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Digital Financial Transformation: The Influence of Fintech on The Stability of The Indonesian Financial System

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Abstract−This research examines the influence of financial technology (fintech) on Indonesia's financial system stability using the Error Correction Model (ECM) methodology with monthly data from 2018-2023. The variables used include the bank Z-score as a proxy for financial system stability, and independent variables consisting of e-money ownership, credit cards, ATM cards, P2P lending volume, and a COVID-19 dummy variable, along with control variables for interest rates, inflation, and exchange rates. Using Stata-14 software, data analysis was conducted through a series of tests including unit root tests, cointegration tests, classical assumption tests, and ECM estimation to analyze both short-term and long-term impacts. The research findings reveal that e-money contributes positively to long-term financial stability, while ATM cards and P2P lending demonstrate negative impacts. Interestingly, the COVID-19 pandemic showed positive effects, reflecting the effectiveness of policy responses. These findings provide crucial insights for policymakers in designing regulations that balance innovation and stability in the digital financial era.

Keywords: Fintech; Financial System Stability

1. INTRODUCTION

The development of information and communication technology has caused many changes in various human lives (Suryono et al., 2019). One of the most prominent innovations in recent years is Financial Technology (fintech). FinTech advances have increasingly received high interest from the public after 2015 since the existence of the Indonesian FinTech Association (AFI) (Arvianto et al., 2021). The exponential growth of Fintech has changed the economic and financial landscape. These changes bring benefits to the financial system and increased market efficiency, but also a significant amount of risk exposure. Whether Fintech disrupts the stability of financial markets or actually upholds their stability is an issue that attracts the attention of researchers, regulators and investors (Koranteng & You, 2024). According to (Bank Indonesia, 2019), the FinTech industry is divided into four main categories: digital payment systems, risk and investment management, e-aggregator platforms, and Peer-to-Peer Lending services. This classification reflects various aspects of technological innovation in the Indonesian financial sector (Barroso & Laborda, 2022). In Indonesia, fintech has developed rapidly and has become an integral part of the financial system. With a large population and increasingly high levels of internet penetration, fintech has great potential to increase financial inclusion (Bähre et al., 2020). According to data from the Financial Services Authority (OJK), the number of fintech companies in Indonesia continues to increase every year, showing high interest and need for digital financial services (Otoritas Jasa Keuangan, 2019, 2019; Fintechnews, 2021).

The transformation from using cash to digital finance in Indonesia involves a significant shift in the way people transact, which is now increasingly dependent on various digital payment instruments such as e-money, ATM cards, credit cards, and peer-to-peer (P2P) systems. E-money or digital wallets have become one of the most popular payment methods, with reports showing that 96% of respondents use e-wallets for daily transactions. In 2025, it is estimated that the value of e-wallet transactions in Indonesia will reach USD 70.1 billion, making it the largest user in Southeast Asia (Bank Indonesia, 2024). ATM cards and credit cards also remain important options in the digital payments ecosystem. ATM cards facilitate access to cash funds and allow users to make transactions at merchants that accept non-cash payments. Meanwhile, credit cards offer convenience in shopping with a flexible payment system, including installment options via the increasingly popular Buy Now Pay Later (BNPL) service. It is projected that Indonesia will become the largest market for BNPL in Southeast Asia in 2025, with total spending using BNPL increasing up to 8.7 times compared to 2020. P2P systems also contribute to this transformation by providing access to people who have not been reached by financial services conventional. With the P2P lending platform, individuals can borrow and lend money directly without going through traditional banks, increasing financial inclusion among the wider community (Barroso & Laborda, 2022).

