel, 2021).

3. Research Methods

This research uses a qualitative approach with a case study method. A case study is when a researcher thoroughly examines a plan, an activity, an event, a procedure, or one or more people (Mohajan, 2018). The case study is a common research technique used to advance our understanding of individual, group, organizational, social, political, and related issues (Yin, 2009). Explanatory or causal case studies, descriptive case studies, and exploratory case studies are the three types of case studies used for research (but not teaching) reasons (Yin, 2009).

The aim is to examine the illegal “Pinjol” case and its impact on the micro-economy. Data obtained by using secondary data such as journal, research paper, internet, financial report and so on. However, the illegal “Pinjol” practice in society still occurs. The results of the study show that the number of illegal “Pinjol” organizers continues to grow despite prevention and prosecution by SWI and the police. The research findings show that the number of illegal “Pinjol” organizers continues to increase.

4. Results and Discussion

4.1 Financial Technology in Indonesia

The development of computer technology, internet of things (IoT), and smartphones have encouraged the establishment of non-bank financial institutions (LKBB). ICT and "Fintech" are important forces behind financial inclusion (Chinoda and Mashamba, 2021). The establishment of LKBB was caused by various factors, among others, disruptive technology, business model innovation, non-banking finance, new market segments, competitive banking competition, as well as responding to people who do not have access to official banking institutions.

During the pandemic Covid-19 most of the purchasing processes used financial technology (hereinafter "Fintech"), digital payment or cashless. This online shopping habit continues after Covid-19. This shows that the use of "Fintech" has spread to various levels of society, business, service and products. The Covid-19 pandemic has encouraged non-banking financial institutions to mushroom in response to payment needs during the pandemic. Currently, the cashless payment system is still used because it is more practical and economical.

The "Fintech" is a new paradigm in the non-bank financial sector that operates using computer technology, IoT, and smartphone applications. The phrase alludes to the "Financial Services Technology Consortium," a Citigroup initiative to promote technological cooperation (Románova and Kudinska, 2017). In addition, the global financial crisis (GFC) of 2008, which decreased consumer confidence in bank financial services, is the primary driver of "Fintech" (Breidbach et al., 2020). The term "Fintech" refers to new financial services enabled by computer technology (Omarova, 2019), companies utilizing cutting-edge financial technology (Saksonova and Kuzmina-Merlino, 2017) whose presence into the market has completely changed the financial services sector (Hasan et al., 2020) and a paradigm for the financial sector (Abad-Segura et al., 2020).

The commercial sector has recently experienced a challenge with an efficient payment system known as "Fintech" (Knewtson and Rosembaum, 2020) which make purchasing transactions and payment systems more effective (Hidayat et al., 2020) because of affordability, speed, accessibility from anywhere and anytime with any device (Wulan, 2017) as a new issue in the financial sector (Leong and Sung, 2018) present a new business strategy (Narayan, 2019) "Fintech" business models have been adopted by startup growth (Suryono, 2019) have arisen in recent years have mostly been evaluated by start-ups and market entrants (Kumar, 2016) which uses the most recent technological advances to provide new financial services (Thakor, 2020) this innovation has disrupted the global financial markets (Arjunwadkar, 2018). In short, "Fintech" is a new phenomenon in the non-banking financial sector in Indonesia.

4.2 Pinjaman Online "Pinjol"

The process of borrowing money from "Pinjol" is very easy and fast compared to loans from banks or cooperatives. But behind the ease of the process there is a very high loan interest rate of 0.8 / day. Whereas OJK sets a maximum interest rate of 0.3-0.4%/day. There are many cases of illegal "Pinjol" company that harm the community as borrowers. Legal "Pinjol" providers charge a daily interest rate according to OJK regulations maximum of 0.3%-0.4%/day but the illegal "Pinjol" interest rate is very high at 0.8%/day. So that many micro-entrepreneurs or lower class people are interested in this facility. Another finding is the negative impact of the high interest rates of illegal P2P "Pinjol" which causes most borrowers to be unable to pay, many cases of forced withdrawals by illegal "Pinjol" operators using debt collectors, confiscation of valuables such as motorbikes, cars or houses belonging to borrowers who failed to pay.

