JURNAL MANAJEMEN & PROFESIONAL
E-ISSN: 2775 - 5967

The Moderation Effect of Bank Operational Efficiency on Digital Banking Health and Stock Performance

Saparila Worokinasih[1], Darma Aji Ramadhani[2], Rani Arifah Normawati[3]
Brawijaya University, Indonesia[1,2], AKN Putra Sang Fajar, Indonesia[3]

CORRESPONDING AUTHOR
Name : Saparila Worokinasih
E-Mail: aparila.fia@ub.ac.id

ARTICLE HISTORY
Received : February, 2026
Accepted : March, 2026
Published : April, 2026

ARTICLE IDENTITY
Vol. 7 No. 1 April 2026

DOI
https://doi.org/10.32815/jpro.v7i1.2912

ABSTRACT
This study aims to examine the influence of bank soundness on stock performance among digital banks in Indonesia. The RGEC framework, which includes Risk Profile, Good Corporate Governance (GCG), Earnings, and Capital, is used to measure how sound a bank is. The study also investigates whether operational efficiency, represented by the BOPO ratio, moderates the relationship between each RGEC component and stock performance. A quantitative approach was employed using secondary data from digital banks listed on the Indonesia Stock Exchange during 2021–2022. After applying the selection criteria, 64 financial statement observations were analyzed using SEM-PLS. The findings demonstrate that solely the GCG component, assessed via management ownership, substantially influences stock performance as indicated by the price-to-earnings ratio (PER). Capital exhibits an unexpected negative influence, while other variables are statistically insignificant. These results expand the literature on bank soundness and stock market performance, particularly within the underexplored context of Indonesia's digital banking sector.

Keywords: Digital Banking Soundness, RGEC, BOPO, Stock Performance

ABSTRACT
Penelitian ini bertujuan menganalisis pengaruh tingkat kesehatan bank terhadap kinerja saham pada bank-bank digital di Indonesia. Tingkat kesehatan bank diukur menggunakan kerangka RGEC, yang mencakup *Risk Profile, Good Corporate Governance* (GCG*), Earnings,* dan *Capital*. Selain itu, penelitian menilai apakah efisiensi operasional yang tercermin dari rasio BOPO mampu memoderasi pengaruh masing-masing komponen RGEC terhadap kinerja saham. Pendekatan kuantitatif digunakan dengan data sekunder bank digital yang terdaftar di Bursa Efek Indonesia selama 2021–2022. Setelah proses seleksi, sebanyak 64 observasi laporan keuangan dianalisis menggunakan SEM-PLS. Hasil penelitian menunjukkan bahwa hanya GCG (diukur dengan Kepemilikan Manajemen) yang berpengaruh signifikan terhadap kinerja saham yang diproksikan dengan PER, sementara *capital* menunjukkan pengaruh negatif yang tidak terduga, dan variabel lainnya menunjukkan hasil tidak signifikan. Temuan ini memberikan kontribusi pada pengembangan literatur mengenai kesehatan bank dan kinerja saham di pasar modal, khususnya dalam konteks bank digital yang masih relatif terbatas pembahasannya di Indonesia.

Keywords: Digital Bank Health, RGEC, BOPO, Stock Performance

INTRODUCTION

Advances in information technology have driven major transformations in various sectors, including the financial and banking industries. This transformation is not merely a technological update; rather, it is a comprehensive reform of strategic models and management systems that encourages deeper integration in the banking industry (Yu & Liu, 2025). Currently, banking is undergoing significant changes in business models, technology utilization, and resource management strategies (Hao et al., 2023). These developments have given rise to the *digital bank* model as a new form of innovation in the financial system. The emergence of digital banks marks a new era in the banking industry.

In Indonesia, the development of digital banks shows a growing trend in line with increasing collaboration between companies in forming an integrated financial services ecosystem. For example, the Djarum Group and Blibli through PT Bank Digital BCA (Blu), the GoTo Group through its ownership of PT Bank Jago Tbk (IDX: ARTO), and the CT Corp Group through PT Allo Bank Indonesia Tbk (IDX: BBHI) (Mayasari, 2023; Zionetha Mailoa & Tjhin, 2023). The emergence of these various digital banks not only expands the range of services available to customers, but also significantly drives the growth of digital transaction activity. Based on Bank Indonesia data, the volume of *mobile banking* transactions during the first eight months of 2025 reached 15.91 billion, an increase of 28.62% compared to the same period last year. The transaction value also increased by 19.45% to IDR 17,613 trillion (Keuangan Kontan, 2025). This surge in transactions reflects a shift in public preference towards digital banking services and increased competition in the banking sector's digitalization.

In the context of this rapid growth, assessing the health of digital banks has become increasingly crucial. This is also mentioned in the Financial Services Authority Circular Letter Number 14/SEOJK.03/2017 concerning the Assessment of the Health of Commercial Banks, which states that innovation in banking products and activities that is not balanced with the implementation of adequate risk management can cause various fundamental problems for banks and the financial system as a whole (OJK, 2017). Business model changes that are fully supported by technology cause digital banks to face different risk characteristics compared to conventional banks (Yu & Liu, 2025), including system-based operational risks, cyber security risks, liquidity risks due to more volatile fund collection models, and greater capital requirements to support long-term technology investments. The complexity of these risks requires regulators, industry players, and investors to have a deeper understanding of the fundamental conditions of digital banks.

