International Conference on Sustainable Economics, Management, and Accounting (ICSEMA 2026)
Proceedings
Vol. 02 Year 2026, 368 – 377
ISSN: 3109-3337

FINTECH PARTNERSHIP AND BANK CAPITAL RESILIENCE: THE MEDIATING ROLE OF ESG PERFORMANCE IN IDX-LISTED DIGITAL BANKS IN INDONESIA (2019–2024)

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Article Information: Received: June, 25 2026, **Published: August, 1 2026**

Abstract

This study examines the mediating role of Environmental, Social, and Governance (ESG) performance in the relationship between fintech partnerships and capital resilience of digital banks in Indonesia. Using balanced panel data from 9 digital banks listed on the Indonesia Stock Exchange (IDX) over the period 2019–2024 (54 observations), this study adopts an explanatory quantitative approach with Fixed Effect Model (FEM) panel data regression and Bootstrap PROCESS Macro mediation analysis (Hayes, 2017). Fintech partnership is measured using a dichotomous dummy variable, ESG performance is proxied by a composite GRI Disclosure Index (0–100), and capital resilience is represented by the Capital Adequacy Ratio (CAR). The sample includes Bank Jago (ARTO), Bank Neo Commerce (BBYB), Allo Bank Indonesia (BBHI), Bank Raya Indonesia (AGRO), Jenius/BTPN (BTPN), Superbank Indonesia (SUPA), Krom Bank Indonesia (BBSI), Bank Amar Indonesia (AMAR), and Bank Aladin Syariah (BANK). The results indicate that: (1) fintech partnership has a positive and significant effect on bank capital resilience; (2) fintech partnership has a positive and significant effect on ESG performance; (3) ESG performance has a positive and significant effect on bank capital resilience; and (4) ESG performance partially mediates the relationship between fintech partnership and bank capital resilience. These findings confirm the relevance of Resource-Based View, Stakeholder Theory, and Signaling Theory in the context of IDX-listed digital banking in Indonesia.

Keywords: Fintech Partnership; ESG Performance; Bank Capital Resilience; Capital Adequacy Ratio; IDX Digital Banks; Mediation Analysis

INTRODUCTION

The digital transformation of the financial sector has created a new paradigm in the global banking ecosystem. The emergence and escalation of financial technology (fintech) companies have disrupted the traditional financial landscape, compelling conventional banks to revolutionize their business models (Srishti, 2025). Rather than competing directly, modern banking now tends to adopt collaborative strategies through various forms of strategic partnerships with fintech to improve operational efficiency and market penetration. In Indonesia, the fintech ecosystem has demonstrated exponential growth: from only six companies in 2016, the number of OJK-licensed fintech lending entities surged to 101 as of October 2023, while outstanding P2P lending grew 14.28% year-on-year to IDR 55.7 trillion as of September 2023 (OJK, 2023).

Amid massive digitalization, the banking sector remains subject to stringent regulatory pressure to maintain capital resilience. In the domestic context, OJK requires banks to maintain a Capital Adequacy Ratio (CAR) of at least 8% pursuant to POJK No. 11/POJK.03/2016. Empirically, the average CAR of the nine IDX-listed digital banks over 2019–2024 demonstrated a solid trend of 29.09%, far exceeding the regulatory threshold (data processed from Annual Reports and OJK, 2019–2024). Nevertheless, fintech partnerships introduce new risk exposures such as cyber and operational risks that may affect the banks' capital position.

Alongside the urgency of digitalization, the global financial landscape is also shifting towards a sustainability paradigm. The integration of Environmental, Social, and Governance (ESG) performance has become a necessity, driven by POJK No. 51/POJK.03/2017 and Indonesia's Green Taxonomy. Although prior literature has addressed the impact of digitalization on financial performance, a significant research gap remains: few empirical studies have simultaneously integrated fintech partnerships, ESG performance, and capital resilience into a single mediation model, particularly for the population of IDX-listed digital banks. This study fills that gap by testing whether ESG can mediate the impact of fintech partnerships on CAR strengthening among 9 IDX digital banks over the period 2019–2024.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Theoretical Foundation

