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The Influence of Intellectual Capital and Corporate Sustainability on Bank Performance: Innovation as a Mediator

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Abstract: This study aims to examine the effect of Intellectual Capital and Corporate Sustainability on the financial performance of banks in Indonesia with innovation as a mediating variable. The banking sector faces demands not only to achieve profitability but also to maintain business sustainability and governance quality, while previous research results show inconsistencies regarding the direct effects of Intellectual Capital and Corporate Sustainability on financial performance. This study employs a quantitative causality approach with a sample of eighteen commercial banks listed on the Indonesia Stock Exchange during the 2018–2023 period, yielding 68 observations. Secondary data was obtained from annual financial reports and sustainability reports. Data analysis was conducted using partial least squares. The results show that Intellectual Capital has a positive and significant effect on financial performance, as do Corporate Sustainability and innovation. Both Intellectual Capital and Corporate Sustainability have positive and significant effects on innovation. Furthermore, innovation is proven to partially mediate the effect of Intellectual Capital on financial performance and partially mediate the effect of Corporate Sustainability on financial performance. These findings confirm that innovation serves as a crucial transformation mechanism that converts the potential of intangible assets and sustainability commitments into tangible economic value for banks in Indonesia.

Keyword: Intellectual Capital, Corporate Sustainability, Innovation

INTRODUCTION

The banking industry in Indonesia currently faces demands to not only achieve profitability but also maintain business sustainability and corporate governance quality (Hulu & Utami, 2023). The rapid development of the banking industry, accompanied by increasing competition and digital transformation, encourages banks to continuously improve service quality, strengthen brand image, and adopt digital innovation to maintain customer satisfaction and loyalty (Hervina & Kurniawan, 2026). In service-based industries such as banking, Intellectual Capital represents a strategic resource encompassing knowledge, human resource competencies, organizational systems, and customer relationships capable of creating added

value for companies (Zuhrofi, 2025). Regulation of the Financial Services Authority (POJK) No. 17 of 2023 concerning Governance Implementation for Commercial Banks reinforces this by emphasizing good governance and long-term value creation for stakeholders (OJK, 2023). Given the central position of the banking sector in advancing inclusive and sustainable economic development in the region, studies on the impact of ESG on banking profitability are becoming increasingly important (Hartanto et al., 2025). The regulator's commitment to sustainability has been ongoing since the Sustainable Finance Roadmap Phase I (2015-2019) and continued with Phase II (2021-2025) (OJK, 2021). Thus, Corporate Sustainability and Intellectual Capital have become strategic necessities for the banking industry.

The selection of innovation as a mediating variable is based on inconsistencies in previous research findings. Several studies have shown that Intellectual Capital and Corporate Sustainability directly contribute to company financial performance (Hulu & Utami, 2023; Martiningsih & Yuliandhari, 2018). However, other studies have found that Intellectual Capital and Corporate Sustainability do not have significant direct effects but become significant when mediated by innovation (Cahyaningati et al., 2022; Li et al., 2025). These findings indicate that Intellectual Capital and Corporate Sustainability need to be transformed through innovative activities to improve financial performance.

This research gap becomes increasingly relevant in the Indonesian banking industry, which faces regulatory pressures, increasing competition from fintech, and changing customer behavior post COVID-19 (Indayani et al., 2023). The stability of the banking sector is fundamentally linked to the overall economic well-being of a nation (Pratama et al., 2025). These conditions encourage banks not only to rely on physical capital but also on innovative capabilities based on Intellectual Capital and commitment to sustainability. Digitalization, automation, and artificial intelligence have become the main drivers of transformation in corporate financial and operational systems (Pratama et al., 2026).

Theoretically, from the Resource-Based View (RBV) perspective, Intellectual Capital constitutes valuable, rare, difficult-to-imitate, and non-substitutable internal resources that determine competitive advantage and company performance (Dasuki, 2021). In the service-oriented banking industry, the role of Intellectual Capital becomes crucial through its three components (Trisnawati et al., 2025). Human Capital reflects employee competence and professionalism in risk management, product innovation, and customer service. Structural Capital supports operational efficiency through systems, procedures, and technology. Meanwhile, Relational Capital strengthens relationships with customers, regulators, and other stakeholders. Effective Intellectual Capital management enables banks to improve efficiency, service quality, and adaptability, ultimately impacting financial performance improvement. Research Hulu & Utami (2023) reinforces this argument by showing that intellectual capital has a significant effect on banking performance.

H_1. Intellectual Capital has a positive and significant effect on the financial performance of banks in Indonesia.

From the Stakeholder Theory perspective, companies are responsible to all stakeholders, not only shareholders (Ghozali & Chariri, 2007). Corporate Sustainability practices through Environmental, Social, and Governance (ESG) dimensions serve as means for companies to create long-term value (Pham et al., 2021). For the banking industry, which depends on public trust, Corporate Sustainability implementation can potentially increase legitimacy, reputation, and governance quality, impacting banking financial performance.

