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The Effect of Financial Innovation, Risk Management, and Monetary Policy on the Stability of Fintech Startup Companies in Jakarta

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ABSTRACT

This study investigates the effects of financial innovation, risk management, and monetary policy on the stability of fintech startup companies in Jakarta. Using a quantitative approach, data were collected from 35 fintech startups through structured questionnaires with responses measured on a Likert scale of 1-5. Data analysis was conducted using SPSS version 25, employing correlation and multiple regression analysis. The results reveal that financial innovation is the most significant predictor of fintech stability, followed by risk management and monetary policy. The combined influence of these factors explains 74% of the variance in fintech stability. These findings underscore the importance of integrating innovation with robust risk management practices and aligning operations with macroeconomic trends for sustained stability. This research provides valuable insights for fintech stakeholders and policymakers to foster resilience and growth in the rapidly evolving financial ecosystem.

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1. INTRODUCTION

The fintech industry is a pivotal force in driving innovation and economic growth, particularly in urban centers like Jakarta, where advancements such as blockchain, digital payments, and AI are transforming traditional financial systems by offering faster, more efficient, and cost-effective services, thereby increasing financial inclusion and accessibility for underserved populations [1]. This democratization of financial services enables broader access to financial operations, which were previously exclusive to traditional institutions, supporting economic development [2], [3]. Moreover, technological advancements like AI and blockchain are reshaping the banking, finance, and insurance sectors by improving operational efficiency and enabling personalized financial services [2]. Fintech also contributes to environmental sustainability in smart cities by optimizing resource management and promoting green finance initiatives [4]. However, the industry faces significant challenges to stability and sustainability, including navigating complex regulatory environments, addressing data security concerns, and managing market volatility, which can impede growth and long-term viability [1], [5]. The dynamic nature of the fintech landscape underscores the need for strategies to ensure consumer protection and financial stability while addressing these challenges [1], [5].

Financial innovation in fintech, characterized by new products, services, and delivery mechanisms, is pivotal for companies to differentiate themselves in a competitive market while offering significant opportunities for economic growth by reducing costs in areas like mortgage lending and pension insurance [6]. Technologies such as big data, AI, and blockchain enhance financial efficiency and inclusiveness, transforming sectors like payments, lending, and wealth management [7], [8]. However, this rapid innovation can expose firms to operational risks and regulatory uncertainties, making effective risk management essential for maintaining resilience and financial stability [7]. Responsible risk management practices are critical to mitigating threats such as data breaches, credit risks, compliance failures, and systemic risks, ensuring company stability and sustainability [7]. Decentralized technologies, particularly blockchain, play a strategic role in addressing regulatory challenges by increasing transparency, automating processes, and reducing regulatory risks, further solidifying fintech's position in the financial industry [9], [10].

Monetary policy significantly influences the macroeconomic environment in which fintech companies in Jakarta operate, as changes in interest rates, inflation control measures, and central bank regulations can affect funding opportunities, consumer demand, and market stability. Interest rates set by Bank Indonesia play a critical role in shaping the cost of borrowing for fintech companies, impacting their capital structure and investment decisions, where higher interest rates may increase the cost of capital and limit growth opportunities [11]. These rates also influence consumer demand for fintech services by affecting borrowing costs and disposable income [12], [13]. Inflation control measures are equally important, as they stabilize consumer purchasing power, vital for fintech companies reliant on consumer spending and investment activities, while controlled inflation can attract foreign direct investment, enhancing growth prospects [11], [12]. Central bank regulations, including know-your-customer (KYC) and anti-money laundering (AML) procedures, are essential for ensuring consumer protection and fostering innovation, with initiatives like regulatory sandboxes and industry-regulator collaborations enabling fintech companies to adapt to evolving monetary policies [14]. This study aims to investigate the combined effects of financial innovation, risk management, and monetary policy on the stability of fintech startup companies in Jakarta.

2. LITERATURE REVIEW

2.1 Financial Innovation

Financial innovation refers to the creation and adoption of new financial products, services, processes, or platforms. It helps firms respond effectively to the needs of customers for a competitive advantage in the market. According to Schumpeter's theory of innovation, only those firms that innovate continuously are capable of achieving sustained growth and resilience. In the fintech sector, innovations like blockchain technology, mobile payments, peer-to-peer lending, and robo-advisory services have redefined financial services delivery [15]–[17]. Research by [18], [19] has indicated that financial innovation is a double-edged sword: it promotes efficiency and customer satisfaction but also introduces risks regarding technological adoption, regulatory compliance, and market acceptance. Such risks may threaten the operational stability of fintech startups, especially those with undeveloped mechanisms to scale and integrate innovations effectively.