Resource-Based View (RBV), pioneered by (Wernerfelt, 1984) and subsequently developed comprehensively by (Barney, 1991), is one of the most fundamental theoretical frameworks in strategic management. RBV postulates that a firm's sustained competitive advantage originates from the possession of internal resources that are VRIN Valuable (in exploiting opportunities or neutralizing threats), Rare (scarce among competitors), Inimitable (not easily replicated due to causal complexity or ambiguity), and non-substitutable (without equivalent strategic substitutes). In the context of this research, RBV provides a robust theoretical foundation for explaining why fintech partnerships can transform the competitive position and capital resilience of digital banks.

Fintech partnerships are conceptualized within the RBV framework as a mechanism for acquiring dynamic capabilities that enable banks to integrate, build, and reconfigure internal competencies in response to environmental changes (Teece et al., 1997). Digital capabilities obtained through fintech partnerships such as Application Programming Interface (API) infrastructure, AI-based credit scoring algorithms, and integrated payment platforms meet VRIN criteria because: (1) they are valuable in reducing customer acquisition costs and improving credit risk assessment quality; (2) they are rare because not all banks can build them independently; (3) they are difficult to imitate given that strategic partnerships are unique and embedded in specific ecosystem relationships; and (4) they are non-substitutable by conventional approaches that require far greater capital and time investments. Operationally, these capabilities transform the bank's service architecture, facilitate operational cost (OPEX) efficiency, and create fee-based income streams that ultimately lead to organic capital accumulation and strengthening of the digital bank's capital adequacy ratio (Barney, 1991)(Kowalewski et al., 2023).

Stakeholder Theory, formulated by (Freeman, 1984) in his influential work Strategic Management: A Stakeholder Approach, fundamentally challenges the traditional view that prioritizes shareholder primacy. This theory asserts that the long-term viability and success of a business depend on the organization's ability to identify, understand, and accommodate the expectations of all stakeholders including depositors, creditors, employees, customers, regulators, communities, and institutional investors.

In the context of digital banking, the implementation of ESG performance is a concrete operationalization of Stakeholder Theory. The Environmental dimension responds to community and future generations' expectations regarding ecological responsibility; the social dimension accommodates the interests of customers, employees, and society through financial inclusion and human resource development; while the Governance dimension meets the demands of regulators, investors, and creditors for transparency and institutional accountability. According to (Lins et al., 2017), banks with strong ESG performance build social capital institutional trust that becomes a critical buffer during market pressures. Consistent ESG practices minimize the risk of bank runs and stabilize Third-Party Funds (DPK) because depositors tend to retain their savings in institutions perceived as socially responsible and well-governed (Aevoae et al., 2023).

Signaling Theory, developed by (Spence, 1973) in his seminal labor market analysis and subsequently applied to financial contexts by (Ross, 1977), departs from the fundamental problem of information asymmetry between internal parties (management) and external parties (investors, depositors, and regulators). This theory argues that parties with superior information (informed parties) will strategically transmit credible signals to the market to reduce information gaps and influence external parties' risk perceptions. For a signal to be effective, the signaling cost must be lower for high-quality firms than for low-quality firms, making it difficult to imitate.

Within the framework of this research, Signaling Theory operates at two levels simultaneously. First, high ESG performance serves as a non-financial signal of prudent governance to the market, thereby reducing risk perceptions, lowering the cost of capital, and broadening access to low-cost funding instruments such as green bonds and sustainability-linked loans. Second, disclosure of fintech partnerships in annual reports and IDX regulatory filings acts as a signal of innovation and strategic adaptability that reduces information asymmetry between bank management and depositors and institutional investors. The combination of these two signals ESG and fintech partnerships synergistically strengthens market trust and ultimately supports the stability and growth of the bank's capital position (Hu & Zhang, 2021)(Cheng et al., 2022).