The development of financial technology (fintech) in Indonesia was accelerated by the COVID-19 pandemic which hit the world since early 2020 (Sugandi, 2021). The integration of fintech into the national financial system, which had previously shown a positive trend, gained new momentum when social restrictions and the need for financial services without physical contact increased sharply (Guo & Chai, 2024). This phenomenon is characterized by a significant surge in the use of digital payment services, e-commerce and online lending platforms, which have become critical solutions for society and businesses amidst the global health crisis. However, this rapid growth also brings new challenges to Indonesia's financial stability (Chavleishvili & Kremer, 2023). Overall, the shift from cash to digital finance in Indonesia not only increases efficiency and convenience in transactions but also expands access to financial services for the public. With the support of government policies and continuously developing

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technological innovation, Indonesia is on the right track to accelerate the growth of its digital economy towards a more inclusive and sustainable future. However, behind the various benefits offered, the development of fintech also poses new challenges to the stability of the financial system. This phenomenon is a major concern for regulators and industry players (Ali et al., 2024). Some of the issues that arise include operational risks, cyber risks, consumer protection, and the potential for shadow banking that is not properly monitored. Therefore, it is important to understand how fintech affects the stability of the Indonesian financial system (Azarenkova et al., 2018). Financial system stability is very important for economic growth and macroeconomic stability. Disruption to it could trigger a widespread economic crisis (Prochniak & Wasiak, 2017). Fintech has the potential to increase the efficiency of financial services, but can also threaten traditional banking, for example through P2P lending with looser credit standards. As a result, regulators need to develop a regulatory framework to maintain bank security, protect consumers, and manage competition between fintech and banks (Yudaruddin et al., 2023).

Discussion about the relationship between FinTech and the stability of the financial system is packaged in a basic general theory, namely the first theory is related to the relationship between fintech payments (such as e-money, credit cards and ATM cards) on the stability of the financial system, namely the theory of payment efficiency which is an important concept in economics. and finance that focuses on optimizing economic exchange processes. This theory emphasizes the importance of minimizing transaction costs and increasing market efficiency. In the context of modern finance, this theory is relevant to the emergence of digital technology and fintech, such as digital payments which can increase transaction efficiency and reduce operational risk, thus having a significant impact on the stability of the financial system (Quang Khai Nguyen, 2022). Apart from that, the discussion regarding the relationship between FinTech Peer two peer (P2P) Lending is packaged in a basic general theory, namely, Systemic Risk theory. This theory explains the potential risks arising from the use of P2P FinTech and its impact on financial system stability. These risks include credit risk, operational risk, liquidity risk and systemic risk. To reduce these risks, Systemic Risk Theory emphasizes the importance of effective regulation, strict supervision and risk management. Thus, Systemic Risk Theory can help understand the potential risks arising from the use of P2P FinTech and its impact on the stability of the financial system (Nabella et al., 2020).

Various empirical studies show mixed results regarding the impact of FinTech components on financial stability. In research conducted by (Antwi & Kong, 2023; Ekananda, 2023; Kasri et al., 2022; Kipkemboi & Bahia, 2019) which proves that the use of electronic money and mobile money will reduce transaction costs and will ultimately have a positive impact on stability financial system. Meanwhile in research (Rusdianasari, 2018) e-money does not have a significant effect on the stability of the financial system, this is because it is only reached by a few layers of society who know more about technology. Research conducted by (Ekananda, 2023) shows that the use of ATM cards has a significant influence towards financial system stability, where increasing ATM card transactions contributes to reducing risks to financial system stability. Meanwhile in research (Rusdianasari, 2018) ATM cards do not have a significant effect on financial system stability. This is due to the limited reach of fintech development in the financial sector, especially in unbankable communities. Previous P2P research stated that P2P lending has a negative effect on financial system stability. This is because P2P lending tends to have a lower screening capacity compared to traditional banks (Fabio Braggion & Zhu, 2011; Käfer, 2016; Saraswati & Tisnawati, 2021).

Based on this gap in the literature, the aim of this research is to determine the influence of fintech on the stability of the financial system in Indonesia, especially before and after Covid-19. This research is important because it can help policymakers develop good strategies and regulations to prevent future financial crises and support long-term economic growth. This study can also help stakeholders manage risks arising from fintech innovation, increasing financial inclusion and efficiency in Indonesia.

