



Does Financial Innovation Drive Firm Value? The Mediating Role of Financial Performance in Indonesian Banking

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Abstract

Background: Financial innovation in Indonesian banking has evolved alongside changes in the banking system. While the adoption of Internet Banking (IB) services has been fast, bank value indicators, like Price-to-Book Value (PBV), have shown significant fluctuations, raising questions about whether financial innovation truly adds value.

Objective: This study examines the impact of financial innovation on firm value and financial performance in Indonesian banks, and whether financial performance mediates this relationship. It views financial innovation not only through its financial outcomes but also as part of the broader technology-driven digital transformation in banking towards sustainability and resilience.

Methods: The research was conducted by analyzing Secondary data from 13 banks listed on the Indonesia Stock Exchange (BEI) annual financial report data with the period of 2019–2024 which were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) technique.

Results: Financial innovation directly affects firm value, but does not directly affect financial performance that can be used to significantly mediate the relationship between financial innovation and firm value. What this means is that, rather than an immediate profitability boost, the additional value to the firm from financial innovation is likely due to a long-term perspective of growth potential and viability.

Conclusion: Market participants value innovation not just for short-term financial gains, but for its role in building resilience and long-term business models. While some innovations may offer short-term benefits, they remain a key strategy for enhancing firm value and building trust in the market over time.

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INTRODUCTION

The digital economy, especially financial transactions, continues to grow rapidly as digital transformation driving national integration grows ever faster. As information, the volume of digital banking transactions in Q2/2024 recorded a growth of 32.03% (yoy) to 5.26 billion from 3.98 billion, the transaction value increasing by 33.26% (yoy) to IDR 10.872 trillion. Electronic money transactions are still a growing segment with a transaction value of IDR 232 trillion with a volume of 3.87 billion transactions, or a 36.22% (yoy) increase compared to the previous quarter. QRIS transactions also recorded a high growth of 226.54% (yoy), supported by 50.5 million users

and 32.71 million merchants (Bank Indonesia 2024). Such rapid adoption signals how critical financial innovation has become to competitive, operational, and future growth resilience in the banking sector. With investors paying more attention to whether banks can adapt to digital disruption, identifying the determinants of firm value (FVI) has never been more important. Though knowing this rise is a sign of growing readiness for digital, it begs the question, do these innovations actually create firm value, or do they only influence market expectations of future value? More broadly, this dynamic environment presents a fundamental question in corporate finance: Does the quantifiable growth of digital financial services really correlates to higher firm value as well as higher financial performance among Indonesia bank, and through what mechanism?

Firm value is a key variable in corporate finance literature, potentially indicating what the market perceives about the potential and sustainability of an entity. In banking, firm value is usually proxied by Price-to-Book Value (PBV) as an indicator of performance, information of stability and expected return for investors. On the other hand, PBV in Indonesian banking sector are following a volatile trend in the last few years, which not only be affected by macroeconomic aspects and monetary policy but also by market expectation of the bank's innovative capability and future readiness Sartika & Choiriyah (2019), It is thus this empirical puzzle the disconnect between innovation activity and PBV performance which motivates this study examined using Indonesian banking data (2019–2023).

Moreover, with the speedy improvement of digital technologies, the banking sector is experiencing considerable modifications with the emergence of monetary innovation and banking (Judijanto et al., 2023). The pace of innovations has redefined through businesses models that substantially impacted towards the changing nature of economic environment in financial institutions (Al Aidhi et al., 2023). As a strategic tool for retaining competitiveness in the financial services sub-sector, innovation has increasingly been embraced by banks to boost their revenues and performance, strengthen market efficiency Ashiru et al.(2023), and contribute to economic development (Jonah et al., 2021). This innovation in banking includes the creation of any novel financial products, services, and processes that use innovations in financial instruments and payment technology (Lerner et al., 2021).

In the light of this increasing digital transformation, electronic banking as the financial innovation tool is been widely embraced by banks. Such innovations are meant to benefit consumers in terms of convenience as well as provide operational efficiencies and financial benefits to the company. Previous research discovered that electronic banking could lead to better excellence of bank operation Sutarti et al. (2019) and positively influence value of banking organization (Nuraini et al., 2022). Customers are able to consume financial services using internet banking, mobile phones, computer, point-of-sale (POS) terminals, and ATMs (Anifowose & Ekperiware, 2022). These types of technologies lower the necessity of physical bank visits, improve the financial functions, lower costs and therefore improve financial performances (Baker et al., 2023).

But in fact, the Indonesian banking industry has a different pattern, where there is evidence that should financial innovation be able to improve profitability and value firm (Nuraini et al., 2022). Despite the increased adoption of digital banking, the Price-to-Book Value (PBV) of banking companies experienced significant volatility from 2019 to 2023, with a particular drop from 2022 to 2023. This discrepancy implies a disconnect between theoretical predictions and the realities of the market. In addition, though there are numerous studies that observed the direct impact of financial innovation to firm value and performance but none link financial performance as and intervening variable especially in a developing countries like Indonesia.

This gap gives an opportunity in this research to examine the effect of financial innovation on firm value through financial performance (intervening) at banking sector firm in Indonesia. However, this empirical inconsistency is not specific to Indonesia a high intensity of investment activity accompanied by periodic bursts of volatility in both the price and size of venture fund valuations. Previous Studies reporting Conflicting Results: for example Olalere et al.(2021) finds a negative innovation–value relationship in Nigeria whereas Nuraini et al. (2022) finds significant positive innovation–value effects in Indonesia. This inconsistency indicates that the relationship may be contingent on context and moderated by performance in financial and nonfinancial terms

in ways that current single-context studies have not fully reconciled, thus making the present study both timely and needed.

The study will enhance knowledge of academia as well as become useful for practice. This provides an academic contribution in terms of gaining enhancement for the literature on the relationship of financial innovation, financial performance and firm value, particularly in the Indonesian banking sector, as well as serving as a basis for further investigating on analytical models development in corporate finance research context. Its findings may have practical implications as a reference for corporate strategy, policy formulation, and managerial decision-making for corporate practitioners in the development in financial innovation and the competitive environment of the banking industry.

Three Contributions to the Literature this study offers three explicit contributions to the literature. This is firstly one of the first papers that tests the mediating effect of the financial performance in the relationship between financial innovation and firm value which specifically explores the context in the Indonesian banking sector during the period after the COVID-19 disruption up to span of three years (2019–2024) using panel data. Second, an important implication of the absence of significant mediation through financial performance is that this result largely opposes conventional financial theory, and expands upon Signaling Theory by indicating that market participants respond directly to innovation signals independent of short-run profit outcomes (Bansal et al., 2023). Third, this study provides a more integrated theoretical view on the impacts of banking innovation on the value of the investor with an analytical framework that integrated Signaling Theory, Agency Theory and Technology Acceptance Model (TAM) as a whole.

The range for this study period (2019–2024) is inconsistent with other cited points for PBV data ranges (2019–2023). Check throughout the manuscript that the intended data period is consistent.

Hypotheses Development

A. Financial Innovation and Firm Value

Studies that detailed the link between financial innovation with either firm value whole or the different contexts showed that these outcomes varied from firm value whole with financial innovation. Related Trends are enormous in institutional environment as it was discovered that the effect was significantly negative for Nigeria but positive in Malaysia (Ojalere et al., 2021). In favor of that notion, Nuraini et al.(2022) evidence that e-banking innovation significantly affect firm value, found that mobile and internet banking transactions, either or together, increase banking institutions value. On the other hand, Moridu (2020) and Triyani & Siswanti (2024) found that digital banking had no significant effect on firm value indicating that mere innovation cannot ensure observable benefits. All in all, these results suggest that although financial innovations are sometimes regarded as a catalyst of competitiveness and firms performance, this is not the case under all market conditions, and therefore the hypothesis:

H1: Financial innovation has a positive impact on firm value on Indonesian banking.

B. Financial Innovation and Financial Performance

The role of financial innovation on profitability has been widely covered within financial innovation and financial performance research, although with some variation among services and contexts in the banking sector. According to Ashiru et al. (2023) and Akani & Tony (2020) financial innovation has a short-term, long-term, and very strong link with bank performance quantified through return on equity. In the same way globally the ratio of branches to ATMs and electronic bank acceptance was found to influence profitability significantly, concluded that investigation chronicled the impact of development, reengineering, and quality on banks, and accepted that there is a requirement for banks to fortify attention to innovation, for banks to remain serious later on, ought to zero in on profound innovations too (Fentaw & Thakkar, 2022).