H_2: Corporate Sustainability has a positive and significant effect on the financial performance of banks in Indonesia.

In Indonesia, the relevance of Corporate Sustainability has strengthened since the issuance of the Sustainable Finance Roadmap Phase I (2015-2019) by OJK. This policy was subsequently reinforced through POJK No. 17 of 2023 concerning Governance Implementation for Commercial Banks, encouraging banks to integrate ESG aspects into business strategy, risk

management, and corporate governance (OJK, 2021). Effective ESG implementation helps banks manage environmental and social risks, improve operational efficiency, and strengthen stakeholder relationships, potentially enhancing banking performance. Research by Martiningsih & Yuliandhari (2018) also shows that sustainability disclosure affects company profitability.

Furthermore, the ability of Intellectual Capital and Corporate Sustainability to generate optimal financial performance in the modern banking industry is highly influenced by the extent to which companies can manage and implement innovation (Hulu & Utami, 2023). Innovation acts as an enabler or mediation mechanism because it serves as a bridge connecting internal resources and sustainability commitments to be realized in economically valuable business (Nuraini, 2025; Zuhrofi, 2025). Without innovation, Intellectual Capital and Corporate Sustainability tend to remain merely potential or normative commitments that may not directly impact financial performance.

H_3: Innovation has a positive and significant effect on the financial performance of banks in Indonesia.

In the banking industry, innovation enables Intellectual Capital to be actualized through new product and service development, operational improvements, and digital technology utilization (Nuraini, 2025). Human Capital contributes through employee creativity and competence in creating innovative financial solutions, while Structural Capital provides systems, procedures, and organizational culture supporting continuous learning and experimentation (Zuhrofi, 2025). The need for a mediating role arises because previous research results show that the direct relationship between Intellectual Capital and Corporate Sustainability on financial performance remains inconsistent, with some studies finding positive effects (Felita, 2021; Pham et al., 2021) while others found no significant effects (Cahyaningati et al., 2022; Hardi, 2019; Martiningsih & Yuliandhari, 2018). Thus, innovation becomes the medium that makes Intellectual Capital more productive and impactful on bank financial performance.

H_4: Intellectual Capital has a positive and significant effect on innovation.

Similarly, Corporate Sustainability practices will have a more significant effect on financial performance when integrated into core business innovation (Haryono & Wirianata, 2025). Research by Cahyaningati et al. (2022) and Hardi (2019) found no direct effect. Commitment to ESG can be realized through green financial product innovation, inclusive banking services, and more adaptive risk management (Aqila & Sisdianto, 2024). Through innovation, sustainability practices not only function as regulatory compliance but also become sources of added value and competitive advantage for banks.

H_5: Corporate Sustainability has a positive and significant effect on innovation.

Various studies support the role of innovation as a mediating variable in the relationship between Intellectual Capital and Corporate Sustainability on company financial performance. Cahyaningati et al. (2022) and Li et al. (2025) found that innovation strengthens the influence of Intellectual Capital and Corporate Sustainability on financial performance. Therefore, banks with high levels of Intellectual Capital and Corporate Sustainability tend to be more effective in driving innovation, which subsequently contributes to improved financial performance. Based on these studies, it can be hypothesized that Intellectual Capital and Corporate Sustainability positively affect banking financial performance, and innovation mediates the influence of Intellectual Capital and Corporate Sustainability on banking financial performance.

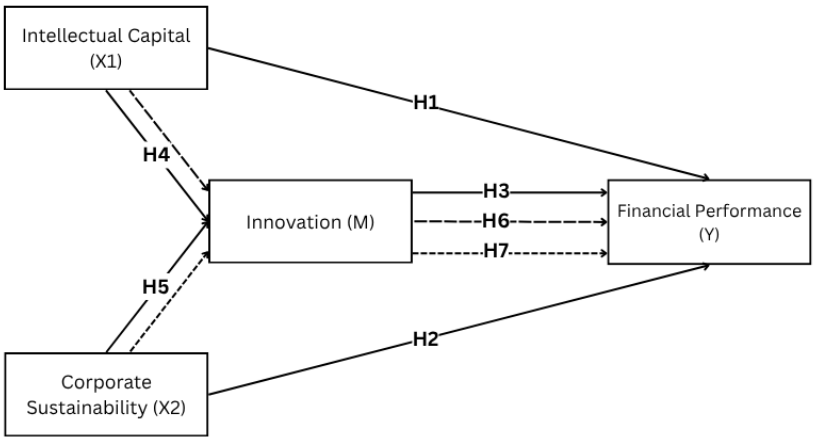
H_6: Innovation mediates the relationship between Intellectual Capital and Financial Performance.

H_7: Innovation mediates the relationship between Corporate Sustainability and Financial Performance.