For investors in the capital market, bank health has direct relevance to stock performance (Avionita et al., 2023; Christine, 2023; Goh et al., 2022; Guntara et al., 2023; Hermawati & Windiarti, 2025; Ningrum, 2021; Nurwahidah et al., 2019; Safri et al., 2020; Suhadak et al., 2020; Tahmat, 2020; Tantra et al., 2022). This condition is increasingly important for investors because the characteristics of digital banks differ substantially from conventional banks. The digital business model presents a new risk profile, where short-term performance tends to be

lower as a consequence of large technology investments, but promises stronger long-term growth potential. Furthermore, digitalization has blurred the boundaries between industries, meaning that digital banks not only compete with other banks, but also with technology, telecommunications, e-commerce, and cloud service providers. Companies with a strong digital orientation generally have higher valuations and more efficient cost structures. However, these premium valuations can increase the risk *of overpricing*, so investors need to assess whether the value is supported by a clear digital strategy and sustainable innovation, not just narrative. On the other hand, digital banks are also more vulnerable to regulatory changes, security issues, and digital infrastructure dynamics, which add to the challenges for investors in assessing their stock prospects (Drechsler et al., 2025).

Thus, bank health measurements—through frameworks such as *Risk Profile, Good Corporate Governance, Earnings, and* Capital—(OJK, 2017) become important indicators for assessing performance sustainability, which is ultimately reflected in *stock performance*. However, previous empirical results show mixed findings. Some studies report that RGEC indicators have a significant effect on *stock performance*, while others find no effect or inconsistent results, especially in the banking sector with high market dynamics. On the other hand, the role of BOPO as a moderating variable has not been widely studied in research with a digital banking context.

Based on these conditions, this study is important to analyze the effect of bank health based on the RGEC approach on *stock performance* in digital banks listed on the Indonesia Stock Exchange during the 2021–2022 period, as well as to test whether operational efficiency through BOPO can moderate this relationship. This study is expected to provide empirical contributions to the development of literature on financial performance and capital markets in the digital banking industry, as well as provide practical insights for investors, bank management, and regulators in understanding market dynamics amid the digital transformation of banking.

THEORETICAL BACKGROUND

2.1 Signaling Theory

Signaling Theory, as proposed by Spence (1974), states that signals are attributes or actions that can be arranged in such a way as to convey specific information. Individuals send signals through their behavior, communication, and interactions, while organizations send signals through media such as advertisements, recruitment activities, and annual reports. *Signaling Theory* is a relevant conceptual framework for analyzing the dynamics when two parties are involved in market interactions with a degree of information asymmetry (Choudhury, 2024). In the context of corporate management, this theory assumes that corporate financial decisions are reflected in stock returns. For example, the use of debt can be a signal to distinguish good quality companies from poor quality ones (Eldomiaty et al., 2024). Therefore, *signaling* can be considered a way for company managers to indicate to shareholders that the company is implementing beneficial strategies and policies. This approach allows for integration between

corporate financial management and external parties. This theory facilitates the communication process between internal stakeholders—who are generally represented by financial managers—and external stakeholders such as investors, capital owners, and the public (Elwisam et al., 2024).

2.2 Bank Health Rating

Bank health ratings are an important indicator used to assess a bank's ability to perform its functions optimally, maintain financial stability, and fulfill its obligations to customers and related parties. According to PBI No. 13/1/PBI/2011 Article 1 paragraph 4, bank health is the result of an evaluation of a bank's condition that considers the bank's performance using a risk-based approach *(risk-based bank rating)* (Bank Indonesia, 2011). Meanwhile, bank health is evaluated through a *Risk-Based Bank Rating* (RBBR) approach that covers four main aspects, namely *risk profile*, *good corporate governance (GCG)*, *earnings*, and *capital* (RGEC) (SEOJK No.14/SEOJK.03/2017) (OJK, 2017). These factors are assessed quantitatively after considering *judgment* based on the materiality of the assessment factors and the influence of other factors such as the condition of the banking industry and the economy (Tahmat, 2020).

Risk Profile

The *risk profile* aspect assesses the risk exposure inherent in business activities, particularly those of banks (Gambetta et al., 2015), both quantifiable and unquantifiable, which have the potential to affect the bank's financial position (Febrianto & Fitriana, 2020). This assessment is an assessment of inherent risks and the quality of risk management implementation in the bank's operational activities (OJK, 2017). The risk profile components are measured using two indicators, namely credit risk measured by the *non-performing loan* (NPL) ratio and liquidity risk measured by *the loan to deposit ratio* (LDR). NPL is the ratio of non-performing loans to total loans granted (Cynthiasari et al., 2017; Guntara et al., 2023; Safri et al., 2020; Tahmat, 2020). liquidity risk is the ratio resulting from a bank's inability to meet its maturing obligations from cash flow funding sources and from high-quality liquid assets used, without disrupting the bank's financial activities. The liquidity ratio can be measured using *the loan to deposit ratio* (LDR). LDR is a ratio of credit to deposits or savings used to assess a bank's ability to repay withdrawals by depositors by relying on the credit provided as a source of liquidity (Cynthiasari et al., 2017; Ningrum, 2021; Safri et al., 2020; Tahmat, 2020).