According to Abiodun et al.(2024), the dynamics of the financial services sector means that creative payment transactions keep generating profit. Specific innovations that are very familiar to us such as ATMs, POS terminals, web-based platforms and mobile money operations are usually proven to improve performance Syahputra & Suparno (2022) even internet banking

has a significant effect. Nonetheless, the conclusion regarding mobile banking is inconclusive; Ayuningtyas & Sufina (2023) found no significant effect because the customers were still not hesitant, while Kustina & Sugiarto (2020) explained a positive influence on ROE in which this condition was encouraged by the community acceptance of the technology. Even where it Internet banking had an insignificant effects, Ibekwe (2021) reinforces the contribution of ATM, POS terminal and mobile banking to ROA. In general, evidence shows that financial innovation enables banks to be more profitable through different channels and to develop the long-term evolution of the financial system and, in other words, without financial innovation, there are no reasons for banks to perform.

H2: The impact of Innovation finance in Indonesian Banking to financial performance

C. Financial Performance and Firm Value

Prior researches on the association of financial performance with firm value have mentioned extensively that good financial performance can increase the firm value through different factor such as profitability. According to Ningdiyah et al. (2024) and Olalere et al. (2021) profitability as proxied by return on assets (ROA) significantly influence firm value. Likewise, Sianturi (2020) stated that the profitability has a significant effect on the changes of the firm value which is measured by Tobin's Q, with Profitability having positive relationship to firm value (Bon & Hartoko, 2022).

In addition, Priharto et al. (2023) also found that ROA (return on assets) and NIM (net interest margin) have a positive and significant effect on firm value but the ROE (return on equity) does not. On the other hand, revealed that ROE had a very strong positive correlation impact on price-to-book value (PBV). But in contrast, the research result of Maryadi & Susilowati (2020) showing that ROE not significantly influence to firm value. Similarly Jamaludin et al. (2024) also found that financial performance has no significant effect on firm value.

H2: Financial performance influence the Firm Value in Indonesian Banking

D. Does Financial Performance Subsequent to Financial Innovation Affect Firm Value?

This would imply that financial innovation can have an indirect impact on firm value through financial performance as the profitability likely translates above the expected return to investors due to sound financial management (Asni & Agustia, 2022; Umiyati et al., 2023). Various studies indicate that digital banking innovations lead to an increase in firm value due to customer transactions and bank transactions (Triyani & Siswanti, 2024). Nevertheless, the results are inconsistent since some studies explain that a high profit performance could not indicate sustainability and growth in the longer term Rahadian & Handono (2022); Reschiwati et al. (2020), and in some contexts provide a negative signal to investors. Generally, innovation affects firm value through financial performance, but finance is only a tunnel for conveying the information of innovation, we may be more concerned about the market as a whole and the sustainability of the company.

H4: Financial innovation only have direct significant effect on firm value through financial performance in Indonesian banking.

Theoretical Framework

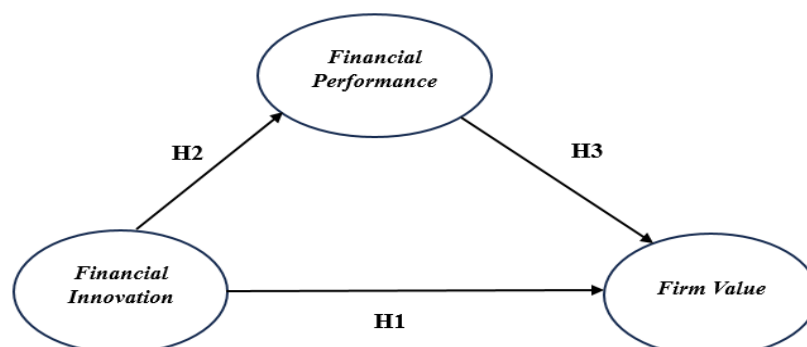


Figure 1. Theoretical Framework

METHOD

In this paper quantitative methods were used to find out the effect of financial innovation on the profitability of the banking sector in Indonesia, and the role of profitability on the firm value. The population in the study are all banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2024. We used a purposive sampling approach to recruit participants for our study based on important criteria. Per this process the final sample contained 13 companies. The data is a secondary data, which was used in this research are annual reports and financial statements of the sampled companies, which can be accessed from the IDX official website. The generalizability of findings was limited to smaller and unlisted banking entities due to the fact that a sample of 13 banks was considered as the most actively traded banking institutions on the IDX. This limitation came from the implementation of purposive sampling, which is consistent with the nature of using PLS-SEM, that is mainly bounded to analyse small-to-small samples (Hair et al., 2019).

Data analysis was performed using quantitative descriptive analysis based on the SmartPLS application. We chose Partial Least Squares Structural Equation Modeling (PLS-SEM) method, as it is able to handle data with a small sample size as well as to evaluate complex models comprising latent variables in a single model. The research model was evaluated in two steps. Measurement model (outer model) was evaluated in the first step, by testing the validity and reliability of the indicators using the tests of convergent validity, discriminant validity and measures of composite reliability. Then, the structural model (inner model) was assessed to determine the causal and effect relationships between the latent variables. Financial innovation was operationalized by using 3 indicators: (1) ATM transaction volume, which reflects physical digital touchpoints; (2) internet banking transaction value, which reflects online financial service adoption; and (3) mobile banking transaction value, which reflect smartphone based financial engagement. We used three different measures of financial performance, namely Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). Firm value was proxied with Price-to-Book Value (PBV). The data used is secondary data taken from the annual reports obtained from the IDX website from 2019–2024.

The R-square (R^2) and predictive relevance (Q^2) are investigated, along with the hypothesis tests based on t-statistics. All hypotheses were tested at the 5 percent significance level ($\alpha = 0.05$), and a t-statistic value > 1.96 indicated support for a hypothesis. To assess the direct and indirect effects, path coefficients within the research model were examined. This paper, by employing this thorough methodological framework had tried to deliver sound empirical evidence of the financial innovation-profits-value supportive relationship for banks in Indonesia.

RESULTS AND DISCUSSION

Results

Variable Descriptive Data

This study uses quantitative methods with financial report data of banks listed in Indonesia Stock Exchange within 2019–2024. In a SmartPLS framework, financial innovation is the independent variable, firm value is the dependent variable, and financial performance is the mediating variable. Financial performance is manifest using ROA, ROE, and NIM ratios, while firm value is measured using Tobin's Q and PBV ratios. The first steps involve descriptive statistical analysis, in order to summarize the characteristics of these variables in the research model.

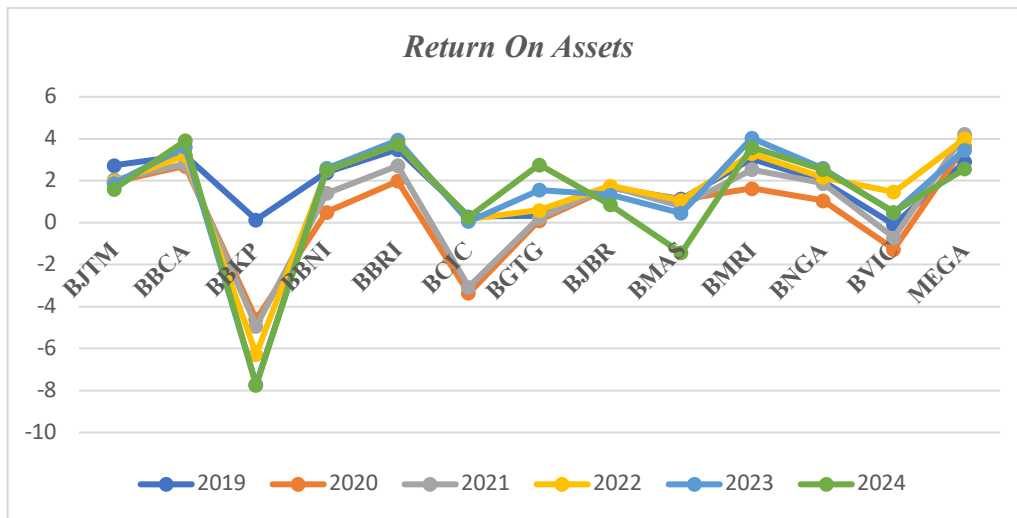


Figure 2. Return on Assets

2019–2024 Trend of Return on Assets (ROA) of 13 Indonesian Banks: An International Comparative Study In 2020 the pandemic-induced crisis drove a severe sector-wide slew of decline, leaving BBKP and BCIC at unsustainably low levels of ROA below -8%, just shy of the threshold of financial distress, both firm fell into deeply negative territory. Strong recovery has sustained since 2021, with BBKA, BBRI & MEGA showing best-in-class ROA resilient & improvement. BJTM, BMRI, and BNGA experienced milder ups and downs but all still in the green. The trend over the ROA indicates a gradual recovery of the market sector, characterised by quick gains in profit as the banking sector overcame the initial recession-period slump.