2. RESEARCH METHODS

2.1 Basic Research Framework

The type of research used in this research is quantitative descriptive. Figure 1 shows a research framework that examines the influence of fintech on financial system stability in Indonesia. The dependent variable in this research is data on the stability of the Indonesian financial system which is proxied by the bank Z-score. The independent variables in this research consist of fintech payments, namely ownership of e-money cards, credit cards, ATM cards, Fintech P2P lending, and the dummy variable covid-19.

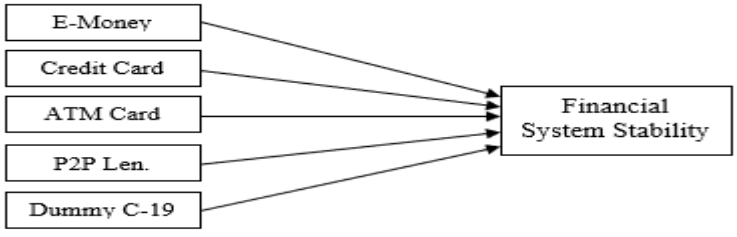

Figure 1. Research Framework

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Based on the hypothesis in Figure 1 above, it can be concluded that:
H1: E-money influences the stability of the Indonesian financial system
H2: Credit cards influence the stability of the Indonesian financial system
H3: ATM cards influence the stability of the Indonesian financial system
H4: P2P lending influences the stability of the Indonesian financial system
H5: The COVID-19 pandemic has an impact on the stability of the Indonesian financial system

2.2 Data Types and Sources

The data used in this research is a time series. The data in this research was taken from various sources, namely, Bank Indonesia, Financial Services Authority (OJK), Central Statistics Agency (BPS), which is available in the form of monthly data from 2018 to 2023.

2.3 Operational Definition of Variables

2.3.1 Dependent Variable

The dependent variable in this research is data on the stability of the Indonesian financial system which is proxied by the bank Z-score. The bank Z-score is an index that shows banking stability, which is used to measure financial stability, which indicates the possibility of bank insolvency or bankruptcy. A higher bank Z-score value indicates a lower possibility of insolvency, meaning it indicates better financial stability (Kurniawati, 2017). The z-score value is calculated using the formula:

$$\text{Bank}_{\text{Z-score}} = \frac{(\text{ROA}+\text{CAR})}{\sigma\text{ROA}} \quad (1)$$

Where return on assets (ROA) is the result of banking assets during the observation period which shows how banks generate profits, capital adequacy ratio (CAR), which shows capital divided by risk-weighted assets to see the level of banking leverage, and σROA is the standard deviation of ROA, which shows the level of ROA uncertainty (Saraswati & Tisnawati, 2021).

2.3.1 Independent Variables

The independent variables in this research consist of fintech payments, namely ownership of e-money cards, credit cards, ATM cards which have millions of units, as well as the amount of fintech P2P lending loans in billions of rupiah, and the dummy variable covid-19. E-Money with a proxy value of 0 for the time before Covid-19, a value of 1 for the time when Covid-19 occurred and a value of 2 for the time after Covid-19 occurred. The variables used as control variables in this research include interest rate, inflation and exchange rate variables.

2.3 Technique data analysis

In this research, the Error Correction Model (ECM) analysis technique is used to identify the long-term and short-term impacts of fintech on financial system stability in Indonesia. The purpose of this test is to find whether there is a long-term and short-term balance relationship that occurs due to the cointegration of the research variables. Stationarity test (unit root test), cointegration test, long-term and short-term estimation are several stages of Error Correction Model (ECM) estimation (Basuki, 2015). This research uses the Stata-14 program. The short-term and long-term ECM models can be expressed in the following equation:

$$\text{Bank Z-Score T} = \beta 0t + \beta 1\text{EM}t + \beta 2\text{CC}t + \beta 3\text{ATM}t + \beta 4\text{P2P}t + \beta 5\text{DM}t + \beta 6\text{IR}t + \beta 7\text{Inf}t, + \beta 8\text{ER}t + et \quad (2)$$