Good Corporate Governance

The assessment of corporate governance factors (*Good Corporate Governance*) is an assessment of the quality of bank management in implementing good governance principles (OJK, 2017). The assessment of GCG factors is carried out on the implementation of GCG principles in banks through comprehensive and structured analysis. The analysis is based on relevant data and information to support the evaluation of the structure, processes, and results of governance and their interrelationships. GCG components are measured using two indicators: institutional ownership (IO) and managerial ownership (MO). IO is the ratio of a company's shares owned

by financial institutions or other companies (Avionita et al., 2023). This institutional share ownership can minimize potential conflicts within the company, given that institutional investors are more active when it comes to supervision and control. KM refers to the company's management involved in corporate decision-making (directors or commissioners) who are also shareholders of the company (Nurwahidah et al., 2019). Managerial ownership provides managers with the opportunity to have the same position as shareholders. Ownership by management can give rise to conflicts of interest because, in principle, there are differences in interests between shareholders and company management.

Earnings

Earnings or profitability reflect a bank's ability to generate profits on a sustainable basis, which is assessed through the bank's performance, sources, and profit prospects, taking into account the level, trends, structure, and stability of income. The evaluation of this factor involves various components such as *Return on Assets* (ROA) (Avionita et al., 2023; Tahmat, 2020) and *Return on Equity* (ROE). ROA describes the effectiveness of management in utilizing assets to generate profits (Cynthiasari et al., 2017), while ROE shows the bank's ability to provide profits to shareholders through an increase in net income that could potentially affect dividend payments (Safri et al., 2020). These two indicators are used to assess the extent to which a bank's profitability performance is in the healthy or unhealthy category according to regulatory provisions.

Capital

The assessment of capital factors includes an evaluation of capital adequacy and capital management adequacy. The higher the risk of a bank, the greater the capital that must be provided to anticipate that risk (OJK, 2017). The assessment of capital factors is measured using *the Capital Adequacy Ratio* (CAR) tool. CAR is a ratio that measures the adequacy of a bank's capital, calculated based on the total capital and risk-weighted assets (Cynthiasari et al., 2017; Guntara et al., 2023; Safri et al., 2020; Tahmat, 2020).

Operating Expenses to Operating Income (BOPO)

The Operating Expense to Operating Income Ratio (BOPO) is a company profitability indicator that measures the amount of operating expenses relative to operating income. BOPO provides an overview of the extent to which a company is able to manage its operating expenses. If the BOPO ratio decreases, this indicates that the bank's operational efficiency is increasing and its ability to manage operating costs is becoming more optimal. Good efficiency enables banks to increase profits, thereby potentially providing greater returns to shareholders (Ningrum, 2021).

2.3 *Stock Performance*

Shares are proof of capital ownership by individuals or institutions in a company or limited liability company and serve as proof of participation in a public company (Ningrum, 2021).

Companies issue shares to raise funds that are then used in various investment and operational activities. Basically, investors and company management have the same goal, which is to increase the value of the company as reflected in the performance of its shares. In measuring this performance, commonly used indicators are *price to book value* (PBV) (Nurwahidah et al., 2019) and *price to earning ratio (*PER). The PER ratio is used because the amount of *future returns* will determine the value of the investment (Nuzula & Nurlaily, 2020). Christine (2023) revealed a significant positive relationship between relative valuation—measured using PER and PBV—and stock prices, both in BUKU IV banks and digital banks in Indonesia (Christine, 2023).

2.4 Bank Health Levels and *Stock Performance*

Information on bank health levels is internal company information that has the potential to shape investor perceptions. Each component in the assessment of bank health—*risk profile, good corporate governance, earnings,* and *capital* (RGEC)—produces signals that reflect the quality of risk management, the effectiveness of governance, the ability to generate profits, and capital resilience. These signals are taken into consideration by investors when assessing a bank's prospects and determining their interest in investing. With stronger positive signals reflected in the bank's financial and non- , the potential for increased stock performance through indicators such as PBV and PER also increases.

Previous studies provide empirical evidence of the relationship between bank health and stock performance. The effect of *risk profile* on *stock performance* can be seen from the perspective *of signaling theory*. Low NPL values are a positive signal regarding the effectiveness of credit risk management, thereby increasing investor confidence and driving up stock prices. Conversely, high NPLs are viewed as a negative signal. Empirical findings show varying results. Anggraeni et al. (2019) state that high risk can reduce investor attractiveness. Safri et al. (2020) found that NPL and LDR have a negative impact on stock returns, especially in unfavorable macroeconomic conditions. Ningrum (2021) shows that NPL has a negative effect on stock returns, while LDR has a significant positive effect. However, Avionita et al. (2023) found that NPL has no effect on stock performance.

GCG reflects the quality of the implementation of governance principles within a company. In *Signaling Theory*, good GCG communicates transparency, accountability, and management integrity, thereby increasing investor confidence. Research shows that GCG can affect stock performance. Suhadak et al. (2020) found that GCH has a significant but negative effect on stock returns. Meanwhile, Nurwahidah et al. (2019) found that managerial ownership has a positive effect on PBV. However, Anggraeni et al. (2019) and Avionita et al. (2023) found that GCG does not always have a significant effect on stock prices.

Earnings factors assess a company's ability to generate profits on a sustainable basis. High profitability can be a positive signal that the company is able to manage its resources effectively.