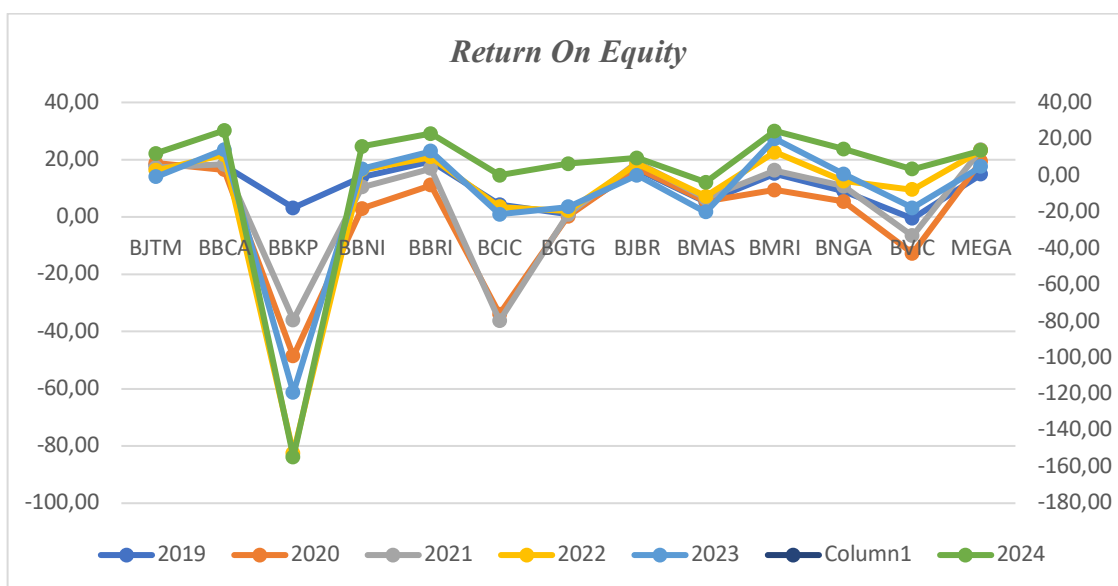


Figure 3. Return on Equity

Trend of ROE for 2019-2024 reveals high volatility and 2020 as nadir for most banks. Declines of BBKP and BCIC: fell -80% and new lows. By 2021 a distinct recovery was underway, with the majority of banks back in the black. ROE that continuously high achieved by some of the banks like BBKA, BBRI, and MEGA, or some bank show a good improvement like BJTM, BMRI, and BNGA. Overall, the data reflects the recovery from equity profitability for the sector.

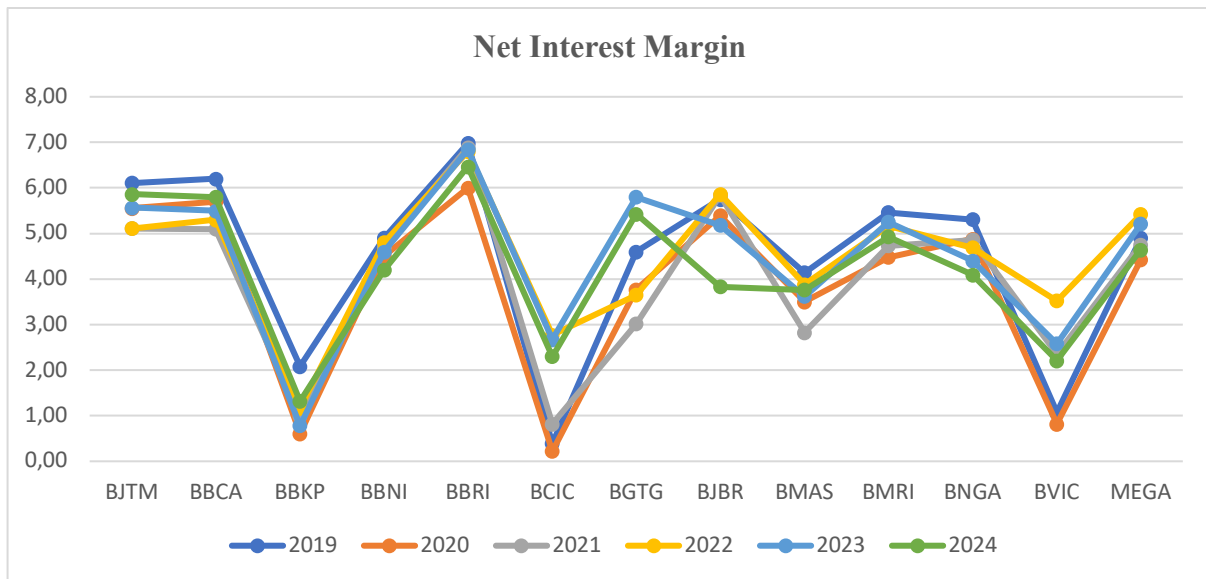


Figure 4. Net Interest Margin

The 2019–2024 Net Interest Margin (NIM) chart is one of the most stable sectors while still offering a considerable variation between banks. Meanwhile, BJTM, BBCA, and BRI avoided the decline and consistently posted NIMs above 5% which suggests solid traction on the interest income side. Meanwhile, BBKP and BCIC are consistently lo margin, even below 1% since 2020. This began to recover in 2021 where BGTG, BMRI and MEGA show a recovery trend. Across the board, the data suggest that the majority of banks adapted their approaches so as to protect core interest-earning efficiency from the impact of the pandemic shock.

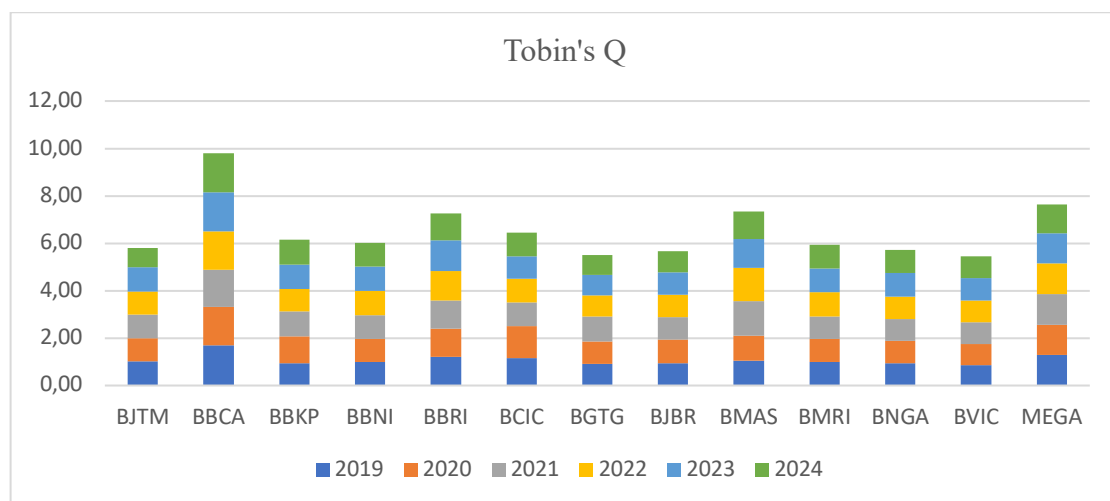


Figure 5. Tobin's Q

Tobin's Q is a chart that depicts one of the Tobin's Q value trends on several banks of Indonesia between 2019 until 2024. In general, we see a year-on-year growing value, with 2024 showing the most significant increase. Bank Central Asia (BBCA) remained the bank with the highest Tobin's Q, closing in on 10 in 2024. Other banks including Bank Mega (MEGA), Bank Maspion (BMAS), etc also posted great growth. This is an indication of the market value of the assets of these banks going up which indicates grow of investor confidence over a time period.