2.2 Risk Management

It refers to the art of identification, assessment, and mitigation against probable threats to resources and objectives. The nature of vulnerabilities fintech startups face because of technological, operational, and regulatory challenges makes risk management a concern. Under Basel III principles, good risk management serves to enhance financial stability by making firms better prepared to withstand adverse conditions with sufficient capital buffers [20], [21]. Empirical evidence, such as that by [20], [22], confirms that risk management should have a more proactive framework directed toward fintech operations, including threats related to cybersecurity, data privacy, and compliance with financial regulations. Poor risk management has been discussed as the main reason startups fail; according to CB Insights in 2022. However, in the case of a Jakarta-based fintech, risk management is very vital because Indonesia is one country with tremendous changes in regulation and diverse customers.

2.3 Monetary Policy

Monetary policy refers to the use of money supply control as a tool of the central bank to influence the economic activities of a nation, using tools such as interest rates, reserve requirements, and open market operations. In fintech startups, monetary policy has a direct effect on capital availability, consumer spending, and market dynamics. In this line, [23], [24] have echoed that stability in monetary policy will provide an enabling environment for business to thrive. The fintech sector is very sensitive to any change in liquidity and interest rates; hence, these changes in central bank policy have a direct bearing on the fintech sector. For example, increased interest rates will raise the cost of borrowing for startups, while inflationary pressures may change consumer behavior. In Jakarta, monetary policy decisions made by Bank Indonesia have a way of shaping the financial landscape in which fintech startups set up shop.

2.4 Research Gap

While there is considerable literature on financial innovation, risk management, and monetary policy, few empirical studies have investigated the joint impact of these factors on the stability of fintech startups, particularly in emerging markets such as Jakarta. This paper tries to fill this gap by testing these factors in the peculiar context of the fintech ecosystem in Jakarta and thus provides practical insights for both industry players and policymakers.

3. METHODS

3.1 Research Design

The research will utilize a cross-sectional quantitative approach; it will obtain data only at one point in time to determine the relationships that exist between independent variables of financial innovation, risk management, and monetary policy, with the dependent variable of stability in FinTech startups. This provides for a structured and statistical examination of the hypothesized relationships based on empirical data.

3.2 Population and Sample

The population in the study involves the fintech startups operating within Jakarta, Indonesia. Samples of 35 fintech startups were picked through a purposive sampling basis, based on the fact that the companies must operate for more than two years; the companies have to be registered at Indonesia's Financial Services Authority, OJK; offer technology-driven financial services/products. The samples meet relevance and representation to be researched in the context of their stability. Data were collected from managerial or executive-level representatives who possess direct knowledge of the firm's operations and stability.

3.3 Data Collection

Primary data were obtained using a structured questionnaire administered to sample companies. The data-capturing instrument of this study was designed based on the perceptions of the respondents in respect of financial innovation, risk management practices, monetary policy influences and stability in the company. The items have been measured using Likert scale ranging from 1 - strong disagreement to 5-strong agreement.

3.4 Data Analysis Techniques

After that, data analysis was carried out using SPSS, version 25, by means of several statistical methods, such as: descriptive statistics through demographic characteristics of respondents and companies; reliability testing, such as Cronbach's alpha, in order to test the consistency of items in the questionnaire that were used; correlation analysis in order to find out the strength and direction of the relationship between the variables; and multiple linear regression analyses to assess jointly and separately the effects of financial innovation, risk management, and monetary policy on Fintech stability [25].

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The sample consisted of 35 fintech startups operating in Jakarta. The demographic analysis showed that 60% of the firms had been operational for 3–5 years and 40% had been in business for over five years. Most respondents held managerial or executive roles, with 75% reporting direct involvement in strategic decision-making.

Table 1. Descriptive Statistics

Variable	Mean	Standard Deviation
Financial Innovation	4.12	0.68
Risk Management	4.08	0.73
Monetary Policy	3.95	0.81
Fintech Stability	4.15	0.66

The mean values indicate that fintech startups in Jakarta perceive themselves to be moderately strong in financial innovation, risk management, and stability, while monetary policy is a factor but to a lesser extent.