Several studies support this. Anggraheni et al. (2019) found that NIM has a positive effect on stock prices. Safri et al. (2020) found that ROE and BOPO have a positive effect on stocks, but ROA has a negative impact. Conversely, the results of the analysis (Tantra et al., 2022) show that both ROA and ROE have no significant effect on company value, as reflected in PBV.

Capital reflects a bank's capital adequacy in facing risks. A high CAR can be a positive signal to investors that the company has good financial resilience. Avionita et al. (2023) found a positive effect of CAR on stock performance. However, Anggraeni et al. (2019) found that CAR had no effect on stock prices.

BOPO describes a bank's operational efficiency. In the framework of *signaling theory*, a high BOPO indicates inefficiency and sends a negative signal to investors. Ailiyah (2020) showed that BOPO can be a moderating variable in the relationship between ROA and other banking variables. Ningrum (2021) found that BOPO has a significant negative effect on stock value.

Based on the above description, several hypotheses are proposed, namely:
H1: *Risk profile* affects *stock performance*.
H2: *Good corporate governance* affects *stock performance*.
H3: *Earnings* affect *stock performance*.
H4: *Capital* affects *stock performance*.
H5: BOPO moderates the effect of *risk profile* on *stock performance*.
H6: BOPO moderates the effect of GCG on *stock performance*.
H7: BOPO moderates the effect *of earnings* on *stock performance*.
H8: BOPO moderates the effect *of capital* on *stock performance*.

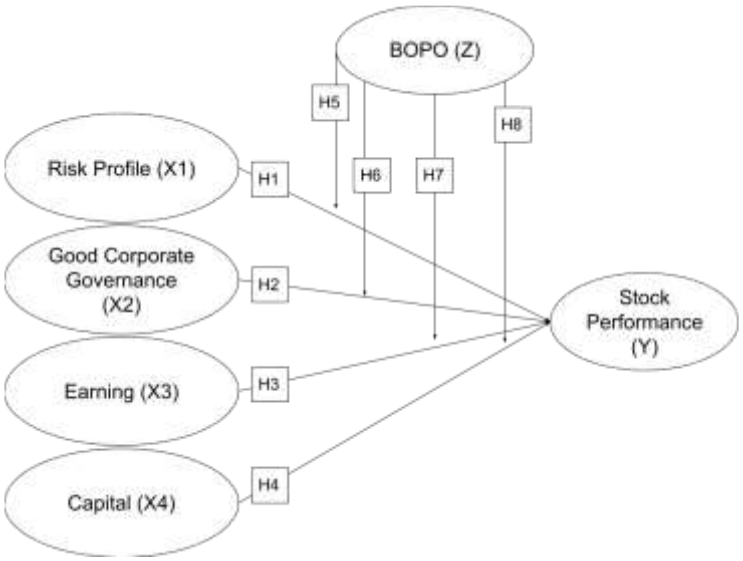

Figure 1. Hypothesis Model
Source : Primary Data (2025)

RESEARCH METHODS

The population in this study includes all banking companies listed on the Indonesia Stock Exchange (IDX). Sample selection was conducted using *purposive sampling* techniques, taking into account criteria relevant to the research objectives, particularly those related to the status of digital transformation of banks and the availability of data during the observation period. The sample selection process was carried out in stages to ensure that the samples obtained had characteristics in line with the analysis requirements. At the end of the selection process, 64 analysis units were obtained. Details of the sample selection stages are presented in Table 1.

Table 1. Research Sample Selection Process

Sample Selection Stage	Number
Total number of banking companies listed on the IDX	47
Banks that meet the criteria for consolidated digital transformation (POJK 12/POJK.03/2021)	8
Banks that have and publish quarterly financial reports and annual reports for 2021–2022	8
Final sample size (banks)	8
Total units of analysis (8 reports × 8 banks)	64

Source : Processed Data (2025)

This study uses the *Structural Equation Modeling–Partial Least Squares* (SEM-PLS) method to analyze the relationships between latent variables constructed in the research model. The variables and measurements in this study are:

Table 2. Variables and Measurements

Latent Variables	Indicators/Manifest Variables	Measure
Risk Profile (X1)	*Non-Performing Loan Ratio (NPL)* (X1.1)	$NPL = \frac{Non-performance\ Loan}{Total\ Credit} \times 100\%$
	Loan to Deposit Ratio (LDR) (X1.2)	$LDR = \frac{Total\ Loan}{Total\ Deposit} \times 100\%$
Good Corporate Governance (X2)	Institutional Ownership (IO) (X2.1)	$KI = \frac{Institusional\ Ownership}{Outstanding\ Shares} \times 100\%$
	Managerial Ownership (MO) (X2.2)	$KM = \frac{Managerial\ Ownership}{Outstanding\ Shares} \times 100\%$
Earnings (X3)	*Return on Assets* (X3.1)	$ROA = \frac{EBIT}{Total\ Assets} \times 100\%$
	Return on Equity (ROE) (X3.2)	$ROE = \frac{EAT}{Total\ Equity} \times 100\%$

Capital (X4)	*Capital Adequacy Ratio* (X4)	$CAR = \frac{Capital}{Risk\ Weighted\ Assets} \times 100\%$
BOPO (Z)	BOPO (Z)	$BOPO = \frac{Total\ Operating\ Expenses}{Total\ Operating\ Income} \times 100\%$
Stock Performance (Y)	*Price to Book Value (PBV)* (Y.1.1)	$PBV = \frac{Price\ per\ Share}{Book\ Value\ per\ Share}$
	Price to Earnings Ratio (PER) (Y.1.2)	$PER = \frac{Price\ per\ Sahre}{Earning\ per\ Share}$

Source : Processed Data (2025)

RESULT AND DISCUSSION

The descriptive statistics presented in Table 3 provide a comprehensive overview of the characteristics of the research data through the presentation of the mean, minimum and maximum values, and standard deviation for each variable indicator. This presentation allows researchers to identify central tendencies, value distribution ranges, and data variability levels, thereby providing a foundation for assessing data distribution and consistency before proceeding to the inferential analysis stage.