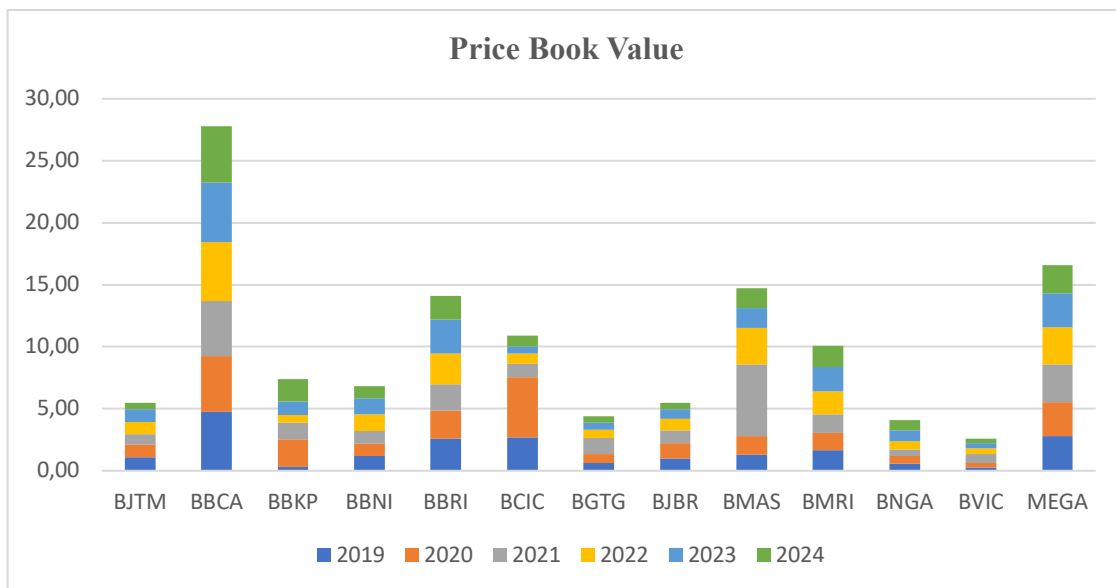


Figure 6. Price Book Value

Graph 4: PBV ratio of several Indonesian Banks from 2019-2024 Source: Financial Statement from Jakarta Stock Exchange PTBBCA; Sumber: Jakarta Stock Exchange Data Table 2019-2024 PBV ratio for a slew of Indonesian banks appears to largely trample upward right until hitting a cliff in 2024, with almost 28 being the PBV ratio registered for Bank Central Asia (BBCA) - the top scorer above. However, Bank Maspion (BMAS) and Bank Mega (MEGA) who had a big upward jugger over the preceding 2 years, have all experienced the biggest capital gains around this period, unsurprisingly from the positive appraisal and investor confidence in that particular stock.

Table 1. Descriptive Statistic

	Y1	Y2	X1	X2	X3	Z1	Z2	Z3
Mean	1.086	1.671	6.692	3.343	3.361	0.012	0.05	0.042
Median	1	1.27	6.72	3.42	3.41	0.018	0.126	0.047
Min	0.82	0.25	2.4	2.49	2.61	-0.077	-1.546	0.002
Max	1.71	5.77	9.88	3.63	3.63	0.042	0.273	0.07
Std. Dev	0.209	1.293	2.521	0.241	0.207	0.025	0.263	0.017
Kurtosis	1.406	1.338	-1.411	2.447	1.448	3.969	18.33	-0.216
Skewness	1.433	1.42	-0.207	-1.548	-1.27	-1.878	-3.808	-0.788
Observations	78	78	78	78	78	78	78	78

Source: Processed PLS Data (2025)

Descriptive statistics of the three main variables in this study firm value, financial innovation, and financial performance are provided in Table 1. The data distribution is relatively dispersed if we are to look at 78 observations of 8 features at a glance. The means of the variables are from 0.012 to 6.692. The median values are closer to the means for the variables indicating a fairly symmetric distribution for most variables. The minimum and maximum values show a considerable range in the variables that is reflected in the minimum being -1.546 and the maximum being 9.88. On the other hand, the standard deviations of 0.017 to 2.521, ranging from the lower to upper margins, indicate varying degrees of dispersion from the mean of different variables in the research sample.

Outer Model Evaluation Results

The measurement model, or outer model, measures the validity and reliability of the model. In the measurement model, two types of tests are performed: validity test, including convergent and discriminant validity tests and reliability test is measured using Cronbach's alpha and composite reliability.

1. Convergent Validity

Partial Least Squares (PLS) tests for convergent validity by looking at the loading factor of each indicator on the corresponding variable.

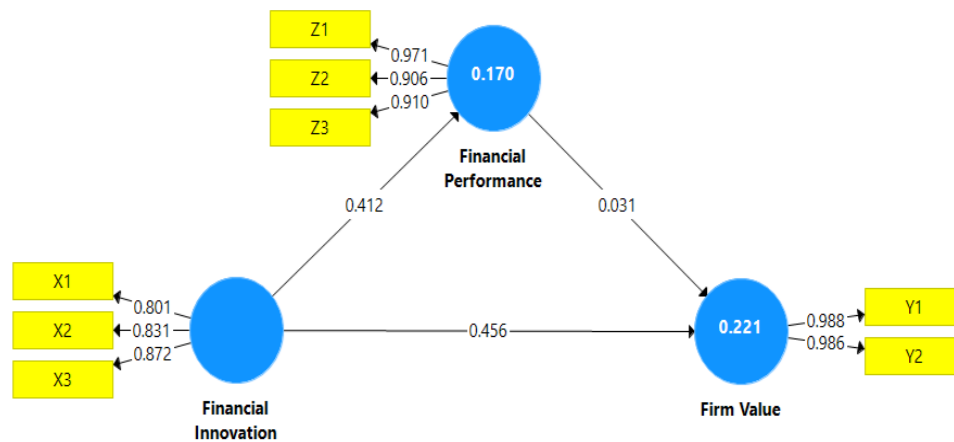


Figure 3. PLS Model Estimation Results

Table 2. Convergent Validity Results

Variable	Indicator	Loading Factor	Average Variance Extracted (AVE)	Result
Firm Value	Y1	0.988	0.974	Valid
	Y2	0.986		
Financial Innovation	X1	0.801	0.698	Valid
	X2	0.831		
	X3	0.872		
Financial Performance	Z1	0.971	0.864	Valid
	Z2	0.906		
	Z3	0.910		

Source: Processed PLS Data (2025)

Referring to Table 2, we could convert the test results imply the value all loading factor on every indicator of every variable within the range of " >0.6 ". Consequently, it can be stated that each items are valid. Also, the model variables that reflect the relationship between all indicators and the respective latent variables are still valid because they have an AVE value greater than 0.5.

2. Discriminant Validity

Another way to assess of temporally lock for the reliability of indicators for a latent variable is discriminant validity. A variable is valid if its loading on the item is greater than its loading on other items. The results of the discriminant validity are reported in the Table 3:

Table 3. Discriminant Validity Result

Indicator	Firm Value	Financial Innovation	Financial Performance
Y1	0.988	0.475	0.229
Y2	0.986	0.449	0.202
X1	0.325	0.801	0.617
X2	0.460	0.831	0.122
X3	0.416	0.872	0.123
Z1	0.249	0.415	0.971
Z2	0.146	0.261	0.906
Z3	0.195	0.431	0.910

Source: Processed PLS Data (2025)

As per Table 3, each of the indicators loads highest on its own construct and not on any other, which satisfies the discriminant validity criteria. As such, the results for discriminant validity are good and all meaningful measurement items are accepted as valid.

3. Composite Reliability

PLS InfoReliability Testing InfoReliability Tests is used to assess the internal reliability of the measurement instrument as measured Cronbach Alpha and Composite Reliability. The findings of Cronbach’s Alpha and Composite Reliability were prepared and are presented in Table 4.

Table 4. Reliability Result

Variable	Cronbach's Alpha	Composite Reliability	Result
Firm Value	0.973	0.987	Reliable
Financial Innovation	0.796	0.874	Reliable
Financial Performance	0.922	0.950	Reliable

Source: Processed PLS Data (2025)

These results show that the reliability values for all constructs are higher than (0.7) meaning that all dimensions and variables in this study have met reliability requirements, thus, all items in this study were reliable.

Inner Model Evaluation Results

In this structural model evaluation there are three methods, namely determination of the coefficient of determination (R-square), Predictive Relevance (Q-square), and Hypothesis Testing (direct and indirect effect).