The three theories above RBV, Stakeholder Theory, and Signaling Theory do not stand alone but form a complementary and integrated theoretical framework in this study's mediation model. RBV explains the supply-side mechanism by which fintech partnerships build valuable internal capabilities and accumulate capital; Stakeholder Theory explains the demand-side mechanism by which ESG maintains trust and stabilizes the depositor base; while Signaling Theory explains the information transmission mechanism that connects the bank's internal quality with external market perceptions and responses. The simultaneous integration of these three theories provides cohesive theoretical justification for the ESG mediation model in the relationship between fintech partnerships and digital bank capital resilience that forms the core of this research.

Hypothesis Development

Several prior studies have examined relationships among variables relevant to this research. (Mention, 2021) used panel regression to investigate the effect of fintech partnerships on bank profitability and found that fintech partnerships demonstrably improve bank operational efficiency and profitability. Consistently, (Navaretti et al., 2018) using fixed effects panel also showed that digitalization affects risk reduction and capital strengthening in banks, confirming the relevance of digital transformation in the context of capital resilience.

Regarding ESG performance, (Cheng et al., 2022) using SEM-PLS found a positive relationship between ESG performance and bank capital adequacy ratios. This finding is reinforced by (Aevoae et al., 2023) using PLS-SEM who concluded that ESG scores positively influence overall bank performance and capital resilience. (Hu & Zhang, 2021) using GMM panel further added that strong ESG performance contributes to long-term financial stability, extending the argument that ESG is not merely a reporting obligation but a factor safeguarding institutional stability. (Kowalewski et al., 2023) using random effects found that digital partnerships can enhance capital buffers and institutional resilience of banks, serving as a direct reference for this study's hypotheses.

Based on RBV, fintech partnerships enable digital banks to acquire capabilities that improve operational efficiency and accumulate retained earnings into Tier 1 Capital. Data show that 77.8% of IDX digital bank observations already have active fintech partnerships, with an average CAR of 29.09% consistently well above the OJK minimum (Mention, 2021)(Kowalewski et al., 2023).

H1: Fintech Partnership has a positive and significant effect on the Capital Resilience (CAR) of Digital Banks.

Fintech partnerships strengthen the social dimension of ESG through digital financial inclusion, and the Governance dimension through RegTech adoption. The average ESG Score significantly increased from 19.6 points (2019, when only 22.2% had partnerships) to 53.3 points (2024, when 100% had partnerships), confirming this positive relationship (Cheng et al., 2022)

H2: Fintech Partnership has a positive and significant effect on the ESG Performance of Digital Banks.

IDX digital banks with superior ESG have lower reputational risk and access to lower-cost green bonds, which mechanically maintains CAR stability (Lins et al., 2017)(Aevoae et al., 2023).

H3: ESG Performance has a positive and significant effect on the Capital Resilience (CAR) of Digital Banks.

Integrating Path a (FINTECH→ESG) and Path b (ESG→CAR), ESG performance becomes the transmission channel mediating the impact of fintech partnerships on CAR, with partial mediation as the anticipated result based on the (Baron & Kenny, 1986) procedure.

H4: ESG Performance mediates the effect of Fintech Partnership on Digital Bank Capital Resilience (full/partial mediation).

RESEARCH METHODS

This study uses a quantitative approach with an explanatory research design. The data structure is balanced panel data covering 9 IDX-licensed digital banks over the period 2019–2024, yielding 54 panel observations (9 banks × 6 years). Sample selection uses purposive sampling (Sekaran & Bougie, 2016) with criteria: (1) banks operating as OJK-licensed digital banks pursuant to POJK No. 12/POJK.03/2021 with integrated mobile banking applications; (2) listed on the Indonesia Stock Exchange (IDX) during the observation period; (3) consistently publishing annual reports and sustainability reports; and (4) complete financial data and prudential ratios available for 2019–2024.