Several reasons for choosing "Pinjol" as a source of loans by the lower class such as official financial institutions such as cooperatives or banks takes a long time and requires collateral. Savings and loan cooperative financial institutions have almost the same procedure as banks, in particular, they must have collateral. In addition, cooperatives are usually designated for their members, for example, farmer group cooperatives, market sellers cooperatives, employee cooperatives and the like. Currently, many cooperatives are closed or bankrupt due to unprofessional management. In addition, many cooperatives are unable to respond to developments in financial technology due to various reasons, including costs, management and human resources. Thus, "Pinjol" becomes the only alternative for borrowers who are not members of the cooperative or do not have collateral. The main attraction of "Pinjol" is that it can borrow a small amount of money, for example IDR 400,000 - IDR 1,000,000, with daily interest that is not facilitated by the bank (Rahman, 2020). Estimates that 80 million Indonesians do not have access to banking or financial services (Narayan, 2019).

In 2022, the total number of legal "Fintech" Peer to Peer Lending (P2P) providers registered with the OJK is 106 providers. Some of the legal "Pinjol" companies that are successful and have large transactions are Modalku IDR. 49.15 Trillion IDR Smart Credit. 35.5, and KoinWork IDR.16.3 Trillion. KoinWork has 2.2 million users consisting of 1.4 million lenders and 840 thousand borrowers from Micro, Small and Medium Enterprises (MSMEs). In 2018 to 2022 there were 3,786 illegal "Fintech" platforms that were closed by the OJK investment alert task force. The closure was caused by various factors, most notably, the very high interest rates that made many borrowers default. All "Fintech" operators must register with OJK so that consumer rights are protected. The illegal "Fintech" operators do not register with the OJK. These illegal "Fintech"s apply very high interest rates that are not in accordance with OJK rules which is a maximum of 0,4%/day or 13,8%/month. In fact, many illegal "Fintech"s use interest rates above the OJK regulations of around 0,8%/day or 24%/month.

Based on the data, the number of illegal loan loans that SWI closed in 2023 was 102. This shows that illegal "financial loans" still exist and even the number is increasing. In addition, the Task Force for Handling Unlicensed Business Activities (STPKUTI) replacing SWI has found several illegal "Pinjol" acting on behalf of cooperatives, for example, the Joint Venture Savings and Loans Cooperative (KSP), Sarah Benyamin KSP, and A Wang KSP. There are 352 illegal "Pinjol" websites and 77 content on Facebook and Instagram. This means that "Pinjol" is illegal in promoting its business in various ways. Therefore, OJK needs to carry out stricter supervision of illegal P2P Lending "Pinjol" operators and set a maximum interest rate threshold. In conclusion, the existence of illegal "Pinjol" is due to weak supervision regulations and law enforcement. Table 1 is the interest comparison between illegal "Fintech" and two conventional banks.

Table 1. Interest Comparison Between Legal Loans, Illegal Loans and Conventional Banks

Lender	Interest Rate/Day	Interest Rate/Month	Interest Rate /Year
Legal Pinjol	0,4%	30 days x 0,4 = 12%	12 months x 12%=144%
Illegal Pinjol	0,8%	30 days x 0,8 = 24%	12 months x 24%=288%
Bank Rakyat Indonesia	-	-	12 months x 3% = 36%
Bank Central Asia	-	-	12 months x 2,65%=31,8%

Table 1. shows a large comparison between illegal lenders and legal lenders and conventional banks. Bank Rakyat Indonesia is a bank is owned by the State Enterprise (BUMN) and Bank Central Asia is the largest private bank in Indonesia.

Conclusion

The existence of illegal "Pinjol" has caused many negative impacts and many legal cases. The illegal "Pinjol" interest rates are very high, causing many borrowers to default. In some cases the amount of interest is greater than the loan. Due to very high interest rates, many illegal "Pinjol" borrowers cannot repay their loans. Most of the Pinjol borrowers are related to the micro economy, small traders, housewives, informal workers and the like. They do not have access to banks because they do not have collateral or are not permanent employees. Consumers who fail to pay are intimidated, terrorized or defamed on social media. Several loan cases can be classified as unlawful or criminal acts, namely by charging the borrower with violence or confiscation.