Table 3. Descriptive Statistics

Variable		Mean	Max	Min	Standard Deviation
X1	X1.1	2.93	9.24	0.00	2.58
	X1.2	91.05	224.48	8.79	45.99
X2	X2.1	69.76	92.48	30.00	19.63
	X2.2	0.05	0.43	0.00	0.11
X3	X3.1	-1.44	4.73	-19.58	4.28
	X3.2	-9.48	27.64	-146.20	27.44
X4	X4.1	56.88	538.02	14.50	80.95
Z	Z	114.62	287.92	39.94	47.50
Y	Y1.1	7.94	63.42	0.24	11.18
	Y1.2	251.74	3234.78	-4548.19	1014.03

Source : Processed Data (2025)

Outer model evaluation was conducted to assess the suitability of the relationship between indicators and latent constructs in the formative model through two main criteria, namely collinearity testing using VIF values (< 5) and indicator significance testing through outer weight ($p < 0.05$). If the outer weight is not significant, the assessment is continued with the measurement of outer loading (≥ 0.5 or significant at $p < 0.05$).

Based on the VIF test results in Table 4, it can be seen that all indicators have VIF values below 5, except for indicators X3.1 and X3.2 (ROA and ROE), which show VIF values of 8.277. These

values indicate the presence of multicollinearity that must be addressed. To overcome this problem, one of the indicators with a lower *loading factor* value was eliminated. The comparison results show that ROA has *a loading factor* of 2.433, which is higher than ROE, which has a value of -1.747. Thus, indicator X3.2 (ROE) was eliminated from the research model, and the data processing continued to the next stage.

Table 4. VIF Results

Variable		VIF 1	VIF 1
X1	X1.1	1.036	1.036
	X1.2	1,036	1,036
X2	X2.1	1,017	1,017
	X2.2	1,017	1,017
X3	X3.1	8,277	1,000
	X3.2	8,277	
X4	X4.1	1,000	1,000
Z	Z	1,000	1,000
Y	Y1.1	1,002	1,002
	Y1.2	1,002	1,002

Source : Processed Data (2025)

In this study, *outer weight* testing on the formative construct was conducted in stages. At each stage of evaluation, indicators that did not meet the criteria—set based on the lowest *outer weight* and *outer loading* values—were removed from the model. The elimination process was carried out sequentially until all remaining indicators were proven to have adequate contributions and met the eligibility requirements in the formative model.

Table 5. *Outer Weight* Values for Tests 1-4

No	Value	X1		X2		X3		X4	Z	Y	
		X1.1	X1.2	X2.1	X2.2	X3.1	X3.2	X4.1	X1.1	Y1.1	Y1.2
1	Original Sample	-0.692	0.862	0.323	0.906	1.000		1.000	1,000	0.801	0.632
	T Statistics	0.958	1.216	0.744	1.775					1.470	1.160
	P Values	0.338	0.225	0.457	0.077					0.142	0.247
2	Original Sample	-0.454	0.979		1.000	1.000		1.000	1.000	0.544	0.861
	T Statistics	0.667	1.336							1.468	2.122
	P Values	0.505	0.182							0.143	0.034
3	Original Sample		1,000		1,000	1,000		1,000	1,000	0.523	0.874
	T Statistics									1.548	2.282
	P Values									0.122	0.023
4	Sample Origin		1,000		1,000	1,000		1,000	1,000		1,000
	T Statistics										
	P Values										

Source : Processed Data (2025)

Table 6. *Outer Loading* Values for Tests 1-4

No	Value	X1		X2		X3		X4	Z	Y	
		X1.1	X1.2	X2.1	X2.2	X3.1	X3.2	X4.1	X1.1	Y1.1	Y1.2
1	Original Sample	-0.532	0.733	0.439	0.947	1.000		1.000	1.000	0.776	0.600
	T Statistics	0.861	1.223	0.971	1.817					1.435	0.990
	P Values	0.390	0.222	0.332	0.070					0.152	0.323
2	Original Sample	-0.272	0.895		1,000	1,000		1,000	1,000	0.510	0.839
	T Statistics	0.468	1.414							1.260	1.776
	P Values	0.640	0.158							0.208	0.076
3	Original Sample		1,000		1,000	1,000		1,000	1,000	0.488	0.853
	T Statistics									1.305	1.879
	P Values									0.193	0.061
4	Sample Origin		1,000		1,000	1,000		1,000	1,000		1,000
	T Statistics										
	P Values										

Source : Processed Data (2025)

Structural model evaluation (*inner model*) was conducted to assess the strength and direction of relationships between latent variables in the study. This test utilized the R-Square value to examine the ability of exogenous variables to explain endogenous variables, as well as to test the significance of relationships between constructs through t-statistics values obtained from the *bootstrapping* process. The results of SEM-PLS data processing show that the *stock performance* variable has an R-Square value of 0.424 ( ). This finding indicates that *stock performance* can be explained by the variables *of risk profile*, *good corporate governance*, *earnings*, and capital by 42.4%, while the remaining 57.6% of variance is influenced by other factors outside the research model.