METHOD

This research uses a quantitative method with a causality approach. According to Sugiyono (2018), the quantitative method applies positivism philosophy to specific populations or samples containing numerical research data with the aim of testing hypotheses formulated by researchers. The causality approach explains cause-and-effect relationships between two or more variables or states that variable X causes variable Y (Sekaran & Bougie, 2016).

According to Sugiyono (2018), a population encompasses not just the quantity of objects or subjects, but also their specific characteristics. The population in this study comprises all 47 banking sector companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2023. The sample was selected using a purposive sampling method, focusing on companies that were consistently listed on the IDX during the study period, completely disclosed the required annual financial and sustainability (ESG) reports, and recorded a positive Return on Assets (ROA). Based on these criteria, 18 banks were selected. After excluding incomplete annual data and observations with negative ROA, the final number of observations used in this study was 68. The research design is illustrated in Figure 1.



Source: Data processed (2026)

Figure 1. Research Design

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0 software. PLS-SEM was selected because it is suitable for testing complex relationships, including mediation effects, and can be effectively applied to relatively small sample sizes (Latan & Ghozali, 2015). The structural equations are formulated as follows:

$$INV = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 FS + \beta_4 LEV + \varepsilon \quad \text{..... (1)}$$

$$ROA = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 FS + \beta_4 LEV + \varepsilon \quad \text{..... (2)}$$

$$ROA = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 INV + \beta_4 FS + \beta_5 LEV + \varepsilon \quad \text{..... (3)}$$

In the established models, ROA represents the Return on Assets, while INV stands for Innovation. The independent variables are denoted by IC for Intellectual Capital and CS for Corporate Sustainability. The equations also incorporate FS for Firm Size and LEV for Leverage. Mathematically, α serves as the constant, β represents the regression coefficient for each respective variable, and ε accounts for the error term. The operational definitions and measurement methods for each variable are summarized in the table below.

Table 1. Operational Variable Definitions

Variable	Proxy	Formula
Dependent Variable		
Financial Performance	Return on Assets (ROA)	$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \text{ x } 100\%$

Variable	Proxy	Formula
Independent Variable		
Intellectual Capital	Value Added Intellectual Coefficient (VAIC)	$CEE = \frac{\text{Value Added}}{\text{Capital Employed}}$ $HCE = \frac{\text{Value Added}}{\text{Human Capital}}$ $SCE = \frac{\text{Structural Capital}}{\text{Value Added}}$ $VAIC = CEE + HCE + SCE$
Corporate Sustainability	Sustainability Report Disclosure Index (SRDI)	$SRDI = \frac{\sum V}{\sum M}$
Mediating Variable		
Innovation	Ratio of Intangible Assets to Total Assets	$\text{Innovation} = \frac{\text{Intangible Assets} - \text{Goodwill}}{\text{Total Assets}}$
Control Variable		
Firm Size	Natural Logarithm of Total Assets	$\text{Firm Size} = \log(\text{Total Assets})$
Leverage	Debt to Asset Ratio (DAR)	$\text{Leverage} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$

Source: Data processed (2026)

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Table 2. Descriptive Statistics Results

Variable	N	Mean	Minimum	Maximum	Std. Deviation
Intellectual Capital	68	1,38	0,03	14,78	1,78
Corporate Sustainability	68	62,50	25,23	87,45	15,92
Financial Performance	68	0,02	0,00	0,15	0,02
Innovation	68	0,02	0,00	0,05	0,01
Firm Size	68	19,55	15,29	22,37	1,48
Leverage	68	0,74	0,13	0,89	0,21

Source: Data processed (2026)

The table above presents the descriptive statistics for all variables based on 68 observations. Intellectual Capital shows substantial, indicating large differences in VAIC efficiency across the sampled banks. Corporate Sustainability has a mean of 62,50, suggesting moderate to high ESG disclosure levels. Financial Performance averages 0,02. Innovation has a mean of 0,02, while Firm Size and Leverage show relatively low dispersion. Overall, sufficient variability exists among the variables to proceed with hypothesis testing.

Data Quality Test

Table 3. Multicollinearity Test (VIF)

Variable	VIF
Intellectual Capital	1,04
Corporate Sustainability	2,69
Innovation	1,55
Firm Size	2,84
Leverage	1,59

Source: Data processed (2026)

Multicollinearity occurs when two or more independent variables are highly correlated, which can bias regression coefficients. The Variance Inflation Factor (VIF) was used to detect this issue. A VIF value below 5 indicates that multicollinearity is not a concern (Latan & Ghozali, 2015). As shown in the table above, all VIF values are well below this threshold, with

the highest value being 2,84. Therefore, the models are free from multicollinearity, and all independent variables can be interpreted reliably.