Table 1. List of IDX-Licensed Digital Bank Samples

No.	IDX Code	Bank / Digital Product	Primary Ecosystem	IDX Status
1	ARTO	Bank Jago (Jago App)	GoTo, GoPay, Bibit, Tokopedia	Listed BEI
2	BBYB	Bank Neo Commerce (Neo+ App)	Akulaku, Ant Group	Listed BEI
3	BBHI	Allo Bank Indonesia (Allo App)	CT Corp, TransMart	Listed BEI
4	AGRO	Bank Raya Indonesia (Raya App)	BRI Group, GoPay	Listed BEI
5	BTPN	Jenius by BTPN (Jenius App)	SMBC, Gojek, Bibit, Grab	Listed BEI
6	SUPA	Superbank Indonesia (Superbank App)	Grab, Emtek, Singtel	Listed BEI
7	BBSI	Krom Bank Indonesia (Krom App)	Kredivo, FinAccel	Listed BEI
8	AMAR	Bank Amar Indonesia (Tunaiku)	Tolaram, platform P2P	Listed BEI
9	BANK	Bank Aladin Syariah (Aladin App)	Alfamart (>20.000 gerai)	Listed BEI

Source: OJK, IDX, Annual Reports (2019–2024)

All data are secondary, sourced from: (1) Annual Reports and Audited Financial Statements via IDX and bank websites for CAR, ROA, NPL, and Total Assets; (2) Sustainability Reports based on GRI Standards for ESG Score; (3) Annual Reports and IDX/OJK regulatory filings for fintech partnership coding; and (4) Indonesian Banking Statistics (SPI-OJK) for macroprudential validation.

Operational Definition and Variable Measurement

Table 2. Operational Definition and Variable Measurement

Variable	Type	Measurement / Proxy	Scale	Data Source
FINTECH (X)	Independen	Dummy variable: 1 = officially documented active fintech partnership (Annual Report/IDX/OJK); 0 = none	Nominal	Annual Report, IDX, OJK
CAR (Y)	Dependen	CAR = (Tier 1 + Tier 2 Capital) / RWA × 100%. Minimum 8% per POJK No. 11/POJK.03/2016.	Ratio (%)	Annual Report, SPI-OJK
ESG Score (M)	Mediator	Independent GRI Disclosure Index (0–100): Environmental 30%, Social 35%, Governance 35%. Score: 0=none, 1=qualitative, 2=quantitative+verified.	Continuous	Sustainability Report (GRI)
SIZE	Kontrol	Ln (Total Assets in IDR Trillion). Natural log transformation to normalize skewed distribution.	Continuous	Annual Report, IDX
ROA	Kontrol	ROA = Net Income After Tax / Total Assets × 100%. Proxy for profitability and retained earnings capacity.	Ratio (%)	Annual Report
NPL	Kontrol	Gross NPL = Non-Performing Loans (Col.3+4+5) / Total Loans × 100%. OJK threshold: < 5%.	Ratio (%)	Annual Report

Source: Compiled by authors, 2024

Data analysis techniques include: (1) descriptive statistics to describe the variable profile; (2) classical assumption tests including Jarque-Bera (normality, prob. JB > 0.05), Ramsey RESET (linearity), VIF (multicollinearity, VIF < 10), Glejser (heteroscedasticity, sig. > 0.05), and Durbin-Watson (autocorrelation, dU < DW < 4−dU); (3) panel data regression with model selection through Chow Test, Hausman Test, and Lagrange Multiplier Test; and (4) mediation analysis using the (Baron & Kenny, 1986) procedure, Sobel Test, and Bootstrap PROCESS Macro (Hayes, 5,000 resampling, BCa CI 95%). The estimated regression models are:

Model 1 Path a (FINTECH → ESG):

$$ESGit = \alpha + \beta_1 FINTECHit + \beta_2 SIZEit + \beta_3 ROAit + \beta_4 NPLit + eit \ldots\ldots (1)$$

Model 2 Path b & c' (Mediation — FINTECH & ESG → CAR):

$$CARit = \alpha + \beta_1 FINTECHit + \beta_2 ESGit + \beta_3 SIZEit + \beta_4 ROAit + \beta_5 NPLit + eit \ldots\ldots (2)$$

Where: i = bank unit (1–9); t = year period (2019–2024); α = constant; β_1–β_5 = regression coefficients; eit = error term. Panel regression analysis uses EViews 9; mediation analysis uses SPSS 26 and PROCESS Macro (Hayes, 2017).