Hypothesis testing in this study was conducted to assess the effect of exogenous variables on endogenous variables using a significance criterion of α = 5%. A hypothesis is considered significant if the p-value ≤ 0.05. Based on the results of structural model estimation through *bootstrapping*, only two relationships were found to be significant, namely the effect of *good corporate governance* on *stock performance* and the effect *of capital* on *stock performance*. Meanwhile, the *risk profile* and *earnings* variables did not show a significant effect on *stock performance*. In addition, all moderating interactions with BOPO were not proven to be significant, so that BOPO was unable to strengthen or weaken the relationship between exogenous variables and *stock performance* in this research model.

Table 7. Research Hypothesis

Hypothesis	Original Sample	T Statistics (|O/STDE|)	P-Values	Description
Risk_Profile → Stock_Performance	0.134	1.393	0.164	Rejected
Good Corporate Governance → Stock Performance	1.009	2,690	0.007	Accepted
Earnings → Stock_Performance	0.013	0.052	0.958	Rejected
Capital → Stock_Performance	-1.515	2.309	0.021	Accepted
*Risk Profile*BOPO → Stock_Performance*	0.239	1.233	0.218	Rejected
*Good Corporate Governance*BOPO → Stock_Performance*	-0.146	0.235	0.814	Rejected
*Earnings * BOPO → Stock_Performance*	0.00	0.000	1.00	Rejected
*Capital * BOPO → Stock_Performance*	0.766	1.069	0.286	Rejected

Source : Processed Data (2025)

The results of hypothesis testing in this study show that the dynamics of the relationship between variables are not entirely in line with theoretical expectations. First, the hypothesis of the effect of *Risk Profile* (measured using LDR) on *Stock Performance* (H1) shows insignificant results, with a t-statistic value of 1.393 and a p-value of 0.164. Empirically, these findings support the findings of Alpiani et al. (2022), who tested the effect of LDR on stock *returns*. The results of this study are also consistent with the findings of Avionita et al. (2023) and Goh et al. (2022), who reported that *Risk Profile* has no effect on *Stock Performance*. However, other research findings show that *Risk Profile* has a negative effect on *Stock Performance*, as found in previous studies by (Ningrum, 2021; Safri et al., 2020). This indicates that the level of risk represented by LDR is not always perceived by the market as a signal that affects bank stock value. In other words, investors may not consider LDR fluctuations as a key indicator in assessing stock performance prospects, especially during the research period marked by policy changes and dynamic industry conditions. The difference in results from several previous studies may be due to variations in market context and changes in investor behavior, which now pays more attention to aspects of digitalization, growth quality, and bank capital resilience than traditional liquidity indicators such as LDR.

The next hypothesis suggests that GCG has a positive and significant effect on stock performance. In this study, GCG is represented by the KM variable, while the KI indicator is eliminated at the model evaluation stage because it does not meet the eligibility criteria. This elimination confirms that management involvement as a shareholder is more relevant and better able to explain variations in stock performance—measured using PER—than ownership by institutional investors. The analysis results show that the effect of GCG on *Stock Performance*

is significant, with an *original sample* value of 1.009*, a t-statistic* of 2.690, and *a p-value* of 0.007. Thus, the hypothesis is accepted. This finding indicates that good governance mechanisms send a positive signal to investors regarding the stability, quality of management, and strategic direction of the company, especially in the banking sector, which is highly dependent on public trust. Empirically, the findings of this study are in line with the results of Nurwahidah et al. (2019), which show that managerial ownership has a positive effect on company value as measured by PBV. In contrast, the study by Alpiani et al. (2022), which also measured KM on *stock returns,* showed a negative and insignificant effect. Meanwhile, Anggraeni et al. (2019) and Avionita et al. (2023) state similar findings.

Contrary to theoretical expectations, which generally state that profitability is positively related to stock prices, the results of this study show that *earnings* do not have a significant effect on *stock performance*. The very small coefficient—based on measurements using ROA—and its insignificance indicate that periodic profits are not a strong enough signal for investors to make investment decisions. One possible reason for this is that the market tends to pay more attention to earnings quality, revenue sustainability, or company growth prospects than to short-term absolute earnings figures. In this context, ROA as a profitability indicator is not yet able to comprehensively reflect investor expectations of company value. These results are in line with the research by Goh et al. (2022), which found that ROA has no effect on stock returns. On the other hand, the results of this study do not support the previous findings by Alpiani et al. (2022), Ningrum (2021), and Safri et al. (2020), which stated that *earning* factors have a positive effect on *stock performance*.

An interesting finding emerged in the *capital* variable, which had a significant but negative effect on stock performance. The results of this study are not in line with the studies by Safri *et al* (2020) (Alpiani et al., 2022) and Avionita *et al* (2023), in which the *Capital* factor can positively affect *Stock Performance.* The difference between this study's results and previous findings can be explained by the specific conditions during the study period, which coincided with the enactment of new OJK regulations through POJK Number 12 of 2021 concerning the Implementation of Financial Technology Services. This regulation encourages banks, including those moving towards service digitalization, to increase their minimum capital in order to strengthen the resilience of their capital structure and reduce operational risks in the digital era. This capital increase requirement may create different perceptions among investors.