1. Evaluation of the Coefficient of Determination (R-square)

R-square= R² is a metric that tells us how strong or weak the independent variables effect on the dependent variable. The achieved R-square values are:

Table 5. Coefficient Determination Value (R-square)

Variable	R-square
Firm Value	0.221
Financial Performance	0.170

Source: Processed PLS Data (2025)

As one of the predictors, financial innovation explains 22.1% of the variance in firm value and 17.0% in financial performance are explained by the model. These two values are both low which means a weak predictive relationship. While extended goodwill explains over 20% of the variance in both dependent variables, this still leaves a large amount of unexplained variance due to omitted factors such as corporate governance, firm characteristics and macroeconomic conditions.

2. Structural Model Evaluation Using Predictive Relevance (Q-Square)

The value of Q-square serves to measure the level of data can result within a research model, the structural model. Here are the results for the Q-square calculation:

$$\begin{aligned}
 \text{Q-square} &= 1 - [(1-R_1^2) \times (1-R_2^2)] \\
 &= 1 - [(1 - 0.221) \times (1 - 0.170)] \\
 &= 1 - (0.779 \times 0.83) \\
 &= 1 - 0.647 \\
 &= 0.353
 \end{aligned}$$

The model's predictive relevance is confirmed, with a Q² value of 0.35. This indicates the model has a strong fit and can explain 35% of the variability in the data. The remaining 65% is attributed to factors outside the study. This level of predictive relevance is deemed suitable for hypothesis testing.

3. Hypothesis Testing Results

The Q^2 criterion confirms the predictive relevance of the model ($Q^2 = 0.35$). This means it is a good fit and can explain 35% of the variance in the data. The other 65% is explained by unknown variables. Such predictive relevance is considered adequate for hypothesis testing purposes.

Table 6. Path Coefficients

Variable Relationship	Original Sample	T Statistics	P Values	Significance
Financial Innovation → Firm Value	0.456	4.480	0.000	Accepted
Financial Innovation → Financial Performance	0.412	5.638	0.000	Accepted
Financial Performance → Firm Value	0.031	0.336	0.737	Rejected

Source: Processed PLS Data (2025)

The hypothesis testing results could be described based on the Table 6 data as follows: The results of hypothesis testing show that financial innovation has a positive impact on firm value and financial performance in Indonesia banking which means it can support H1 ($\beta = +0.456$, $t = 5.366$, $p = 0.05$).

H1: Financial innovation has a significant effect on firm value in Indonesian banking.

H2: Financial innovation has a significant effect on financial performance in Indonesian banking.

H3: Financial performance does not have a significant effect on firm value in Indonesian banking.

4. Indirect Effect Testing Results

The bootstrapping output in SmartPLS provided the results of indirect effect testing. Below in Table 7, the results of the tests:

Table 7. Total Indirect Effects

Variable Relationship	Original Sample	T Statistics	P Values	Significance
Financial Innovation → Financial Performance → Firm Value	0.013	0.310	0.756	Rejected

Source: Processed PLS Data (2025)

The financial performance as a mediator in the relationship between financial innovation and firm value (H4) is not shown to be the significant mediator as noted in the analysis. This suggests that the indirect effect of self-play on predictive performance through overfitting is not significant ($\beta = +0.013$, $t = 0.310$, $p > 0.05$), and thus leads to a rejection of H4. For that reason, the impact of financial innovation on firm value is of a direct nature and is not transmitted by financial performance. Due to the exploratory context of the study through the use of a small 13-bank sample, and the multi-determinant nature of firm value in banking, where a lot of unexplained variance is covered by macroeconomic changes, regulatory changes, credit risk and systemic factors, the rather low R^2 values spreading across constructs seems to be in line with expectations. The non-significance of the mediation pathway ($\beta = 0.013$, $t = 0.310$) is a substantively important finding in itself: it challenges the impression, that should be avoided, of a market that bides its time for an innovation to translate into return on capital earnings before corralling a bank's equity in anticipation that once that is achieved, its stock will be re-rated.

Discussion

RQ1: What is the influence of financial innovation on the financial performance of the Indonesian bank?

The results of the research show that financial innovation affects financial performance because it can improve operational efficiency, broad access to services, and reduce transaction costs. Innovative services like ATMs, internet banking and now mobile banking (the latest development in the banking area) enable customers to carry out their banking tasks without visiting the branch directly, that helps banks to relieve operational costs burdens and improve productivity (Atasyadila & Muchlis, 2024). Digital innovation improves the ease of service and accessibility of services for customers, increasing the number of transactions and customer satisfaction that will also affect strengthening bank revenue and profitability (Ilaahi, 2024).

This supports the Technology Acceptance Model theory suggesting that any technological innovation will succeed as long as users believe that using them is useful and easy. If a customer is comfortable using digital services, they will use them more, which is always good news for bank revenues. That is to say, financial innovation not only fast-tracks services but facilitates the growth and profitability of banks in the era of digitalisation (Akani & Tony-Obiosa, 2020). Such innovations essentially boost customer retention and acquisition, which in turn, positively and significantly affects financial performance (Rashid et al., 2020). The previous studies which reported that financial innovation is able to be a significant driver of financial performance supports the finding of the research results (Abiodun et al., 2024; Ashiru et al., 2023; Syahputra & Suparno, 2022).

The positive effect of financial innovation on financial performance shows that the implementation of financial innovations will be able to improve corporate financial performance (Yogaswari & Diantini, 2024). Such innovation has allowed businesses to allocate their resources more soundly, reach a broader market, and make financial services more efficient. One of the elements that later strengthens this relationship is the tendency of customers to choose banks that have innovated on the service unit or product used such as; digital services, real-time transactions, or even integration between other financial platforms. For instance, this trend among customers for a quick, secure and hassle-free service leads to higher transaction volume, wider customer base and enhances the growth of fee-based income. This means that innovation is not only a source of added value but also has a close relationship to the level of profitability, liquidity and efficiency of a company (Lestari, 2024).

The findings indicate that innovations within the financial sector plays a key role in driving firm value aligned (Chairina & Yusri, 2023). This innovation occurs through the implementation of technology and innovation of new products that are offered to customers, such as digital banking as well as technology-based payment instruments that characteristically drive the growth of firm value (Sakinah et al., 2024). However, when there is financial innovation, this added value strengthens investor confidence, which influences the increase in the market value of the company (Petare et al., 2023).

Besides enhancing the position of a company, financial innovation is also a strategic aspect to boost economic growth and to keep the stability of the entire financial system (Hidayati et al., 2024). The more consistent a company is with injecting innovation into the financial sector, the higher the likelihood that it will create a long-term competitive advantage and become more valuable (Olalere et al., 2021). Results are consistent with signalling theory that innovation should signal positively on the competitiveness of a company to the market. We find that innovations related to new products or strategic business models have a higher market capitalization firm value, engaging in sustained innovation performance over the long term in the market.

Likewise, previous studies also confirmation the findings got that relationship between financial innovation and firm value (Ferreira et al., 2019; Nuraini et al., 2022). This positive effect of FI on free cash flow-rich firms reflects the importance of FI as a strategic tool that savvy implementation could improve a firm prevalent efficiency on market (Johan, 2024). This indicates that the more companies are able to carry out and implement innovation in financial products, services, or systems, the higher the trust given by investors, which also has an impact on the increasing firm value (Azhari & Ali, 2024). Or maybe a way that can change the perception of customer through an investor. Customers want modern, quick, easily accessible, good banks that

provide them with services that fit their needs. The resulting high customer trust and loyalty toward cutting-edge services also supports the bank's overall business performance, which in turn is seen reflected in the increasing value of the firm.

RQ2: What are the effects of financial performance on the firm value of Indonesian banks?

In contrast to existing financial theory that indicates the strong financial performance as the main determinant of firm value, the results of this study found a negative insignificant relationship between these two variables in the context of Indonesian banking. It suggests that high profitability alone is not sufficient to assure that the firm value become more expensive because the market may not be fully reflect the robust and appealing long-term outlook to the market (Reschiwati et al., 2020). Although better financial metrics should in theory facilitate investor confidence and increase firm value Farawansyah et al. (2024), but data from this study showed a small effect. Such insignificance is explained by the fact that other components and factors such as market sentiment, industry conditions, quality of risk management and more macroeconomic pressures had a broader effect on firm value (Nikmah et al., 2024).

This study also supports Rahadian & Handono (2022) found that financial performance has no significant effect on firm value. Third, as we have discussed previously, ROA and ROE are not always significant for bank valuation when increases in bank assets are not followed by a linear rise in profit, and the investor relates it to low asset efficiency. In the same way, high NIM would not necessarily mean good firm value if the revenue earned is from credit activities with high operating expenses Hidayati et al. (2024), thus making NIM a bad proxy for net profit entitled to investors. Moreover, ROE which is usually considered positively will not always be better, because a high ROE can often be caused by taking high debt, so that profitability increases. Higher levels of debt create higher financial risk, and investors may in turn become worried about the firm's ability to survive in the future and as a result, devalue the firm on the market (Listari, 2018). Therefore, in some circumstances, high return on equity will send negative signals to the investor.