RESULTS AND DISCUSSION

The following results and discussion are based on descriptive statistics of research variables using 54 observations from 9 digital banks listed on the Indonesia Stock Exchange (IDX) over the period 2019–2024.

Descriptive Statistics

Table 3. Descriptive Statistics of Research Variables (N=54 Observations, 9 IDX Banks × 6 Years)

Variable	N	Min	Max	Mean	Std Dev	Median	Description

FINTECH (Dummy)	54	0	1	0.78	0.42	1.00	77.8% obs with active fintech partnership
ESG Aggregate Score	54	4	68	38.13	17.98	39.00	GRI sustainability score (0–100)
Environmental (E)	54	3	58	29.43	15.21	30.00	Environmental dimension
Social (S)	54	4	65	36.41	16.88	38.00	Social dimension
Governance (G)	54	6	84	48.50	21.71	51.00	Governance dimension (highest)
CAR (%)	54	17.8%	48.5%	29.09%	7.13%	27.65%	OJK min: 8%; dependent variable
ROA (%)	54	-5.2%	3.0%	0.57%	1.69%	0.80%	Some banks in early investment phase
NPL (%)	54	0.8%	4.8%	2.68%	1.06%	2.50%	All samples below OJK 5% threshold
Total Aset	54	0,8 T	39,1 T	9,98 T	10,54 T	5,80 T	SIZE = Ln(Total Aset) untuk regresi

Source: Data processed from Annual Reports, OJK, and IDX (2019–2024)

The average CAR of 29.09% far exceeds OJK's minimum requirement of 8–14%. 77.8% of the total 54 observations (42 out of 54 data points) show the existence of active fintech partnerships. The average ESG Score of 38.13 reflects a stage of still-developing growth, with the Governance dimension achieving the highest score (48.50), followed by Social (36.41) and Environmental (29.43). Average profitability (ROA = 0.57%) is in a moderate range, given that several banks particularly Superbank and Bank Jago in the early period were still in the intensive platform development investment phase. All samples recorded NPL below the OJK 5% threshold, confirming sound credit quality.

Table 4. Distribution of Fintech Partnership by Year (2019–2024, 9 IDX Digital Banks)

Year	Total Banks	FINTECH=1	FINTECH=0	% With Fintech Partnership	Average CAR (%)
2019	9	2	7	22.2%	30.6%
2020	9	4	5	44.4%	28.7%
2021	9	9	0	100.0%	29.3%
2022	9	9	0	100.0%	29.1%
2023	9	9	0	100.0%	28.7%
2024	9	9	0	100.0%	28.1%
Total	54	42	12	77.8%	29.1%

Source: Data processed from Annual Reports and OJK (2019–2024)

Table 4 illustrates the progressive pattern of fintech partnership adoption among IDX digital banks. In 2019, only 2 of 9 banks (Bank Amar and Jenius/BTPN, 22.2%) had established fintech partnerships. Adoption increased significantly in 2020 (44.4%) and reached 100% in 2021, accelerated by the Covid-19 pandemic that catalyzed digital banking transformation. The average CAR shows a moderate downward trend from 30.6% (2019) to 28.1% (2024), which represents

capital utilization optimization amid massive digital business expansionnot a weakening, but rather a movement toward more efficient capital levels still far above regulatory thresholds.

Panel Data Regression Results and Hypothesis Testing

Prior to estimation, a series of classical assumption tests were conducted. The Jarque-Bera test results show that model residuals are normally distributed (prob. JB > 0.05). VIF tests confirm the absence of multicollinearity (all VIF values < 10). The Glejser test shows no heteroscedasticity problem (sig. > 0.05). The Durbin-Watson test satisfies the autocorrelation-free requirement (dU < DW < 4−dU). Panel model selection through the Chow Test, Hausman Test, and Breusch-Pagan LM Test resulted in the Fixed Effect Model (FEM) as the most appropriate estimator for both models, consistent with significant heterogeneity among IDX digital banks in terms of ownership structure, asset scale, and highly diverse ecosystem strategies.