Furthermore, all interaction variables involving BOPO as a moderator did not show a significant effect. These results indicate that operational efficiency as represented by BOPO neither strengthens nor weakens the relationship between exogenous variables and *stock performance*. Based on these findings, it can be concluded that management's ability to manage operations efficiently does not affect the influence of bank health factors on stock performance. Based on the research data, the average BOPO value of companies is 114.62%. These results indicate that companies' operational costs are greater than their revenues. This contradicts *signaling theory,*

which states that the BOPO efficiency indicator can be a positive signal for a company's stock performance. Empirically, this condition is not in line with the research by (Syafina, 2019) where BOPO can be a moderating variable between CAR, NPF, and FDR factors on bank profitability proxied by ROA.

CONCLUSION

This study aims to analyze the effect of risk profile, good corporate governance (GCG), earnings, and capital on stock performance, as well as to examine the role of BOPO as a moderating variable. The test results show that only two variables are proven to be significant, namely the effect of GCG and capital on stock performance. GCG has a positive and significant effect, confirming the role of good governance as a signal of trust for investors. Conversely, the capital variable has a significant but negative effect, which is likely influenced by the obligation to increase minimum capital in accordance with POJK Regulation Number 12 of 2021.

Risk profile and *earnings* variables do not significantly affect *stock performance*, indicating that traditional risk and profitability indicators are not fully interpreted by the market as signals of stock performance in the context of the research period. In addition, BOPO is not proven to moderate the relationship between exogenous variables and stock performance, so that operational efficiency neither strengthens nor weakens the influence of bank health on stock performance.

Overall, the findings of this study indicate that the dynamics of the banking stock market during the period of regulatory transition and digitization exhibit response patterns that do not always align with theoretical expectations or the results of previous studies. To produce stronger generalizations, further exploration of sample characteristics and market conditions is needed, as well as refinement of measurement indicators and research instruments in subsequent studies.

REFERENCES

Alpiani, D., Purbayati, R., Setiawan, S., & Nugraha, D. S. (2022). Assessing Banking Soundness of Infobank15 Index' Categories: The Impact of RGEC on Stock Return. *Indonesian Journal of Economics and Management*, *3*(1), 146–160. https://doi.org/10.35313/ijem.v3i1.3895

Avionita, V., Nurhanifah, A., Fitri, F., & Nurhasanah, N. A. (2023). Analysis of The Influence of RGEC, BI Rate, and Inflation on Stock Return. *Accounthink: Journal of Accounting and Finance*, *8*(01). https://doi.org/10.35706/ACC.V8I01.8710

Bank Indonesia. (2011). *Peraturan Bank Indonesia Nomor 13/1/PBI/2011 tanggal 5 Januari 2011 tentang Penilaian Tingkat Kesehatan Bank Umum*. https://www.bi.go.id/id/publikasi/peraturan/Pages/pbi_130111.aspx

Choudhury, M. M. (2024). Signaling Theory: An Approach to Organizational Behavior Research. *Journal of Accounting, Business and Management (JABM)*, *31*(2).

Christine, D. (2023). Comparison Of The Effectiveness of Relative Valuation Ratios (PE and PBV) In Predicting Share Prices Book Iv Banking And Digital Banks. *Journal of Economics*, *12*(02), 2023. http://ejournal.seaninstitute.or.id/index.php/Ekonomi

Cynthiasari, V., Muhammad, M., Maria, S., Wi, G., & Np, E. (2017). ANALISIS KINERJA PERBANKAN DENGAN PENDEKATAN RGEC (RISK PROFILE, GOOD CORPORATE GOVERNANCE, EARNING, AND CAPITAL) UNTUK MENGETAHUI TINGKAT KESEHATAN BANK (Studi pada Bank Umum yang Terdaftar di BEI Periode 2013-2015). In *Jurnal Administrasi Bisnis (JAB)|Vol* (Vol. 48, Issue 1).

Drechsler, K., Müller, Prof. Dr. S., & Wagner, Prof. Dr. H.-T. (2025). The "digital" premium: Why does digitalization drive stock returns? *Journal of Economic Dynamics and Control*, 105217. https://doi.org/10.1016/j.jedc.2025.105217

Eldomiaty, T., Azzam, I., Afifi, K. T. H., & Rashwan, M. H. (2024). An Alignment of Financial Signaling and Stock Return Synchronicity. *Journal of Risk and Financial Management*, *17*(4). https://doi.org/10.3390/jrfm17040162

Elwisam, Muhani, Ria, Digdowiseiso, K., Kartini, Juliandi, D., & Saputra, D. (2024). Implementation of Signalling Theory In Financial Management: A Bibliometric Analysis. *Revista de Gestao Social e Ambiental*, *18*(3). https://doi.org/10.24857/rgsa.v18n3-092

Febrianto, H. G., & Fitriana, A. I. (2020). Assessing The Health of Banks Using Risk Profile, Good Corporate Governance, Earnings, And Capital Analysis Methods In Islamic Banks In Indonesia. *Islamic Banking: Journal of Islamic Banking Thought and Development*, *6*(1). https://doi.org/10.36908/isbank