$$\Delta\text{SSBank Z} - \text{Score}t\ \text{K}_t = a_0 + a_1\Delta\text{EM}_{t-i} + a_2\Delta\text{CC}_{t-i} + a_3\Delta\text{ATM}_{t-i} + a_4\Delta\text{P2P}_{t-i} + a_5\Delta\text{DM}_{t-i} + a_6\Delta\text{IR}_{t-i} + a_7\Delta\text{Inf}_{t-i} + a_8\Delta\text{ER}_{t-i} + \text{ECT}_t + e_t \quad (3)$$

Information :
$\text{Bank Z} - \text{score}_t$: Financial System Stability
EM_t : E-money (Million Units)
CC_t : Credit Card (Million Units)
ATM_t : ATM Card (Million Units)
P2P_t : P2P fintech lending (Billions of Rupiah)
DM : Dummy Covid-19
IR_t : Interest Rate (%)
Inf_t : Inflation (%)
ER_t : Exchange Rate Against US Dollar
e_t : Interference variable or Error Term period t
ECT : Error Correction Term (imbalance in the short term)

3. RESULTS AND DISCUSSION

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3.1 Results

3.1.1 Unit Root Test

Before estimating the VECM model, it is necessary to test the stationarity of the data to avoid false regression. This stationarity test is carried out using a unit root test, such as Augmented Dickey-Fuller (ADF), to determine whether each research variable has a stable determinant form. If the ADF calculated value is greater than the table alpha value at an alpha value of 5%, the estimated variables can be continued with cointegration testing.

Table 1. Stationarity Test Results with the Augmented Dickey-Fuller Indicator (ADF)

Variable	Unit Root Test	Mac-Kinnon Critical P-Value (5%)	Is
Bank Z-score (SSK)	Level	0.9409	Not Stationary
	First Difference	**0.000**	**Stationary**
E-Money	Level	0.8433	Not Stationary
	First Difference	**0.000**	**Stationary**
Credit Card	Level	0.6694	Not Stationary
	First Difference	**0.000**	**Stationary**
ATM Card	Level	0.9509	Not Stationary
	First Difference	**0.000**	**Stationary**
P2P Lending	Level	0.2914	Not Stationary
	First Difference	**0.000**	**Stationary**
Dummy Covid-19	Level	0.894	Not Stationary
	First Difference	**0.000**	**Stationary**
Interest Rate	Level	0.9224	Not Stationary
	First Difference	**0.0003**	**Stationary**
Inflation	Level	0.6658	Not Stationary
	First Difference	**0.000**	**Stationary**
Course	Level	0.0129	Not Stationary
	First Difference	**0.000**	**Stationary**

3.1.2 Cointegration Test

After knowing that the data is stationary, the next step is to determine whether the data is cointegrated. This cointegration test is carried out to find out whether the model has a long-term relationship. To determine cointegration, residuals are formed and must be stationary at the level, which is called the Error Correction Term (ECT) (Basuki, 2015).

Table 2. Cointegration Test Results

Variable	Unit Root Test	Mac-Kinnon Critical P-Value (5%)	Is
ECT	Level	**0.0000**	Stationary

Based on the residual results in table 2, with a p-value smaller than 5%, which shows that all independent variables are related and cointegrated to the Stability of the Indonesian Financial System

3.1.3 Classic Assumption Test

In estimating the error correction models (ECM) the classical Gauss-Markov assumption test was carried out. The Gauss-Markov theorem states that if the model regression Your linear test satisfies the first classical assumption, then regression ordinary least squares (OLS) produces unbiased estimates that have the smallest variance of all estimator possible linear (Jim Frost, 2020). So to fulfill this, two assumption tests were carried out, namely the heteroscedasticity test and the autocorrelation test.