Table 4. Data Quality Test Result

Model	Variable	Adj. R^2	Q^2 (=1-SSE/SSO)
1	$INV = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 FS + \beta_4 LEV + \varepsilon$	0,32	0,13
2	$ROA = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 FS + \beta_4 LEV + \varepsilon$	0,80	0,48
3	$ROA = \alpha + \beta_1 IC + \beta_2 CS + \beta_3 In + \beta_4 FS + \beta_5 LEV + \varepsilon$	0,80	0,48
Average		0,64	0,37
GoF		$\sqrt{(0,64 * 0,37)} = 0,48$	

Source: Data processed (2026)

The coefficient of determination (Adj. R^2) measures how much of the variance in the dependent variable is explained by the independent variables in the model. Higher adjusted R^2 values indicate better explanatory power (Latan & Ghozali, 2015). In Model 1, the adjusted R^2 is 0,32, meaning that Intellectual Capital (IC), Corporate Sustainability (CS), firm size, and leverage collectively explain 32% of the variation in innovation. Model 2 has an adjusted R^2 of 0,80, indicating that IC, CS, and the control variables explain 80% of the variance in financial performance. Model 3 yields an adjusted R^2 of 0,80, showing that the addition of innovation into the model increases the explanatory power to 80%. Overall, these values demonstrate that the models possess strong explanatory capabilities.

Predictive relevance assesses how well the model can predict omitted data points. A Q^2 value greater than zero indicates that the model has satisfactory predictive relevance (Latan & Ghozali, 2015). As shown in the table above, the Q^2 values for all models are positive: 0,13 for Model 1, 0,48 for Model 2, and 0,48 for Model 3. Because all values are substantially greater than zero, this confirms that the structural model has robust predictive ability.

The overall Goodness of Fit (GoF) is a global measure of model fit in PLS-SEM, calculated as the geometric mean of the average R^2 and average Q^2. GoF values range from 0 to 1, with higher values indicating a better fit. According to Latan & Ghozali (2015), GoF values are categorized as small (0,10), moderate (0,25), and large (0,36). As presented in the table above, the average R^2 is 0,64 and the average Q^2 is 0,37, yielding a GoF of 0,48. Because this value exceeds the 0,36 threshold, the model exhibits a large goodness of fit. This demonstrates that the model fits the data well and is highly suitable for explaining the relationships among the variables

Hypothesis Testing Results

Table 5. Hypothesis Testing Results

Hypothesis	Relationship	Original Sample	T-Statistics	P-Values
H_1	IC → ROA	0,099	1,591	0,056
H_2	CS → ROA	0,703	9,305	0,000
H_3	INV → ROA	0,444	5,833	0,000
H_4	IC → INV	0,342	2,837	0,002
H_5	CS → INV	0,375	2,463	0,007
H_6	IC → INV → ROA	0,118	1,747	0,040
H_7	CS → INV → ROA	0,306	3,679	0,000

Source: Data processed (2026)

This model analyzes the relationships between several variables, namely IC (Intellectual Capital), CS (Capital Structure), INV (Innovation), and ROA (Return on Assets/Financial Performance). Specifically, it examines the direct effects of IC, CS, and INV on ROA, as well as the direct effects of IC and CS on INV. Furthermore, the model evaluates the indirect effects of both IC and CS on ROA through INV as a mediating variable

Discussion

Effect of Intellectual Capital on Financial Performance

The statistical test results show that the Intellectual Capital variable has an original sample coefficient of 0,099 with a p-value of 0,056 ($p < 0,10$). This result indicates that Ha_1 is accepted, meaning that Intellectual Capital has a positive and significant effect on the financial performance of banks in Indonesia.

This finding demonstrates that well-managed Intellectual Capital is proven to directly impact the improvement of banking financial performance as proxied by ROA during the observation period. This condition can occur because investments in intangible assets, such as developing employee competencies, optimizing technology, and strengthening organizational systems, are strategic steps in exploiting the company's internal strengths to create competitive advantage that directly impacts company performance improvement (Dasuki, 2021). This is because the enhancement of human resources through learning and adaptation processes can increase productivity and efficiency in completing operational tasks tangibly (Nuraini, 2025). Furthermore, effective Intellectual Capital management has also been proven to improve decision-making quality, create cost efficiency, and encourage the provision of value-added products and services within the banking ecosystem (Trisnawati et al., 2025). Consequently, the financial contribution of Intellectual Capital can be directly reflected in the improvement of bank profitability.

This research result aligns with Zuhrofi (2025), who found that Intellectual Capital has a positive and significant effect on company financial performance. Similar findings were also stated by Hulu & Utami (2023), which showed that sustainability disclosure related to the relational aspects of Intellectual Capital directly affects company performance.

Thus, it can be concluded that the existence and management of Intellectual Capital directly provide a positive and significant influence in driving the improvement of banking financial performance in this research model.

Effect of Corporate Sustainability on Financial Performance

The test results for the second hypothesis show a coefficient value of 0,703 with a p-value of 0,000 ($p < 0,10$). This means Ha_2 is accepted, stating that Corporate Sustainability has a positive and significant effect on bank financial performance.