Gambetta, N., Zorio-Grima, A., & García-Benau, M. A. (2015). Complaints management and bank risk profile. *Journal of Business Research*, *68*(7), 1599–1601. https://doi.org/10.1016/j.jbusres.2015.02.002

Goh, T. S., Henry, H., Syawaluddin, S., Erika, E., & Albert, A. (2022). Factors Affecting Stock Returns with Stock Price as a Moderating Variable (Case Study of Banking Companies Listed on the IDX). *Owner*, *6*(1), 593–599. https://doi.org/10.33395/owner.v6i1.612

Guntara, A., Arifah Tara, N. A., & Wardani, L. (2023). PENGARUH KESEHATAN BANK TERHADAP HARGA SAHAM DENGAN PROFITABILITAS SEBAGAI VARIABEL INTERVENING PADA PERUSAHAAN PERBANKAN TAHUN 2017-2021. *JMM UNRAM - MASTER OF MANAGEMENT JOURNAL*, *12*(2), 126–140. https://doi.org/10.29303/jmm.v12i2.772

Hao, J., Peng, M., & He, W. (2023). Digital finance development and bank liquidity creation. *International Review of Financial Analysis*, *90*, 102839. https://doi.org/10.1016/J.IRFA.2023.102839

Hermawati, A., & Windiarti, S. (2025). Pengaruh CAR, LDR, BOPO dan NPL terhadap ROA dengan Tipe Bank sebagai Variabel Moderasi (Studi pada Bank Umum Konvensional dan Bank Umum Syariah Periode 2019–2023). *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, *7*(11). https://doi.org/10.47467/alkharaj.v7i11.9616

Keuangan Kontan. (2025). *Transaksi Digital Perbankan Melejit, Mobile Banking Jadi Pendorong Utama*. https://keuangan.kontan.co.id/news/transaksi-digital-perbankan-melejit-mobile-banking-jadi-pendorong-utama

Mayasari, S. (2023). *Competition in Indonesia's Digital Banking Sector Intensifies*. https://keuangan.kontan.co.id/news/peta-persaingan-bisnis-bank-digital-di-indonesia-kian-sengit

Ningrum, S. A. (2021). Analysis of the Influence of BOPO, NPL, and LDR on Stock Returns Through ROA in the Banking Sector Listed on the Indonesia Stock Exchange from 2015 to 2020. *Journal of Social Technology*, *1*(10), 1,218-1,233. https://doi.org/10.59188/JURNALSOSTECH.V1I10.219

Nurwahidah, N., Husnan, L. H., & AP, I. N. N. (2019). The Effect Of Managerial Ownership On Company Value With Capital Structure And Profitability As Intervening Variables In Real Estate Companies On The Indonesian Stock Exchange. *JMM UNRAM - MASTER OF MANAGEMENT JOURNAL*, *8*(4), 363–377. https://doi.org/10.29303/jmm.v8i4.460

Nuzula, N. F., & Nurlaily, F. (2020). *Fundamentals of Investment Management*. UB Press. https://books.google.co.id/books?id=xQH8DwAAQBAJ&pg=PA9&source=gbs_selected_pages&cad=1#v=onepage&q&f=false

OJK. (2017). *Financial Services Authority Circular Letter Number 14/SEOJK.03/2017 concerning the Assessment of Commercial Bank Health Levels*.

Safri, H., Prayoga, Y., Raja, D., & Hendry, S. M. (2020). *Analysis of The Bank's Health Level And Return of Stock of Banking In The Indonesian Stock Exchange*. www.bi.go.id

Suhadak, S., Mangesti Rahayu, S., & Handayani, S. R. (2020). GCG, financial architecture on stock return, financial performance and corporate value. *International Journal of Productivity and Performance Management*, *69*(9), 1813–1831. https://doi.org/10.1108/IJPPM-09-2017-0224

Syafina, L. (2019). FAKTOR-FAKTOR YANG MEMPENGARUHI PROFITABILITAS BANK UMUM SYARIAH (BUS) DI INDONESIA DENGAN BOPO SEBAGAI VARIABEL MODERATING. *Jurnal Riset Akuntansi Dan Bisnis*, *19*(1), 105–117. https://doi.org/10.30596/jrab.v19i1.4381

Tahmat, T. (2020). PENGARUH TINGKAT KESEHATAN BANK TERHADAP RETURN SAHAM BANK BUMN PERIODE 2009-2018. *EKUITAS (Jurnal Ekonomi Dan Keuangan)*, *4*(3), 373–395. https://doi.org/10.24034/j25485024.y2020.v4.i3.4261

Tantra, A. R., Dwi Jayanti, F., Ani, D. A., & Indarto, B. A. (2022). The Effect of ROA, ROE and EPS on Company Value (On construction and Building Sector Companies). *The 1st Virtual International Conference on Economics, Law and Humanities*, *1*(1).

Yu, Z., & Liu, J. (2025). The digital revolution in banking: Unpacking risk management in the age of transformation. *International Review of Economics and Finance*, *103*. https://doi.org/10.1016/j.iref.2025.104444

Zionetha Mailoa, B., & Tjhin, V. U. (2023). AN EMPIRICAL STUDY ON THE USAGE OF DIGITAL BANK IN INDONESIA. *Jurnal Cahaya Mandalika*, *4*(1), 431–439. https://doi.org/https://doi.org/10.36312/jcm.v4i1.1360