4.2 Testing of Reliability

To test the reliability of the items in the questionnaire, Cronbach's alpha for all the variables showed a high reliability above 0.70, namely, financial innovation at 0.824, risk management at 0.852, monetary policy at 0.786, and stability of the fin-tech at 0.811 [25].

4.3 Correlation Analysis

Therefore, the correlation analysis confirms that independent variables are positively related with the fintech stability variable: financial innovation and stability ($r = 0.723$, $p < 0.01$); risk management and stability, $r = 0.697$ ($p < 0.01$); monetary policy and stability ($r = 0.642$, $p < 0.05$). Such results denote that increasing the level of financial innovation, effective management of risk, and good monetary policies has a positive impact on the stability of the fintech startup.

4.4 Regression Analysis

Multiple linear regression analysis was done to determine the extent to which financial innovation, risk management, and monetary policy predict fin-tech stability. The overall model was significant, $F(3, 31) = 21.43$, $p < 0.01$, with an adjusted R^2 of 0.74, meaning that 74% of the variation in fin-tech stability was explained by the independent variables.

Table 2: Regression Coefficients

Variable	Beta Coefficient	t-value	p-value
Financial Innovation	0.453	4.326	<0.01
Risk Management	0.395	3.985	<0.01
Monetary Policy	0.296	2.872	<0.05

The strongest predictor of Fintech stability emerged to be financial innovation, followed by risk management and monetary policy.

DISCUSSION

Financial innovation, risk management, and monetary policy are found to contribute a great deal to the stability of fintech startups in Jakarta.

Financial Innovation

Financial innovation had the highest impact on the stability of fintech, with much emphasis on technological advancement and enhancement of services. It is not only a differentiator for fintech startups but also a way for them to respond to evolving customer needs. This outcome supports the finding of previous research by [15]–[17] that innovation increases the adaptability and competitiveness of firms in the fintech sector. For Jakarta-based startups, continuous innovation is indispensable in facing an ever-changing financial environment.

Risk Management

The second most influencing factor is risk management, which has also suggested that it significantly contributes to operational resilience. Adequate identification and mitigation of risks allow fintech startups to overcome problems of cybersecurity threats, regulatory compliance, and market volatility. This also aligns with the work by [26]–[28], who stated that the fintech industry needs to adopt appropriate risk management frameworks for their particular context. A dynamic and diverse market in Jakarta would also contribute to firm demand for risk management practices.

Monetary Policy

Though less dominant compared to financial innovation/risk management, monetary policy is still one of the determining factors in fintech stability. Changes in interest rates and policies by central banks would impact capital availability and therefore consumer behavior, to which fintech firms must appropriately adjust their strategies. This viewpoint has been seconded by [23], [29], who indicated that monetary policy plays a significant role in shaping the dynamics in financial markets. For fintech startups in Jakarta, staying attuned to Bank Indonesia's monetary policy decisions is critical for maintaining market competitiveness.

Combined Effects

The interlinked influence of the three factors supports the complexity approach in the fintech stability approach. The start-ups that integrate innovation with a sound risk management approach and further align their strategies with the macroeconomic policy are well-placed for long-term success. The interplay supports the work of [30], on the balance between the internal and external factors in organizational stability.

Implications

These results have several implications for fintech startups and policymakers: for startups, emphasizing financial innovation and risk management while aligning operations with monetary policy trends can enhance stability and growth; for policymakers, developing supportive regulatory frameworks and stable monetary policies can foster a conducive environment for fintech development.

5. CONCLUSION

This study underlines the important roles of financial innovation, risk management, and monetary policy in influencing the stability of fintech startup companies in Jakarta. In the case of financial innovation, this came out as the strongest factor, showing the importance of driving competitiveness and adaptability. Risk management contributes to operational and financial resilience about threats such as cybersecurity risks and regulatory compliance. Monetary policy has a meaningful impact but to a lesser extent, influencing the broader economic environment in which fintech firms operate.

The findings suggest that, in order to thrive, fintech startups have to balance innovation with appropriate risk management strategies, as well as be sensitive to the changes in monetary policy. In addition, it requires policymakers to provide a supportive regulatory environment with stable monetary conditions for a thriving fintech sector to evolve.

The research provides actionable suggestions for industry practitioners and adds to the extant literature on fintech stability. Further studies can be done either by the inclusion of more variables or geographical coverage to have more insight into drivers of success in other emerging markets.

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