Table 3. Heteroscedasticity test

Chi-Square	**:**	**1.02**
Probability	**:**	**0.3119**

Based on the probability values in table 3, where the probability of the independent variable must be > 0.05, then table 3 above shows that there are no symptoms of heteroscedasticity.

Table 4. Autocorrelation Test

Lags	Chi-Square	df	Probability
1	1.764	1	**0.1842**

Based on the probability value in table 4. where the probability value must be > 0.05, then table 4. above shows that there is no autocorrelation.

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3.1.4 Regression Results

Table 4. Estimation Results of the Financial System Stability Model in Indonesia using the ECM Model

Variable	Coefficient	Std. Eror	Probability
	Long Term		
E-Money	0.0093618	0.0026704	**0.001**
Credit Card	1.092202	0.8793292	0.219
ATM Card	-0.8830379	0.2019818	**0.000**
P2P Lending	-0.0000256	5.92E-06	**0.000**
Dummy Covid-19	2.328146	1.133785	**0.044**
Variable Control :			
Interest rate	1.865715	0.3473227	**0.000**
Inflation	-0.8740201	0.3624547	**0.019**
Exchange Value	-0.0020554	0.0005819	**0.001**
Adjusted R2 = 0.8945, Probability F-statistic = 0.0000			
	Short-term		
D(E-Money (-1))	0.0011221	0.0040122	0.78
D(Credit Card (-1))	1.142386	1.142604	0.321
D(ATM Card (-1))	-0.3854105	0.4165632	0.385
D(P2P Lending (-1))	-0.0000278	8.53E-06	**0.002**
D(Dummy Covid-19 (-1))	1.614854	1.063462	0.134
Variable Control :			
D(Interest Rate (-1))	1.1476093	0.8434034	0.862
D(Inflation (-1))	-1.1709418	0.4724948	0.719
D(Change Value (-1))	-0.0012236	0.0004385	**0.007**
ECT (-1)	-0.4682522	0.1022693	**0.000**
Adjusted R2 = 0.3789, Probability F-statistic = 0.0003			

From the long-term estimation results above, it can be interpreted that the regression results for the stability of the Indonesian Financial System (SSK) are as follows: the E-money and Covid dummy variables in the long term have a positive and significant influence, while the ATM card and peer to peer lending variables negative and significant effect. Furthermore, in the F significance test, it is known that the F statistical probability value is 0.000000, less than α=5%, which means that together the independent variables have a significant influence on the Stability variable of the Indonesian financial system. The R-Square value is 0.8945. This means that the E-money, credit card, ATM card, p2p lending, and Covid dummy variables as well as other control variables are able to explain 89% of the SSK variable and the remaining 11% is explained by other variables not included in the research model.

Based on the estimation results in table 4. Above, it can be seen that the Error Correction Term (ECT) coefficient in this model has a negative and significant value when estimating the stability of the Indonesian financial system. Analysis using the Error Correction Model (ECM) indicates that the variables that are the focus of this research have a substantial influence on the Indonesian financial system, both in the short and long term context. Meanwhile, in the short term estimation, only the fintech P2P Lending variable has an influence. negative in the short term for the stability of the Indonesian financial system. However, together or simultaneously all independent variables can influence the stability of the financial system, as evidenced by the F-statistic value with a value of α=5%.

3.2 Discussion

The research results show that there are differences in the significance of variables between the short term and the long term in influencing the stability of the financial system in Indonesia. In the short term, only P2P lending shows a significant influence, while in the long term, almost all fintech variables show a significant influence. This phenomenon can be explained through several important perspectives in the context of financial technology development and financial system stability. This difference in significance is mainly due to the characteristics of financial technology adoption which requires time to have a measurable impact on the financial system. The process of adaptation and change in people's behavior in using digital financial services occurs gradually, so that the effect on financial system stability can only be seen after continued use. Apart from that, institutional factors such as regulatory adjustments, adaptation of financial institutions to new business models, and development of supporting infrastructure also require a significant amount of time.