This finding supports Stakeholder Theory, which states that companies that attend to stakeholder interests through sustainability practices will obtain legitimacy, trust, and support, ultimately improving company financial performance (Felita, 2021). In the banking industry, which heavily depends on stakeholder trust, the implementation of sustainable governance can help suppress reputation risk while simultaneously increasing investor and public confidence (Hulu & Utami, 2023). This can occur because banks that transparently integrate ESG will be more proactive in mitigating potential problems, such as ethical violations or lending to environmentally damaging projects, thus avoiding sanctions and negative publicity (Felita, 2021). Maintained reputation and good risk mitigation provide a positive signal that the bank is carefully managed with a long-term vision, ultimately fostering customer loyalty and attracting investor interest (Hulu & Utami, 2023).

In Indonesian banking, increasingly stringent sustainability regulations, such as OJK through POJK No. 17 of 2023 and the Sustainable Finance Roadmap, encourage banks to integrate ESG aspects into their business strategies. Banks that are proactive in implementing sustainability principles tend to have better risk management, positive reputation, and greater opportunities in gaining access to green financing and sustainability-oriented investors (Aqila & Sisdianto, 2024). These conditions can ultimately improve operational efficiency and company profitability as reflected through increased ROA.

This research result aligns with Pham et al. (2021) and Felita (2021), which proved that sustainability report disclosure positively impacts company financial performance improvement. This indicates that sustainability implementation not only functions as a form of corporate social responsibility but also creates economic value for the company (Indayani et al., 2023).

Thus, the results of this research indicate that commitment to sustainability is not merely a corporate moral obligation but also a business strategy capable of providing economic benefits and enhancing the competitiveness of banking companies in Indonesia.

Effect of Innovation on Financial Performance

Based on the hypothesis test results, the effect of Innovation on Financial Performance has a coefficient value of 0,444 with a p-value of 0,000 ($p < 0,10$). This result concludes that Ha_3 is accepted, meaning Innovation has a positive and significant effect on Financial Performance.

Banks that optimize their intangible assets for innovation activities, such as service digitalization and mobile banking development, can improve operational efficiency without relying on physical asset expansion, such as opening new branch offices (Truant et al., 2021; Wang & Xia, 2024). High innovation can increase company value and profitability because massive digitalization and system automation will reduce operational cost burdens (Cahyaningati et al., 2022). At the same time, new services resulting from innovation will attract more users and transaction volumes that boost fee-based income (non-interest operating income from bank service fees) (Cahyaningati et al., 2022). The combination of cost efficiency and commission income growth is what improves overall financial performance.

This finding supports the Resource-Based View (RBV) theory, which states that innovation is a unique internal capability that serves as a source of company competitive advantage (Dasuki, 2021). Through continuous innovation in offering sophisticated financial solutions that are adaptive to technological advancements, companies can create difficult-to-replicate competitive advantages to ensure market share dominance, form entry barriers for competitors, and secure long-term revenue streams (Dasuki, 2021).

This finding is relevant to the post-pandemic condition, where innovative banks are more adaptive in responding to customer needs for fast and secure digital services (Hulu & Utami, 2023). The ability to respond to these behavioral changes is proven to maintain customer loyalty while simultaneously increasing bank profitability. This finding is also supported by research from Anisha (2019), Cahyaningati et al. (2022), and Ningtyas & Kartika (2022), which proved that innovation positively affects company financial performance.

Effect of Intellectual Capital on Innovation

The statistical test results show that the coefficient of Intellectual Capital on Innovation is 0,342 with a p-value of 0,002 ($p < 0,10$). Thus, Ha_4 is accepted, proving that Intellectual Capital has a positive and significant effect on Innovation.

This finding proves that the knowledge assets possessed by banks are the primary raw material for creating innovation (Ali et al., 2022; Nuraini, 2025). This process occurs when competent employees (human capital) utilize their creativity to design new solutions, which are then executed quickly through the support of strong IT infrastructure (structural capital) (Zuhrofi, 2025). This integration is strengthened by close relationships with customers (relational capital), which allows banks to accurately capture market preferences, so that the resulting digital products are more relevant and on target (Trisnawati et al., 2025).

In Indonesian banking industry practice, companies with high levels of Intellectual Capital tend to have better human resource development systems, continuous training programs, and structured knowledge management (Zuhrofi, 2025). These conditions allow companies to more easily develop various technology-based service innovations, such as

integrated digital services, the use of artificial intelligence (AI) in customer service, and the development of digital financing platforms. Conversely, companies with low Intellectual Capital levels tend to experience limitations in creating innovation and find it more difficult to adapt to changing market needs.

In accordance with RBV theory, all these intangible assets are unique strategic resources that drive competitive advantage. This finding is also supported by research from Ningtyas & Kartika (2022) and Trisnawati et al. (2025), which found that Intellectual Capital positively affects company innovation.