Table 5. Panel Data Regression Results Fixed Effect Model (N=54, 9 IDX Banks, 2019–2024)

Variable	Coeff.	t-Stat	Sig.	Coeff.	t-Stat	Sig.
	Model 1: ESG (Path a)			**Model 2: CAR (Path b & c')**		
FINTECH (Dummy)	14.823	6.412	0.000***	3.215	2.845	0.006***
ESG Score	—	—	—	0.248	3.124	0.003***
SIZE (Ln Total Assets)	5.612	4.218	0.000***	-2.154	-2.891	0.005***
ROA (%)	3.841	3.512	0.001***	4.562	5.214	0.000***
NPL (%)	-2.415	-2.124	0.037**	-1.845	-2.012	0.048**
Constant	12.435	3.218	0.002***	38.621	8.412	0.000***
R-squared	0.7821			0.8145		
Adjusted R^2	0.7614			0.7938		
F-Statistic (Prob.)	62.145 (0.000)			74.218 (0.000)		

Note: *** significant at α=1%; ** significant at α=5%. Source: Data processed using EViews 9, 2024

Fintech partnership is proven to have a positive and significant effect on the capital resilience of digital banks. This result can be interpreted as fintech partnerships genuinely strengthening the bank's capital position through two main mechanisms: operational cost efficiency that reduces OPEX and fee-based income accumulation that directly adds retained earnings to Tier 1 Capital. This finding is consistent with the predictions of Resource-Based View (Barney, 1991) which postulates that strategic partnerships are a mechanism for acquiring highly valuable capabilities in this case, digital capabilities not easily replicated by competitors. IDX digital banks partnering with fintech, such as Bank Jago through the GoTo/GoPay/Bibit ecosystem, Allo Bank through CT Corp/TransMart, and Superbank through Grab Indonesia, recorded more stable CAR growth compared to the pre-partnership period. This aligns with (Kowalewski et al., 2023) who found that digital partnerships enhance capital buffers and institutional resilience of banks. Managerially, this finding signal that digital bank management should prioritize selecting fintech partners that genuinely impact operational efficiency and income diversification, rather than mere symbolic collaboration for an innovative image.

Fintech partnerships are also proven to have a positive and significant effect on the ESG performance of digital banks. This indicates that integration with the fintech ecosystem organically drives improvements in bank sustainability practices, particularly in the social dimension through expansion of digital financial inclusion to previously unbanked segments, and in the Governance dimension through RegTech adoption that enhances transparency and reporting accountability. This finding reinforces (Cheng et al., 2022)'s argument that digitalization and sustainability are not two separate agendas but mutually reinforcing. The significant increase in average ESG Score

throughout the 2019–2024 period, coinciding with fintech partnership penetration growing from 22.2% to 100%, constitutes concrete empirical evidence of this relationship. The managerial implication is that digital banks should integrate ESG score improvement targets particularly in the Social and Governance dimensions into the fintech partnership performance evaluation framework, so that digital collaboration is measured not only by user growth but also by its contribution to the sustainability agenda.

ESG performance is proven to have a positive and significant effect on the capital resilience of digital banks. This result can be interpreted through two complementary mechanism channels. First, through the funding channel: banks with high ESG scores gain access to lower-cost capital instruments such as green bonds and sustainability-linked loans, which directly reduce the cost of capital and strengthen the capital structure. Second, through the depositor stability channel: as explained by Signaling Theory (Spence, 1973)(Ross, 1977), high ESG performance serves as a signal of prudent governance to depositors and investors, thereby minimizing the risk of bank runs and maintaining the stability of Third-Party Funds (DPK). IDX digital banks with higher ESG scores, such as Jenius/ BTPN and Bank Jago, demonstrably maintained more stable CAR during the observation period, consistent with findings from (Cheng et al., 2022) and (Aevoae et al., 2023). Managerially, this result provides empirical justification for digital bank management to treat ESG investment not merely as a regulatory compliance burden, but as a strategic instrument for long-term capital structure strengthening that is measurable and delivers concrete returns.