Long-term research results show that 3 of the 4 fintech variables and the Covid-19 dummy variable used in the research have a significant influence on the stability of the Indonesian financial system. The first variable is e-money which has a positive and significant influence, meaning that every increase in e-money by one unit results in a decrease in the stability of the Indonesian financial system. These results are in line with Payment Efficiency Theory, which emphasizes the importance of minimizing transaction costs and increasing market efficiency. This is also in line with research conducted by (Antwi & Kong, 2023; Ekananda, 2023; Kasri et al., 2022; Kipkemboi & Bahia, 2019) which

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proves that the use of electronic money and mobile money will reduce transaction costs and ultimately have a positive impact on the stability of the financial system. Based on the analysis, this influence is caused by several factors, one of which is increasing transaction efficiency, reducing bank operational costs, expanding financial inclusion, increasing transaction transparency, and encouraging innovation in the banking sector. E-money also increases the liquidity of the financial system by accelerating money circulation. The combination of these factors improves the health and resilience of banks, as seen by an increase in the Z-score, indicating a more stable financial system.

The second variable is the ATM card which has a negative and significant influence. This means that when ATM card ownership increases by one unit, it will result in a decrease in the stability of the financial system. This is in line with research conducted by (Ekananda, 2023) showing that the use of ATM cards has a significant influence on financial system stability, where increasing ATM card transactions contributes to reducing risks to financial system stability in ASEAN-4 countries. ATM card ownership has a negative impact due to increased security risks such as skimming, high costs of maintaining ATM infrastructure, potential obstacles to the adoption of more efficient financial technology, challenges in bank liquidity management due to fluctuations in demand for cash, as well as indications of public preferences for cash that can reducing the effectiveness of monetary policy. These factors reduce operational efficiency and increase risks for banks, which is reflected in a decrease in Z-score, indicating a potential decline in financial system stability.

The third variable is peer-to-peer (P2P) lending which has a negative and significant influence. This means that when P2P lending experiences an increase of one unit, it will cause a decrease in the stability of the financial system. The results of this research are in line with previous research (Fabio Braggion & Zhu, 2011; Käfer, 2016; Saraswati & Tisnawati, 2021) which stated that P2P lending has a negative effect on financial system stability. This is because P2P lending tends to have a lower screening capacity compared to traditional banks. On the other hand, the negative influence of P2P lending on financial system stability is in accordance with Systemic Risk Theory. P2P lending increases systemic risk through lower screening capacity compared to traditional banks, increased credit risk and default rates, diversion of funds from the conventional banking system, and lack of strict regulations.

P2P lending creates direct competition with traditional banks, potentially reducing banks' market share and profitability. The higher credit risk in P2P lending can increase the overall default rate. The lack of strict regulations on P2P platforms can lead to less prudent lending practices. In addition, P2P lending can divert funds from the conventional banking system, affecting bank liquidity and stability. These factors collectively reduce bank resilience, which is reflected in a decline in the Z-score, signaling a potential decline in financial system stability. Therefore, it is necessary to underline the importance of effective regulation and risk management in fintech innovation.

The final variable is the Covid-19 dummy which has a positive and significant influence on the stability of the Indonesian financial system. According to the author's analysis, this was caused by the rapid and effective policy response from the government and central bank in dealing with the pandemic, such as fiscal stimulus and monetary easing, which helped maintain banking system liquidity. Additionally, credit restructuring measures and loan moratoriums may have reduced pressure on banks' balance sheets. Increasing digitalization of banking services during the pandemic can also increase operational efficiency. These factors collectively strengthened banks' resilience in facing the crisis, which was reflected in an increase in Z-score, indicating greater financial system stability during the COVID-19 period.

These findings underscore the importance of a long-term perspective in evaluating the impact of financial innovation on financial system stability, and emphasize the need for adaptive and sustainable policies in managing fintech development in Indonesia. This difference in significance between the short term and the long term also has important implications for policy makers in designing regulations that consider both the immediate and long term impacts of financial innovation.