Effect of Corporate Sustainability on Innovation

Testing the effect of Corporate Sustainability on Innovation yields a coefficient value of 0,375 with a p-value of 0,007 ($p < 0,10$). Therefore, Ha_5 is accepted, indicating a positive and significant effect of Corporate Sustainability on Innovation.

This finding supports Stakeholder Theory, which states that stakeholder demands for ESG implementation encourage companies to innovate as a form of response to stakeholder needs while creating added value for the company (Freeman, 1984; GRI, 2021). This relationship occurs because sustainability commitments demand that banks transform conventional business patterns into environmentally friendly and socially responsible operations. Concrete evidence in Indonesia can be seen in banks implementing operational innovations such as energy consumption efficiency, operational emission reduction, recycling technology, and digitalization of transaction processes for financial inclusion. Furthermore, this ESG commitment triggers green product innovation in the form of sustainable financing distribution for MSMEs and the development of green bond and sukuk investments (Haryono & Wirianata, 2025).

Through consistent implementation of Corporate Sustainability, banking companies are proven to become more adaptive to regulatory dynamics and shifts in customer preferences, who are now increasingly concerned about environmental issues (OJK, 2022). This adaptation demand forces banks to continuously update their operational systems to be more efficient and technology-based secure. As a result, innovations born from fulfilling these sustainability principles not only mitigate environmental risks but also successfully open new market opportunities, reduce long-term operational costs, and strengthen the bank's competitive advantage in the global market (Polonskaya & Babenko, 2012).

This research result aligns with Hardi (2019), which stated that Corporate Sustainability implementation is not merely a reporting formality but a strategic instrument that effectively stimulates management to continuously innovate in company operational management (Aqila & Sisdianto, 2024).

Mediating Role of Innovation on Intellectual Capital-Financial Performance

The mediation effect test yields an indirect effect coefficient of 0,118 with a p-value of 0,040 ($p < 0,10$). This means Ha_6 is accepted, where Innovation is proven to positively and significantly mediate the effect of Intellectual Capital on Financial Performance.

This finding is important because it can explain why in the previous hypothesis testing, the direct effect of Intellectual Capital on financial performance was already significant, yet after including innovation as a mediating variable, the indirect effect also shows significance. This condition indicates partial mediation, where the direct effect of Intellectual Capital on financial performance remains significant, and the indirect effect through innovation is also significant (Carrión et al., 2018). This shows that the effect is partially channeled through innovation, and the total effect becomes even stronger.

This result supports the view that knowledge, skills, and competencies possessed by companies cannot directly produce profitability improvements without an appropriate transformation mechanism (Cahyaningati et al., 2022). In this case, innovation acts as a bridge

that transforms human resource capabilities, organizational systems, and company knowledge into tangible economic value. Employee competencies and organizational systems need to first be realized in the form of product innovation, services, and process efficiency to contribute to improving company financial performance (Nuraini, 2025; Zuhrofi, 2025).

In banking industry practice, strong Intellectual Capital, such as competent employees, good organizational systems, and close relationships with customers, needs to be actualized through various technology and service-based innovations (Trisnawati et al., 2025). These innovations can take the form of mobile banking application development, the use of artificial intelligence (AI) in customer service, and automation of company operational processes (Wang & Xia, 2024). Through these innovations, companies can improve operational efficiency, expand services, increase revenue, and ultimately improve company profitability. Conversely, companies that have high Intellectual Capital but are less capable of innovating will find it more difficult to compete amidst the increasingly digital and competitive banking industry development (Hulu & Utami, 2023).

This research result aligns with Cahyaningati et al. (2022) and Li et al. (2025), which found that innovation acts as a significant mediating variable in the relationship between Intellectual Capital and company financial performance.

Mediating Role of Innovation on Corporate Sustainability-Financial Performance

The specific indirect effect test results show a coefficient of 0,306 with a p-value of 0,000 ($p < 0,10$). This concludes that Ha_7 is accepted, proving that Innovation positively and significantly mediates the effect of Corporate Sustainability on Financial Performance.

This finding indicates partial mediation, because the direct effect of Corporate Sustainability on financial performance remains significant, while the indirect effect through innovation also shows significant results (Carrión et al., 2018). This condition shows that sustainability practices not only have a direct impact on profitability, but their effect will be much stronger and more optimal when accelerated by innovation.

This research result supports Stakeholder Theory, which states that fulfilling sustainability demands will provide added value for the company. The concrete manifestation of this innovation is reflected in the transformation of conventional business processes through digital technology optimization. Operational activities such as internet banking, mobile banking, and paperless transactions massively reduce physical document costs (cost reduction) while simultaneously reducing the banking carbon footprint on the environment (Aqila & Sisdianto, 2024). Furthermore, this ESG commitment triggers green product innovation in the form of renewable energy financing (solar and wind) and energy efficiency infrastructure investment (Aqila & Sisdianto, 2024).