This contradicts the results of research conducted in several previous studies that state there is a significant positive effect of financial performance on firm value. Counterargument asserts that corporate profitability is an essential signal for investors (Oktaviani et al., 2024). This increase in developer profits should affect positively on investor appraisal, causing the investors to be more interested to invest and therefore enhancing the firm value (Bon & Hartoko, 2022; Priharta et al., 2023).

The finding that financial performance is not significantly affecting firm value in Indonesia banking sector has fundamental implications for management and investors. It reminds bank management that exceeding market expectations on traditional accounting based performance measures such as ROA, ROE, or net income do not sell the firm at a premium. This implies that the market gives more weight to long-term growth potential, innovation, and competitive strategy over short-term delivery of financial results. Therefore, they need to go beyond chasing after profitability with new services into service innovation, necessary digital transformation and improved reputation and trust.

In practice, even if with the lowest profit margins, banks that present technology-based financial solutions to customers, through an intuitive mobile application, integration with other platforms or advanced security systems, are the most coveted by investors. This very trend is exhibited through frameworks of the valuations of digital banks and nimble conventional banks who change their strategies on a dime. Hence, Value Creation strategies of firms must be based on sustainable innovation, reactivity to market requirements, and future capacity of technology disruption. For those who invest, this indicates that firm valuation analyses must extend beyond annual financial statements to include components of innovation and long-term growth potential.

RQ3: Does it cause firm value (RQ3)?

In the response to this issue, the research results show that the impact of financial sector innovation on firm value is significant. Such innovations are actualized by technological utilization and new product developments like digital banking and technology-based payment systems are having a clear effect to the firm value (Sakinah et al., 2024). Financial innovation which supports with aim and value added value as an additional supply or added value which increases investor

confidence in the company that gives effect to the increase in the company's market value (Wahyuni & Pramudita, 2024).

Apart from reinforcing the company, financial innovation is also strategic in driving the economy and necessary to preserve the financial system stability. The values of a firm and innovation in the financial sector are typically positively associated in which a firm that consistently implements and executes the process of innovation will achieve a positive increase in value leading to a firm being able to remain competitive in the long term (Ojalere et al., 2021). This results indeed are consistent with signaling theory which suggests that innovation acts as a positive signal of the competitive position of a firm to the market. Research shows the market cap tend to be higher if the company consistently innovate, thus innovation not only serves as a driver of performance in the long run but also a critical element of the business strategy aiming to create market value to the firm (Anggraini & Fanani, 2019).

The relationship between financial innovation and firm value has shown consistent findings from previous studies (Ferreira et al., 2019; Nuraini et al., 2022). The positive effect of financial innovation on firm value in this study suggests that financial innovation can be a source of competitive advantage and ultimately a strategic weapon for companies if it is implemented properly (Johan, 2024). This showed that the company which innovate their financial products, services, or systems which can be implemented, the greater trust to the investors, and in turn the more value of the firm (Mustikowati & Tysari, 2014). This innovation has an impact on the investor side as well as the customer side. Customers prefer rapid and easy accessible services which meet their new needs, provided by modern banks. Increased firm value is also reflected in high customer trust and loyalty to innovative services that encourage the bank's business performance.

RQ4: Does financial performance act as a mediator of the association between financial innovation and firm value (bank) in Indonesia?

Results of this study also provide evidence that financial performance do not be a critical mediator for financial innovation to enhance firm value} The direct impact of financial innovation is significant on the firm value and financial performance has a positive indirect impact through the financial performance. This implies that intermediate pathway, being financial firm performance is not representative for the efficacy of financial innovation that rather indicates better return on assets and equity- company valuation does not increase.

The previous studies mostly argued financial performance is a mediating variable that possibly explains the innovation process to create value-driven through materialities such as operational efficiency, revenue growth and profitability (Jamaludin et al., 2024). However, this study shows that profitability, one important way of measuring financial performance, does not play the role of mediator between financial innovation and firm values Tong & Yang (2025) The main reason is that there are often considerable upfront costs for rolling out financial innovations, e.g., new technology, which do not translate immediately into benefits for the firm. The competing focus on growth, efficiency, and the competitive advantage provided by a company's innovations mean that firm value is not determined solely by its financial performance but also by the extent to which the market recognizes the potential to create and destroy value through its innovations (Abbas et al., 2024). As a result, even if there is no direct impact into rising profit, firm value can rise since investors interpret innovation as a positive signal of the firm (Anggraini & Fanani, 2019).

Innovation in finance causes greater impact by increasing business process efficiency, quality of services, and customer satisfaction (Triyonowati et al., 2023). However, these are spillover benefits and seldom reflected in the immediate financial performance measures like ROA and ROE. Yogaswari & Diantini (2024), who also conducted research on the mediating effect of profitability on innovation and financial performance, explained that innovation takes time to create these positive financial results so that profitability can be an unreliable variable to measure mediation in the short term. Also, profitability is affected by many external factors, such as state of the market or economic cycles, which are not related to innovation, so it is not a reliable link between financial innovation on the one hand, and firm value on the other hand (Faaziyyah & Laila, 2020).

Overall, firm financial performance serves as a poor mediator of the relationship between financial innovation and firm value. This suggests: Q1 banks continue to be financially innovative even when it does not lead to their ROA or ROE improving, and even when there is a positive relationship, the relationship is small and not enough to drive firm value. That is, in Indonesian banking, the notion of financial performance is not able to mediate the relationship between financial innovation and firm value.

The finding implies that investors react directly to financial innovation as a flow of good news, like initiatives to digital services, partnerships with fintech firms, or new technology application without waiting for the eventual good news in terms of better financial statements. Firm value is shaped by the perception of their growth potential and adaptability, not short-term financial success. Thus even if any innovations is not present on the balance of profit statement, an innovative bank will still be positively appreciated by the market.

Conversely, this finding is in line with few studies that have proven the mediation role of financial performance on the effect of banking digital innovation on the firm value (KK & Maharani, 2024). The aforementioned studies claimed that digital innovations enable customer transactions, which indirectly raising banks potential sources of income into fee-based income (Triyani & Siswanti, 2024). Although, the present research provides different insights, it indicates that in the Indonesian banking sector the market valuation mechanism weights strategic positioning and innovative potential over the short-term translation into a specific financial metric.

CONCLUSION

The findings of this study also confirm that financial innovation is a fundamental driving force for sustainable firm value as well as sustainable financial performance of the firm in the Indonesian banking sector. Innovation does remarkably improve operational efficiency and profitability, but the financial performance as such neither increases firm value by itself, nor mediates relationship between innovation and value. These results suggest that investor beliefs about banks' innovation capacity and long-term growth potential outweigh their beliefs regarding short-term financial effects. Broadly speaking, financial innovation serves as a signal to the market of an ability to compete and survive in the competitive landscape that is inappropriate if based solely of profit performance.

Theoretical and practical implications of this study are eminent. Theoretically, it adds to the literature on financial management the empirical evidence that financial innovation has relatively more influence on firm value than financial performance within Indonesian bank. These results are in support of Signaling Theory, which shows that financial innovation is a positive signal for the market indicating competitiveness and long term growth potential. In fact, the inability of financial performance to affect firm value challenges the traditional view and implies that investors value long-term sustainability driven by innovation more than near-term profits.

On a practical level, the results underline the importance of financial innovation as a strategy for banks looking to increase firm value. Digital banking Investments in services like easy onboarding, mobile platforms, electronic payments needs to be made for a strong competitive position and a good perception among investors. The results also warn that high profitability on its own may not move the needle on valuation without accompanying innovation and risk management. For investors, this paper illustrates how looking at banks not only through traditional financial indicators but also evaluating innovative capabilities and future growth can be beneficial. For banking regulators, especially Bank Indonesia and the Financial Services Authority (OJK), this research proposes that a regulatory framework should be constructed to encourage positive digital banking innovations beyond compliance. However, three key limitations constrain these implications and denote an agenda for future research.