4. CONCLUSION

Based on the research that has been conducted, it can be concluded that the development of fintech has a significant influence on the stability of the Indonesian financial system, both in the short and long term. E-money shows a positive and significant impact in the long term, indicating increased transaction efficiency and financial inclusion. This suggests that there is great potential to increase financial inclusion and efficiency, and this will encourage regulators to further support and optimize the use of e-money. In contrast, the negative effects of ATM cards and P2P lending show that these sectors need tighter regulation and more flexible risk management. P2P lending also shows a negative and significant impact, both in the short and long term, indicating increased credit risk and competition with traditional banks. Interestingly, the COVID-19 pandemic has had a positive and significant impact on financial system stability in the long term, demonstrating the effectiveness of government and central bank policies in responding to the crisis. Based on these findings, several suggestions can be put forward to improve financial system stability in the digital era. First, regulators need to develop a comprehensive regulatory framework to monitor and manage risks arising from the development of fintech, especially P2P lending. Central banks and financial authorities must continue to monitor developments in e-money and encourage its widespread adoption, while ensuring the security and stability of payment systems. Banks need to evaluate and optimize their ATM networks to reduce operational costs and increase efficiency. Governments and regulators must encourage collaboration between fintech and traditional banks to create a more

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inclusive and stable financial ecosystem. Further research is needed to analyze the long-term impact of COVID-19 on financial system stability and the role of fintech in post-pandemic economic recovery. In addition, financial education and digital literacy need to be improved in society to ensure safe and responsible fintech adoption. Finally, financial authorities need to develop more comprehensive indicators and measurement methods to assess financial system stability in the digital era. By implementing these suggestions, it is hoped that Indonesia can exploit the potential of fintech to increase financial inclusion and efficiency, while maintaining overall financial system stability.

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REFERENCES

Ali, S., Naveed, M., Youssef, M., & Yousaf, I. (2024). FinTech-powered integration: Navigating the static and dynamic connectedness between GCC equity markets and renewable energy cryptocurrencies. Resources Policy, 89. https://doi.org/10.1016/j.resourpol.2023.104591

Antwi, F., & Kong, Y. (2023). Investigating the impacts of digital finance technology on financial stability of the banking sector: New insights from developing market economies. Cogent Business and Management, 10(3). https://doi.org/10.1080/23311975.2023.2284738

Arvianto, G., Cortez, M. B., Widyastuti, V. R., & Ilmada, Z. (2021). Analisis Akad-Akad Dalam Fintech P2P Lending Syariah Di Indonesia. Academica : Journal of Multidisciplinary Studies, 5(1), 183–196. https://doi.org/10.22515/academica.v5i1.4116

Azarenkova, G., Shkodina, I., Samorodov, B., Babenko, M., & Onishchenko, I. (2018). The influence of financial technologies on the global financial system stability. Investment Management and Financial Innovations, 15(4), 229–238. https://doi.org/10.21511/imfi.15(4).2018.19

Bähre, H., Buono, G., & Elss, V. I. (2020). Fintech as a Mean for Digital and Financial Inclusion. 14(Ibmage), 205–211. https://doi.org/10.18662/lumproc/ibmage2020/15

Bank Indonesia. (2019). Bank Indonesia: Navigating the National Payment Systems in Digital Era. Https://Www.Bi.Go.Id/En/Publikasi/Kajian/Documents/Indonesia-Payment-Systems-Blueprint-2025.Pdf, 1–72. www.bi.go.id

Barroso, M., & Laborda, J. (2022). Digital transformation and the emergence of the Fintech sector: Systematic literature review. Digital Business, 2(2), 100028. https://doi.org/10.1016/j.digbus.2022.100028

Chavleishvili, S., & Kremer, M. (2023). Working Paper Series Measuring systemic financial stress and its risks for growth No 2842. 2842. https://sdw.ecb.europa.eu/browse.do?node=9689686

Ekananda, M. (2023). The Nonlinear Impact of Payment System Innovation on Financial System Stability in the ASEAN-4 Countries. Economics and Finance in Indonesia, 69(1), 114–131. https://doi.org/10.47291/efi.2022.05

Fabio Braggion, A. M., & Zhu, H. (2011). Is FinTech a Threat to Financial Stability?Evidence from Peer-to-Peer Lending in China. August.