In Indonesia, this strategy is tactically applied through supply chain financing schemes and integrated digital platforms for automated assessment of customers' social-environmental risks. These various environmentally friendly product and service innovations successfully reduce operational costs, mitigate credit risk, expand customer reach, and strengthen reputation in the eyes of investors to tangibly increase bank profitability (Polonskaya & Babenko, 2012).

This research result aligns with Haryono & Wirianata (2025) and Li et al. (2025), which stated that innovation can improve the effectiveness of sustainability practices in creating economic value for companies.

CONCLUSION

This study examined the effect of Intellectual Capital and Corporate Sustainability on the financial performance of banks in Indonesia with innovation as a mediating variable. Based on PLS analysis of 68 observations from 18 commercial banks listed on the Indonesia Stock Exchange during 2018–2023 with a 10% significance level, several conclusions were drawn. Intellectual Capital has a positive and significant direct effect on financial performance,

meaning that well-managed intangible assets directly improve bank profitability. Corporate Sustainability also has a positive and significant direct effect on financial performance, indicating that better sustainability practices and ESG disclosure boost banking profitability. Innovation has a positive and significant direct effect on financial performance, confirming that investment in knowledge-based innovative capabilities drives operational efficiency and revenue growth.

Both Intellectual Capital and Corporate Sustainability positively and significantly affect innovation, showing that intangible assets and ESG commitments are foundations for creative ideas and operational adaptation. Regarding the mediating role, innovation partially mediates the effect of Intellectual Capital on financial performance, meaning that Intellectual Capital directly improves profitability and this effect is further strengthened when transformed through innovation. Similarly, innovation partially mediates the effect of Corporate Sustainability on financial performance, indicating that sustainability practices directly impact profitability and the impact multiplies when realized through product and process innovation.

REFERENCES

Anisha. (2019). *Pengaruh Inovasi Terhadap Kinerja Keuangan Perusahaan (Studi Pada UKM Bakpia Pathok Yogyakarta)* [Universitas Islam Indonesia]. http://hdl.handle.net/123456789/2851

Aqila, K. S., & Sisdianto, E. (2024). Analisis Integrasi Akuntansi Lingkungan dan CSR untuk Mencapai Tujuan Pembangunan Berkelanjutan Berbasis Digital. *Jurnal Ilmiah Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *2*(1), 508–577. https://doi.org/10.61722/jemba.v2i1.662

Cahyaningati, R., Muttaqien, F., Sulistyan, R. B., Paramita, R. W. D., & Ana, S. R. (2022). Modal Intelektual, Manajemen Pengetahuan dan Kinerja UMKM serta Kecepatan dan Kualitas Inovasi sebagai Variabel Mediasi. *E-Jurnal Akuntansi*, *32*(8), 2227. https://doi.org/10.24843/EJA.2022.v32.i08.p20

Dasuki, R. E. (2021). Manajemen Strategi: Kajian Teori Resource Based View. *Coopetition : Jurnal Ilmiah Manajemen*, *12*(3), 447–454. https://doi.org/10.32670/coopetition.v12i3.710

Felita, A. (2021). The Effect of Sustainability Reporting on Company Performance. *Diponegoro Journal of Accounting*. https://ejournal3.undip.ac.id/index.php/accounting/article/view/33001

Ghozali, I., & Chariri, A. (2007). *Teori Akuntansi*. Badan Penerbit Universitas Diponegoro.

Hardi, E. (2019). The Effect of Sustainability Reporting Disclosure and Its Impact on Companies' Financial Performance. *Journal of Wetlands Environmental Management*, *7*(1). http://ijwem.ulm.ac.id/index.php/ijwem

Hartanto, J., Ismail, T., & Wibowo, M. (2025). Pengaruh Skor ESG Komposit terhadap Profitabilitas Perbankan di Asia Tenggara Dimoderasi Pertumbuhan PDB. *Jurnal Ekonomi Manajemen Sistem Informasi*, *7*(2). https://doi.org/10.38035/jemsi.v7i2

Haryono, B. R., & Wirianata, H. (2025). Pengaruh Kinerja ESG terhadap Kinerja Keuangan Perusahaan: Peran Mediasi Inovasi Hijau dan Moderasi Kendala Keuangan. *Journal of Economics and Business UBS*, *14*(3). https://doi.org/10.52644/joeb.v14i3.2714

Hervina, R., & Kurniawan, R. (2026). Pengaruh Quality of Service, Digital Innovation & Brand Image melalui Customer Satisfaction dan Dampaknya terhadap Customer Loyalty pada Bank Syariah Indonesia Cabang Cianjur. *Jurnal Ekonomi Manajemen Sistem Informasi*, *7*(3). https://doi.org/10.38035/jemsi.v7i3