SWI periodically releases a list of illegal "Pinjol", for example, one hundred and two illegal loan companies/applications that SWI blocked in 2023. However, the number of illegal "Pinjol" continues to grow and it is difficult for the public to check these illegal "Pinjol". Therefore, the existence of illegal "Pinjol" is due to weak supervision regulations and law enforcement so that many illegal "Pinjol" are operating again. This is due to the ease and sophistication of computer technology so that the number of illegal loans continues to grow.

References

- Abad-Segura, Emilio., González-Zamar, Mariana-Daniela., López-Meneses,Eloy., & Vázquez-Cano, Esteban., 2020. Financial Technology: Review of Trends, Approaches and Management.*Mathematics*, 8, 951; doi:10.3390/math8060951
- Albarak, Mansour. Saleh.,& Sara, Ali.Alokley. (2021). "Fintech": Ecosystem, Opportunities and Challenges in Saudi Arabia. *Journal of Risk and Financial Management*, 14, 460. <https://doi.org/10.3390/jrfm14100460>
- Arjunwadkar, Parag, Y. (2018). *"Fintech". The Technology Driving Disruption in the Financial Services Industry*. CRC Press: Boca Raton, FL.
- Armilia, Nadhia., Isbanah, Yuyun.(2020). Faktor Yang Memengaruhi Kepuasan Keuangan Pengguna *Financial Technology* di Surabaya.*Jurnal Ilmu Manajemen*, Vol.8, No.1,pp.39-50.
- Belanche,Daniel., Guinalíu, Miguel.,& Alba´s,Pablo.(2022).Customer adoption of p2p mobile payment systems: The role of perceived risk. *Telematics and Informatics*, 72,101851. <https://doi.org/10.1016/j.tele.2022.101851>
- Breidbach, Christoph.F., Keating, Byron.W., & Lim, Chiehyeon.(2020)."Fintech": Research Directions to Explore the Digital Transformation of Financial Service Systems.*Journal of Service Theory and Practice*, Vol. 30 No. 1, pp. 79-102. DOI 10.1108/JSTP-08-2018-0185
- Gomber,Peter., Kauffman,Robert.J.,Parker, Chris., & Weber, Bruce.W. (2018). On the "Fintech" Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services, *Journal of Management Information Systems*, 35:1, 220-265, DOI:10.1080/07421222.2018.1440766
- Hasan, Rashedul., Hassan, M. Kabir., and Aliyu, Sirajo.(2020). "Fintech" and Islamic Finance: Literature Review and Research Agenda. *IJIEF: International Journal of Islamic Economics and Finance*.Vol. 1 (2), pp.75-94.
- Hidayat, Ase, Syarifuddin., Alam, Faris, Satria., & Helmi, Muhammad, Ishar., 2020. Consumer Protection on Peer to Peer Lending Financial Technology in Indonesia, *International Journal of Scientific & Technology Research*, Volume 9, Issue 01.
- Intan, Novita.(2022).SWI: Sepanjang 2021, Dana yang Disalurkan "Fintech" Rp. 295,85 Triliun. Availabe at [https://www.republika.co.id/berita/r7oegg383/swi-sepanjang-2021-dana-yang-disalurkan-"Fintech"-rp-29585-triliun](https://www.republika.co.id/berita/r7oegg383/swi-sepanjang-2021-dana-yang-disalurkan-)
- Kamel,Sherif. (2021).The Role of Digital Transformation in Development in Egypt. *Journal of Internet and e-Business Studies*, Vol. 2021,pp.1-10. DOI: 10.5171/2021.911090
- Knewtson, Heather.S.,& Rosenbaum, Zachary.A.(2020).Toward Understanding "Fintech" and Its industry.*Managerial Finance*. DOI 10.1108/MF-01-2020-0024
- Kumar, S. (2016). Relaunching Innovation: Lessons from Silicon Valley. *Banking Perspective*, Vol. 4, No. 1, pp. 19-23.
- Leong,Kelvin.,& Sung, Anna.(2018). "Fintech" (Financial Technology): What is It and How to Use Technologies to Create Business Value in "Fintech" Way?*International Journal of Innovation, Management and Technology*, Vol. 9, No. 2.
- Mention, Anne-Laure.(2019).The Future of "Fintech", *Research-Technology Management*, 62:4, 59-63, DOI: 10.1080/08956308.2019.1613123
- Mohajan, Haradhan.(2018).Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*, Vol-7, Issue 01, 2018, pp. 23-48
- Mohamed, Hazik., and Ali, Hassnian.(2019).Blockchain, "Fintech", and Islamic Finance. Building the Future in the New Islamic Digital Economy. Walter de Gruyter Inc., : Boston/Berlin
- Narayan,Seema.Wati.(2019).Does "Fintech" Matter for Indonesia's Economic Growth?*Bulletin of Monetary Economics and Banking*, Volume 22, Number 4
- Nguyen,Quang.Khai.,& Dang,Van.Cuong.(2022).The Effect of "Fintech" Development on Financial Stability in an Emerging Market: The Role of Market Discipline. *Research in Globalization*, 5,100105. <https://doi.org/10.1016/j.resglo.2022.100105>
- Nugraha, Pandu., Setiawan, Budi., Nathan, Robert.Jeyakumar.,& Fekete-Farkas, Maria.(2022). "Fintech" Adoption Drivers for Innovation for SMEs in Indonesia. *Journal Open Innovation Technology Marketing Complex*,8, 208. <https://doi.org/10.3390/joitmc8040208>
- Omarova, Saule,T.(2019). New Tech v. New Deal: "Fintech" as a Systemic Phenomenon, *Yale Journal on Regulation*, Vol. 36.
- Rahman,U.Y.Abdur.(2020).Utilization of Indonesia's Digital Economy to Invest in Human Capital and Provide Socio-Economic Support to Stimulate Economic Growth. *International Journal of Business and Administrative Studies*,Vol.6, Iss. 6, pp. 312-322 doi: <https://dx.doi.org/10.20469/ijbas.6.10003-6>
- Riyanto, A., Primiana,I., Yunizar., & Azis,Y. (2018). Disruptive Technology: The Phenomenon of "Fintech" towards Conventional Banking in Indonesia. IOP Conf. Series: Materials Science and Engineering 407 (2018) 012104. doi:10.1088/1757-899X/407/1/012104
- Románova, Inna.,& Kudinska, Marina.(2017). Banking and "Fintech": A Challenge or Opportunity? Contemporary Issues in Finance: Current Challenges from Across Europe. *Contemporary Studies in*