Fintechnews. (2021). Indonesia Fintech Report and Map 2020. 18 Oktober.

Guo, J., & Chai, J. (2024). Banking competition and systemic risk: evidence from China. Journal of Risk, 26(3), 75–111. https://doi.org/10.21314/JOR.2023.016

Käfer, B. (2016). Peer to peer lending : A (financial stability) risk perspective Joint Discussion Paper Series in Economics by the Universities of Benjamin Käfer Peer to Peer Lending – A (Financial Stability) Risk Perspective This paper can be downloaded from (Issue 22).

Kasri, R. A., Indrastomo, B. S., Hendranastiti, N. D., & Prasetyo, M. B. (2022). Digital payment and banking stability in emerging economy with dual banking system. Heliyon, 8(11), e11198. https://doi.org/10.1016/j.heliyon.2022.e11198

Kipkemboi, K., & Bahia, K. (2019). The Impact of Mobile Money on Monetary and Financial Stability in Sub-Saharan Africa. Gsma, 32. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/The-impact-of-mobile-money-on-monetary-and-financial-stability.pdf

Koranteng, B., & You, K. (2024). Journal of International Financial Markets , Fintech and financial stability : Evidence from spatial analysis for 25 countries. Journal of International Financial Markets, Institutions & Money, 93(May), 102002. https://doi.org/10.1016/j.intfin.2024.102002

Kurniawati, putri. (2017). On the consistency of the Z-score to measure the bank risk. Universitas Nusantara PGRI Kediri, 01, 1–7.

Nabella, R. S., Wahyudi, S. T., & Tawakalni, D. I. (2020). Deteksi Risiko Sistemik Dan Keterkaitan Keuangan: Studi Pada Institusi Keuangan Di Indonesia. Jurnal Ekonomi Dan Bisnis, 21(2), 108. https://doi.org/10.30659/ekobis.21.2.108-120

Prochniak, M., & Wasiak, K. (2017). The impact of the financial system on economic growth in the context of the global crisis: empirical evidence for the EU and OECD countries. Empirica, 44(2), 295–337. https://doi.org/10.1007/s10663-016-9323-9

Quang Khai Nguyen, V. C. D. (2022). The effect of FinTech development on financial stability in an emerging market: The role of market discipline.

Rusdianasari, F. (2018). Kata kunci: Fintech, Inklusi Keuangan, Stabilitas Sistem Keuangan Klasifikasi JEL: G23, E4, E6,. Jurnal Ekonomi Kuantitatif Terapan, 11(2).

Saraswati, B. D., & Tisnawati, N. M. (2021). PENGARUH FINANCIAL TECHNOLOGY (FINTECH) TERHADAP

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STABILITAS SISTEM KEUANGAN DI INDONESIA. E-Jurnal Ekonomi Dan Bisnis Universitas Udayana. https://doi.org/10.24843/eeb.2021.v10.i10.p09

Sugandi, E. A. (2021). The COVID-19 Pandemic and Indonesia's Fintech Markets. SSRN Electronic Journal, 1281. https://doi.org/10.2139/ssrn.3916514

Suryono, R. R., Purwandari, B., & Budi, I. (2019). Peer to peer (P2P) lending problems and potential solutions: A systematic literature review. Procedia Computer Science, 161, 204–214. https://doi.org/10.1016/j.procs.2019.11.116

Yudaruddin, R., soedarmono, wahyoe, Nugroho, B. A., Fitrian, Z., Mardiany, M., Purnomo, A. H., & Santi, E. N. (2023). Financial technology and bank stability in an emerging market economy. Heliyon, 9(5), e16183. https://doi.org/10.1016/j.heliyon.2023.e16183