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AUTHOR CONTRIBUTION STATEMENT

Mursidah Nurfadillah: conceptualization, methodology, data analysis, manuscript writing and corresponding author. He is a staff at Universitas Muhammadiyah Kalimantan Timur, Indonesia. Fauziah Fenty contributed in data collection, data analysis, literature review, and revising the manuscript. She is also with the Universitas Muhammadiyah Kalimantan Timur, Indonesia. Nidya Rudiani helped with data collection, contributed to the analysis and feedback on drafts. Universitas Muhammadiyah Kalimantan Timur, Indonesia{{footnote([5])}} Nur Hanisfatin Rushami Zien, conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; and revision of the manuscript, final approval of the version to be published; agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Dr. Azira Hafizah Abdul Razak is affiliated to Universiti Utara Malaysia, Malaysia.

REFERENCES

- Abbas, J., Balsalobre-Lorente, D., Amjid, M. A., Al-Sulaiti, K., Al-Sulaiti, I., & Aldereai, O. (2024). Financial innovation and digitalization promote business growth: The interplay of green technology innovation, product market competition and firm performance. *Innovation and Green Development*, 3(1), 100111. <https://doi.org/10.1016/j.igd.2023.100111>
- Abiodun, F. R., Christopher, S. R. O., & Muzliu, I. L. O. B. (2024). *Payment Innovation Transactions and Risk-Adjusted Profitability of Deposit Money Banks in Nigeria*.
- Akani, H. W., & Tony-Obiosa, R. L. (2020). Effects of financial innovations on the profitability of deposit money banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 8(1), 52–73. <https://doi.org/10.37745/ejaaf/vol8.no1.pp52-73.2020>
- Al Aidhi, A., Harahap, M. A. K., Rukmana, A. Y., & Bakri, A. A. (2023). Peningkatan daya saing ekonomi melalui peranan inovasi. *Jurnal Multidisiplin West Science*, 2(02), 118–134. <https://doi.org/10.58812/jmws.v2i02.229>
- Anggraini, R., & Fanani, Z. (2019). Does Innovation (Patents and R&D) Affect Firm Value? *1st International Conference on Applied Economics and Social Science (ICAESS 2019)*, 203–207.
- Anifowose, T., & Ekperiware, M. (2022). The effect of automated teller machines, point of sale terminals and online banking transactions on economic growth in Nigeria. *Open Access Research Journal of Science and Technology*, 4(02), 16–33.
- Ashiru, O., Balogun, G., & Paseda, O. (2023). Financial innovation and bank financial performance: Evidence from Nigerian deposit money banks. *Research in Globalization*, 6, 100120. <https://doi.org/10.1016/j.resglo.2023.100120>
- Asni, N., & Agustia, D. (2022). The mediating role of financial performance in the relationship between green innovation and firm value: evidence from ASEAN countries. *European Journal of Innovation Management*, 25(5), 1328–1347. <https://doi.org/10.1108/EJIM-11-2020-0459>
- Atasyadila, H., & Muchlis, M. (2024). Pengaruh digital banking terhadap profitabilitas dan efisiensi operasional perbankan. *Journal of Accounting, Management, and Islamic Economics*, 2(02), 469–478.
- Ayuningtyas, M., & Sufina, L. (2023). Pengaruh Penggunaan Mobile Banking, Internet Banking, dan Atm terhadap Kinerja Keuangan Perbankan (Studi Kasus Sektor Bank Konvensional yang Terdaftar di Bursa Efek Indonesia) Tahun 2017-2021. *Jurnal Keuangan Dan Perbankan*, 19(2), 119–130. <https://doi.org/10.35384/jkp.v19i2.394>
- Azhari, F., & Ali, H. (2024). Peran inovasi produk, strategi pemasaran, dan kualitas layanan terhadap peningkatan kinerja perusahaan. *Jurnal Manajemen Dan Pemasaran Digital*, 2(2), 72–81.
- Baker, H., Kaddumi, T. A., Nassar, M. D., & Muqattash, R. S. (2023). Impact of financial technology on improvement of banks' financial performance. *Journal of Risk and Financial Management*, 16(4), 230.
- Bank Indonesia. (2024). Laporan Kebijakan Moneter Triwulan II 2024. Bank Indonesia.

- <https://www.bi.go.id/id/publikasi/laporan/Documents/Laporan-Kebijakan-Moneter-Triwulan-II-2024>
- Bansal, N., Taneja, S., & Ozen, E. (2023). Green Financing as a Bridge Between Green Banking Strategies and Environmental Performance in Punjab, India. *International Journal of Sustainable Development & Planning*, 18(10). <https://doi.org/10.18280/IJSDP.181017>
- Bon, S. F., & Hartoko, S. (2022). The effect of dividend policy, investment decision, leverage, profitability, and firm size on firm value. *European Journal of Business and Management Research*, 7(3), 7–13. <https://doi.org/10.24018/ejbmr.2022.7.3.1405>
- Chairina, C., & Yusri, Y. (2023). Pengaruh Inovasi Teknologi terhadap Kinerja Keuangan Perusahaan. *All Fields of Science Journal Liaison Academia and Society*, 3(4), 32–38. <https://doi.org/10.58939/afosj-las.v3i4.685>
- ErnitaSianturi, M. W. (2015). Pengaruh kinerja keuangan terhadap nilai perusahaan manufaktur sektor industri barang konsumsi di BEI. *Jurnal Ilmu Administrasi Bisnis*, 3(2), 282–296. <https://doi.org/10.54144/jadbis.v8i4.3799>
- Faoziyyah, A. A., & Laila, N. (2020). Faktor internal dan faktor makroekonomi yang mempengaruhi profitabilitas asuransi syariah di Indonesia periode 2016-2018. *Jurnal Ekonomi Syariah Teori Dan Terapan*, 7(6), 1146–1163.
- Farawansyah, N. I., Rahayu, S. I., & Zhafiraah, N. R. (2024). Do Financial Performance and Corporate Governance Effect on Firm Value: Evidence from Manufacturing Sector. *Research of Business and Management*, 2(1), 29–40. <https://doi.org/10.58777/rbm.v2i1.184>
- Fentaw, A. A., & Thakkar, A. (2022). The effect of financial innovations on the profitability of private Commercial Banks in Ethiopia. *Journal of Positive School Psychology*, 6(5), 5928–5939.
- Ferreira, J. J. M., Fernandes, C. I., & Ferreira, F. A. F. (2019). To be or not to be digital, that is the question: Firm innovation and performance. *Journal of Business Research*, 101, 583–590. <https://doi.org/10.1016/j.jbusres.2018.11.013>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>.
- Hidayati, S. N., Rahayu, P., & Pandin, M. Y. R. (2024). Tantangan dan Peluang Inovasi Keuangan dalam Mendukung Transisi ke Ekonomi Hijau pada PT Adaro Energy Indonesia. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, 9(3).
- Ibekwe, A. O. (2021). Financial innovation and performance of deposit money banks in Nigeria. *International Journal of Business & Law Research*, 9(1), 162–173.
- Ilaahi, S. (2024). Penerapan Dukungan Teknologi Dalam Meningkatkan Loyalitas Nasabah Pada Aplikasi Livin By Mandiri. STIE Indonesia Banking School.
- Jamaludin, J., Leon, F. M., & Chandra, K. (2024). Pengaruh Mediasi Kinerja Keuangan Antara Pemanfaatan Aset Dan Profit Margin Terhadap Nilai Pasar Perusahaan Di Indonesia. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 8(2), 2058–2086. <https://doi.org/10.31955/mea.v8i2.4299>
- Johan, J. (2024). Inovasi dalam teknologi keuangan: Mengubah praktik perbankan dan investasi tradisional. *Currency (Jurnal Ekonomi Dan Perbankan Syariah)*, 2(2), 296–314. <https://doi.org/10.32806/4a2g7278>
- Jonah, J. N., Egbe, I. S., & Richard, E. B. (2021). Financial innovation and demand for money in Nigeria. *International Journal of Business Management and Finance Research*, 4(1), 41–54. <https://doi.org/10.53935/26415313.v4i1.186>
- Judijanto, L., Wahyuni, A. T., Adam, B. B., Febriansyah, F., & Mangkubumi, G. (2023). Inovasi Keuangan dan Transformasi Perbankan: Studi Kasus Pada Pengembangan Layanan Perbankan Digital. *Jurnal Cahaya Mandalika ISSN*, 2721–4796.
- KK, A. S. R., & Maharani, H. N. (2024). Inovasi dan pengembangan produk keuangan syariah: Tantangan dan prospek di era revolusi industri 4.0. *Jurnal Ilmiah Edunomika*, 8(1).
- Kustina, K. T., & Sugiarto, Y. W. W. (2020). Pengaruh penerapan branchless banking dan E-Banking terhadap kinerja keuangan sektor perbankan di Indonesia. *Jurnal Ilmiah Akuntansi Dan Bisnis*, 5(1), 116–128.
- Lerner, J., Seru, A., Short, N., & Sun, Y. (2021). *Financial innovation in the 21st century: Evidence from US patents*. National Bureau of Economic Research.