Economic and Financial Analysis, Volume 98, 21-35.ISSN: 1569-3759/doi:10.1108/S1569-375920160000098002.

- Saksonova,Svetlana.,& Kuzmina-Merlino, Irina. (2017). "Fintech" as Financial Innovation – The Possibilities and Problems of Implementation. *European Research Studies Journal*,Volume XX, Issue 3A,pp. 961-973
- Sung,Anna., Leong,Kelvin., Sironi, Paolo., O'Reilly, Tim., & McMillan, Alison.(2019). An Exploratory Study of the "Fintech" (Financial Technology) Education and Retraining in UK.*Journal of Work-Applied Management*, Vol. 11 No. 2, pp. 187-198.DOI 10.1108/JWAM-06-2019-0020
- Suryono, Ryan,Randy., 2019. Financial Technology ("Fintech") Dalam Perspektif Aksiologi. *Jurnal Masyarakat Telematika dan Informasi*.Volume 10, No. 1,Hal.51-66.
- Teja, Adrian. (2017). Indonesian "Fintech" Business: New Innovations or Foster and Collaborate in Business Ecosystems? *The Asian Journal of Technology Management*, Vol. 10, No.1,pp.10-18.
- Thakor, Anjan V. (2020). "Fintech" and banking: What do we know? *Journal of Financial Intermediation*, Volume 41, 100833.<https://doi.org/10.1016/j.jfi.2019.100833>
- Wulan,Vieqi.Rakhma.,(2017).Financial Technology ("Fintech") A New Transaction in Future. *Journal of Electrical Engineering and Computer Sciences*, Vol. 2, No.1.
- Yin,Robert.K.(2009). *Case Study Research Design and Methods*, 4th Ed, SAGE Inc.: Thousand Oaks, California
- Zhang,Yuejin.,Li, Haifeng.,Hai,Mo., Li,Jiaxuan.,&Li, Aihua.(2017).Determinants of loan funded successful in online P2P Lending. *Procedia Computer Science* 122 (2017) 896–901.DOI: 10.1016/j.procs.2017.11.452