Hulu, I. I. P., & Utami, W. (2023). Kinerja Bank: Pengaruh Laporan Keberlanjutan, Kualitas Laba, dan Modal Intelektual. *Bina Ekonomi*, *27*(2). https://doi.org/10.26593/be.v27i2.6269.177-193

Indayani, I., Meuthia, P. Z. A., & Meutia, R. (2023). Corporate Sustainability and Digitalization: Is It a Bank Performance Boosters? *Jurnal Keuangan Dan Perbankan*, *27*(3), 437–452. https://doi.org/10.26905/jkdp.v27i3.9756

Latan, H., & Ghozali, I. (2015). *Partial least squares konsep, teknik dan aplikasi menggunakan program SmartPLS 3.0 untuk penelitian empiris* (2nd ed., Vol. 4). Badan Penerbit Universitas Diponegoro.

Li, Q., Zhang, Y., & Yan, J. (2025). ESG: Resource or Burden? Evidence from Chinese Listed Firms with Innovation Capability as the Mediating Mechanism. *Systems*, *13*(9), 831. https://doi.org/10.3390/systems13090831

Martiningsih, S. W., & Yuliandhari, W. S. (2018). Pengaruh Modal Intelektual dan Pengungkapan Laporan Keberlanjutan terhadap Profitabilitas (Studi pada Perusahaan yang terdaftar di Bursa Efek Indonesia Periode 2014-2016). *Jurnal Akuntansi, Bisnis Dan Ekonomi*, *4*(2). https://doi.org/10.33197/jabe.vol4.iss2.2018.182

Ningtyas, P. A. R., & Kartika, T. P. D. (2022). The Effect Of Intellectual Capital, Research And Development Intensity On Company Value With Financial Performance As Intervening Variables. *Jurnal Akuntansi AKUNESA*, *10*(3), 115–124. https://doi.org/10.26740/akunesa.v10n3.p115-124

Nuraini, H. (2025). *Kapital Intelektual: Aset Tak Tersentuh yang Menentukan Nilai Bank di Mata Investor*. Takaza Innovatix Labs.

Otoritas Jasa Keuangan. (2021). *Roadmap Keuangan Berkelanjutan Tahap II (2021-2025)*. OJK.

Otoritas Jasa Keuangan. (2023). *Siaran Pers: OJK Terbitkan Peraturan Perkuat Penerapan Tata Kelola Bank Umum* (SP 124/GKPB/OUK/IX/2023). https://ojk.go.id/id/

Pham, D. C., Do, T. N. A., Doan, T. N., Nguyen, T. X. H., & Pham, T. K. Y. (2021). The impact of sustainability practices on financial performance: Empirical evidence from Sweden. *Cogent Business & Management*, *8*(1), 1912526. https://doi.org/10.1080/23311975.2021.1912526

Pratama, B. B., Azkiyai, A. A., Widyaningrum, S., & Darmawan, D. (2026). Utilizing Advanced Artificial Intelligence to Predicting Indonesia's Economic Growth and Strengthen Economic Decision-Making:(A Case Study of Indonesia's Macroeconomic Indicators). *KONSTELASI: Konvergensi Teknologi Dan Sistem Informasi*, *101*(101). https://doi.org/10.24002/konstelasi.v101i101.14067

Pratama, B. B., Cahyadi, R. T., Indranatan, C. D. C., & Mangkuluhur, F. W. D. (2025). How Does Accounting Education Ensure the Relevance of Accounting Profession in the Future? *Journal of Applied Managerial Accounting*. https://jurnal.polibatam.ac.id/index.php/JAMA/article/view/11806

Trisnawati, L. P. P., Apollo, Siswanti, I., & Kurniasih, A. (2025). Determinants of Bank Financial Performance in Indonesia: The Role of Governance, Capital Structure, Firm Size, and Intellectual Capital. *TEC EMPRESARIAL*, *20*(2). https://revistas.tec-ac.cr/index.php/tec_empresarial/article/view/679

Truant, E., Broccardo, L., & Dana, L.-P. (2021). Digitalisation boosts company performance: An overview of Italian listed companies. *Technological Forecasting and Social Change*, *173*, 121173. https://doi.org/10.1016/j.techfore.2021.121173

Wang, D., & Xia, X. (2024). The Impact of Digital Transformation on Firms' Value: Examining The Role of ESG Performance and The Effect of Information Interaction. *Business Process Management Journal*, *30*(4), 1236–1265. https://doi.org/10.1108/BPMJ-06-2023-0469

Zuhrofi, A. (2025). Strategi Optimalisasi Human Capital dalam Bank BNI 46 untuk Meningkatkan Inovasi dan Layanan. *AKADEMIK: Jurnal Mahasiswa Ekonomi & Bisnis*, *5*(1), 29–38. https://doi.org/10.37481/jmeb.v5i1.1132