ESG performance is proven to partially mediate the relationship between fintech partnerships and digital bank capital resilience. The type of partial mediation found has important interpretive implications: fintech partnerships affect CAR through two simultaneously operating channels a direct channel through operational efficiency and retained earnings accumulation, and an indirect channel through improved ESG performance that subsequently broadens access to low-cost capital and strengthens depositor loyalty. This finding confirms the relevance of Stakeholder Theory (Freeman, 1984) in explaining how sustainability orientation driven by fintech partnerships can simultaneously accommodate the expectations of various stakeholders from depositors, investors, to regulators that ultimately culminates in capital position strengthening. ESG is therefore not merely a complement to digital strategy, but a multiplier effect that amplifies the impact of fintech partnerships on capital resilience, consistent with the (Baron & Kenny, 1986) framework that underpins this study's mediation analysis. The most crucial managerial implication of this finding is that digital banks that pursue digital expansion without a structured ESG commitment will forfeit a significant portion of their capital strengthening potential. For OJK and Bank Indonesia, this finding supports the urgency of policies that encourage digital banks to substantively integrate the ESG agenda not merely formal reporting as part of the prudential supervisory framework in the digital banking era.

Mediation Analysis Results (H4 Test)

Table 6. Bootstrap PROCESS Macro Mediation Analysis Results (5,000 Resampling)

Mediation Path	Indirect / Direct Effect	Z Sobel	BCa CI 95%	Conclusion
FINTECH → ESG → CAR (Indirect Effect / H4)	3.676	3.214	[1.842; 5.510]	Significant (CI ≠ 0) → Mediation confirmed
FINTECH → CAR (Direct Effect c')	3.215	2.845	[0.948; 5.482]	Remains significant → Partial Mediation
FINTECH → CAR (Total Effect c)	6.891	5.412	[4.385; 9.397]	Significant

Source: Data processed using SPSS 26 & PROCESS Macro (Hayes, 2017), 2024

The mediation analysis results show that the indirect effect of fintech partnerships on CAR through ESG is 3.676, with Z Sobel = 3.214 (> 1.96) and BCa CI 95% [1.842; 5.510] not including zero, proving significant mediation. Since the direct effect (c' = 3.215; sig. 0.006) remains significant after

ESG is included as mediator, the type of mediation that occurs is partial mediation. This means fintech partnerships contribute to capital resilience through two simultaneous channels: directly through operational efficiency and retained earnings accumulation; and indirectly through improved ESG performance that broadens access to low-cost capital and maintains depositor loyalty.

CONCLUSION

This study has empirically proven four hypotheses using balanced panel data from 9 IDX-licensed digital banks over the period 2019–2024 (54 observations). First, fintech partnerships are proven to have a positive and significant effect on digital bank CAR. Second, fintech partnerships have a positive and significant effect on ESG performance, particularly the social and governance dimensions. Third, ESG performance has a positive and significant effect on digital bank CAR. Fourth, ESG performance is proven to partially mediate the relationship between fintech partnerships and CAR, with a significant indirect effect based on Bootstrap BCa CI.

The practical implications of this research are significant. For IDX digital bank management, integrating digital expansion through fintech partnerships and commitment to the ESG agenda is empirically proven to strengthen capital structure. For OJK and Bank Indonesia regulators, this study supports the urgency of policies that calibrate digital innovation with sustainable finance principles. For investors, the combination of active fintech partnerships with high ESG scores constitutes a valid leading indicator in assessing the risk profile and capital resilience of IDX-listed digital banks.

Research limitations include: (1) the sample is limited to 9 IDX digital banks (54 obs), resulting in relatively limited statistical power future research is recommended to expand to all OJK digital banks for listed vs. non-listed comparisons; (2) ESG measurement based on independent GRI-DI may contain subjective bias commercial ESG scores (Bloomberg/Refinitiv) are recommended if available; and (3) future research can explore the moderating effect of macroeconomic variables (interest rates, economic growth) and more granular fintech partnership typologies.

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