- <https://doi.org/10.2139/ssrn.3880213>
- Lestari, T. (2024). Pengaruh kinerja keuangan terhadap nilai perusahaan pada perusahaan bidang manufaktur. *Owner: Riset Dan Jurnal Akuntansi*, 8(3), 2484–2499. <https://doi.org/10.33395/owner.v8i3.2303>
- Listari, S. (2018). Analisis Faktor-Faktor yang Mempengaruhi Nilai Perusahaan pada Perusahaan-Perusahaan yang Terdaftar Dalam Indeks LQ45 di Bursa Efek Indonesia. *Jurnal Ilmiah Manajemen Kesatuan*, 6(1), 51–60. <https://doi.org/10.37641/jimkes.v6i1.36>
- Maryadi, A. R., & Susilowati, P. I. M. (2020). Pengaruh Return On Equity (Roe), Loan To Deposit Ratio (Ldr), Non Performing Loan (Npl) Dan Biaya Operasional Terhadap Pendapatan Operasional (Bopo) Terhadap Nilai Perusahaan Pada Subsektor Perbankan Yang Terdaftar Di Bei Pada Tahun 2015-2017. *Jurnal Sains Manajemen Dan Kewirusahaan*, 4(1), 69–80.
- Moridu, I. (2020). Pengaruh digital banking terhadap nilai perusahaan perbankan: Studi pada PT. Bank Negara Indonesia (Persero) Tbk. *Jurnal Riset Akuntansi Politala*, 3(2), 67–73.
- Mustikowati, R. I., & Tysari, I. (2014). Orientasi kewirausahaan, inovasi, dan strategi bisnis untuk meningkatkan kinerja perusahaan (studi pada UKM sentra Kabupaten Malang). *Jurnal Ekonomi MODERNISASI*, 10(1), 23–37. <https://doi.org/10.21067/jem.v10i1.771>
- Nikmah, W., Nugroho, P., & Purnomo, A. S. D. (2024). The effect of external and internal factors on financial management of salt business actors. *Jurnal Ilmiah Manajemen Kesatuan*, 12(6), 2373–2382.
- Ningdiyah, E. W., Asyik, N. F., & Fidiana, F. (2024). The Impact of Digital Integrated Reporting on the Influence of Financial Performance on Firm Value. *Journal of Accounting Science*, 8(2), 124–138. <https://doi.org/10.21070/jas.v8i2.1866>
- Nuraini, M., Husni, T., & Adrianto, F. (2022). Pengaruh Inovasi Layanan Electronic Banking, Fee Based Income dan Efektivitas Pengendalian Internal terhadap Nilai Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia. *J-MAS (Jurnal Manajemen Dan Sains)*, 7(2), 787–793. <https://doi.org/10.33087/jmas.v7i2.650>
- Oktaviani, D., Satriansyah, A., & Widianingrum, E. (2024). The effect of profitability, company size and leverage on company value. *Jurnal Ilmiah Akuntansi Kesatuan*, 12(2), 207–218. <https://doi.org/10.37641/jiakes.v12i2.2504>
- Olalere, O. E., Kes, M. S. E. M., Islam, M. A., & Rahman, S. (2021). The effect of financial innovation and bank competition on firm value: A comparative study of Malaysian and Nigerian banks. *The Journal of Asian Finance, Economics and Business*, 8(6), 245–253. <https://doi.org/10.13106/jafeb.2021.vol8.no6.0245>
- Petare, P. A., Muthulakshmi, R., Bhattacharjee, I., Sharma, S., & Kumar, S. M. (2023). The impact of financial innovation on corporate financial performance. *Journal of Survey in Fisheries Sciences*, 10(1S), 6245.
- Priharta, A., Tantri, M., Gani, N. A., & Darto, D. (2023). Profitabilitas dan Likuiditas: Pengaruhnya Terhadap Nilai Perusahaan. *JABE (Journal of Applied Business and Economic)*, 9(3), 257–267. <https://doi.org/10.30998/jabe.v9i3.12923>
- Rahadian, D., & Handono, A. A. (2022). The effect of risk based bank rating on firm value. *Trikonomika*, 21(1), 25–29.
- Rashid, M. H. U., Nurunnabi, M., Rahman, M., & Masud, M. A. K. (2020). Exploring the relationship between customer loyalty and financial performance of banks: Customer open innovation perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 108.
- Reschiwati, R., Syahdina, A., & Handayani, S. (2020). Effect of liquidity, profitability, and size of companies on firm value. *Utopia y Praxis Latinoamericana*, 25(6), 325–332. <https://doi.org/10.5281/zenodo.3987632>
- Sakinah, N., Arafah, L., Darman, D. M., & Kenedi, J. (2024). Inovasi digitalisasi produk perbankan dan dampaknya pada pertumbuhan dan perkembangan perbankan syariah. *Jurnal Tabarru': Islamic Banking and Finance*, 7(2), 802–812.
- Sartika, U. D., & Choiriyah, C. (2019). Pengaruh Inflasi, Suku Bunga, Nilai Tukar, Dan Produk Domestik Bruto Terhadap Nilai Perusahaan. *Jurnal Ilmu Manajemen*, 8(2), 75–89. <https://doi.org/10.32502/jimn.v8i2.1821>
- Sianturi, M. W. E. (2020). Pengaruh Kinerja Keuangan Terhadap Nilai Perusahaan Manufaktur Sektor Industri Barang Konsumsi Di Bei. *Jurnal Administrasi Bisnis Fisipol Unmul*, 8(4), 280.

- <https://doi.org/10.54144/jadbis.v8i4.3799>
- Sutarti, S., Syakhroza, A., Diyanty, V., & Dewo, S. A. (2019). The Effects of the Adoption of E-Banking Technology Innovation on the Performance with the Internal Control Effectiveness as the Moderating Variable: An Evidence from Commercial Banks in Indonesia. *Jurnal Akuntansi dan Keuangan Indonesia*, 16(1), 35–60. <https://doi.org/10.21002/jaki.2019.03>
- Syahputra, R., & Suparno, S. (2022). Pengaruh Penggunaan Internet Banking Dan Mobile Banking Terhadap Kinerja Keuangan Perbankan (Studi Pada Perbankan Yang Terdaftar Di Bursa Efek Indonesia 2016-2020). *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi*, 7(3), 379–388. <https://doi.org/10.24815/jimeka.v7i3.21114>
- Tong, X., & Yang, W. (2025). Empirical analysis of the impact of financial technology on the profitability of listed banks. *International Review of Economics & Finance*, 98, 103788. <https://doi.org/10.1016/j.iref.2024.103788>
- Triyani, M., & Siswanti, I. (2024). The effect of sustainability reporting disclosure, environment, social and governance rating, and digital banking transactions on firm value with financial performance as an intervening variable (case study on commercial Bank in Indonesia). *Journal of Management and Economic Studies*, 6(1), 17–37.
- Triyonowati, T., Suwitho, S., & Titik Mildawati, T. M. (2023). *Does innovation efficiency affect financial performance The role of ownership concentration*.
- Umiyati, H., Subiyanto, S., Kusumawati, Y. N., Suherman, A., Anwar, K., & Wedha, I. K. (2023). Analysis of the effect of motivation and knowledge about capital market, return, risk and minimum capital on interest to invest in the Indonesia Stock Exchange (Case study in the financial audit board of the Republic of Indonesia). *International Journal of Business, Economics, and Social Development*, 4(3), 112–122. <https://doi.org/10.46336/ijbesd.v4i3.477>
- Wahyuni, F., & Pramudita, N. (2024). Pengungkapan Corporate Social Responsibility, Intellectual Capital, Nilai Perusahaan dan Ukuran Perusahaan pada Perusahaan Pertambangan. *Reviu Akuntansi Dan Bisnis Indonesia*, 8(1), 105–122. <https://doi.org/10.18196/rabin.v8i1.22175>
- Yogaswari, D. A., & Diantini, N. N. A. (2024). Pengaruh Inovasi Digital Terhadap Kinerja Keuangan Perbankan Di Indonesia. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 13(9), 15–25.