

The Role of Enterprise Risk Management, Intellectual Capital, and Sustainability Report in Enhancing Firm Value: Profitability as a Moderator in Indonesian Pharmaceutical Companies (2017–2023)

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ABSTRACT

This study examines the effect of Enterprise Risk Management, Intellectual Capital, and Sustainability Report on firm value, with profitability measured by Return on Assets as a moderating variable. The research is motivated by the increasing importance of non-financial disclosure in assessing firm value, particularly in high-risk industries such as pharmaceuticals. The objective of this study is to evaluate whether Enterprise Risk Management, Intellectual Capital, and Sustainability Report contribute significantly to firm value and whether profitability enhances this relationship. The research was conducted on pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the period 2017 to 2023. This study applied a quantitative approach using panel data regression to analyze direct relationships and moderated regression analysis to assess the moderating effect. The findings indicate that Enterprise Risk Management, Intellectual Capital and Sustainability Report each have a positive and significant impact on firm value. However, none of these variables shows a significant effect on profitability. Furthermore, return on assets demonstrates a positive and significant influence on firm value, but does not moderate the relationship between Enterprise Risk Management, Intellectual Capital, and Sustainability Report with firm value. These results suggest that although non-financial indicators such as enterprise risk management, intellectual capital, and sustainability reporting are critical in enhancing market valuation, they do not automatically translate into short-term financial performance, nor are their impacts conditioned by profitability levels. The study highlights the importance of aligning non-financial strategies with financial performance to ensure long-term value creation.

Keywords: Enterprise Risk Management; Intellectual Capital; Sustainability Report; Firm Value; Profitability

Received: 08 May 2025

Accepted: 09 June 2025

Available online: 30 August 2025

DOI: 10.61242/ijabo.25.540

JEL Classifications: G32, O34, M14



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INTRODUCTION

In today's dynamic business environment, firm value has emerged as a vital metric reflecting a company's long-term sustainability and attractiveness to investors. Relying solely on financial information is no longer sufficient to assess corporate performance (Holland, 2002; Siregar & Safitri, 2019 in Christophorus *et al.*, 2023). Notable corporate failures such as Enron, Toshiba, and PT Kimia Farma despite positive financial disclosures demonstrate that financial reports alone cannot guarantee continuity. Consequently, non-financial disclosures such as Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting have gained growing attention in recent years due to their role in enhancing transparency, investor confidence, and long-term firm value (Eccles, Ioannou, & Serafeim, 2014; COSO, 2020; Sakti & Desmiza, 2024).

Enterprise risk management enables firms to identify and mitigate complex risks, especially under conditions of polycrisis simultaneous and reinforcing threats such as climate change, geopolitical tensions, and digital disruption (World Economic Forum, 2024). Effective enterprise risk management practices improve operational resilience and investor trust (Hoyt & Liebenberg, 2011; COSO, 2020). Likewise, Intellectual Capital comprising human, structural, and relational capital supports innovation and competitive advantage, particularly in knowledge-intensive industries such as pharmaceuticals (Pulic, 1998; Chen *et al.*, 2005). Meanwhile, sustainability reports serve as a medium for companies to disclose their environmental, social, and governance initiatives, which are crucial for maintaining stakeholder legitimacy and market credibility (GRI, 2013; Deloitte, 2024).

However, the impact of Enterprise Risk Management (ERM), Intellectual Capital (IC), and Sustainability Reporting (SR) on firm value remains a subject of ongoing debate in the literature. ERM is defined as a structured and enterprise-wide approach to identifying, assessing, and managing risks that may hinder the achievement of strategic and operational goals (COSO, 2020). IC represents the sum of intangible resources, including human capital, organizational processes, and stakeholder relationships, that enhance a firm's innovation and value creation capabilities (Chen, Cheng, & Hwang, 2005). Meanwhile, SR refers to the voluntary disclosure of a firm's environmental, social, and governance (ESG) performance, which serves to improve transparency, build stakeholder trust, and reinforce corporate accountability (Eccles, Ioannou, & Serafeim, 2014; Global Reporting Initiative, 2013). Despite their theoretical contributions, empirical findings regarding the effects of these non-financial disclosures on firm value have been mixed across industries and contexts (Sakti & Desmiza, 2024; Sejati & Prastiwi, 2015). While some studies report significant positive effects (e.g., Christophorus *et al.*, 2023; IGN Agung *et al.*, 2022), others find non-significant or even inconsistent results (e.g., Siregar & Safitri, 2019; Tampubolon, 2024). Further, the moderating role of profitability, proxied by Return on Assets, in these relationships remains ambiguous. Several empirical findings suggest return on assets strengthens the enterprise risk management value link (Istiqomah & Rusgowanto, 2024), while others reveal no moderation effect (Munawwaroh *et al.*, 2021; Qudratulloh & Desmiza, 2024).

This study addresses these discrepancies by examining the direct influence of Enterprise Risk Management, Intellectual Capital, and Sustainability Report on firm value, as well as the moderating role of Return on assets. The focus is on pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange between 2017 and 2023 a sector highly exposed to regulatory change, raw material volatility, and innovation-driven competition, especially during and after the COVID-19 pandemic. Despite growing interest in sustainability and risk management, the integration of these factors into financial performance remains underexplored in emerging markets like Indonesia.

The novelty of this research lies in its sector-specific analysis, its integration of non-financial and financial indicators, and its longitudinal approach covering pre- and post-pandemic conditions. The findings are expected to offer practical recommendations for corporate governance and strategic alignment while contributing new insights to the literature on firm valuation and disclosure practices in developing economies.

LITERATURE REVIEW

Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting are increasingly recognized as critical non-financial drivers of firm value and performance. These elements influence market perception, operational resilience, and long-term competitiveness, particularly when aligned with strong financial outcomes. This study draws on four theoretical perspectives: Signaling Theory, Stakeholder Theory, Agency Theory, and Contingency Theory to explore the interplay between Enterprise Risk Management, Intellectual Capital, and Sustainability Report, profitability, and firm value.

Signaling Theory

Signaling Theory (Spence, 1973) suggests that firms can reduce information asymmetry between management and external stakeholders by transmitting credible signals that reflect internal quality. In this context, Enterprise Risk Management (ERM) disclosures serve as signals of sound risk governance and proactive risk mitigation strategies, indicating managerial competence and organizational stability. Intellectual Capital (IC) reporting reflects the firm's investment in knowledge-based assets, such as skilled human resources, innovation capacity, and strong stakeholder relationships signaling long-term value creation. Sustainability Reporting (SR), through transparent disclosure of environmental, social, and governance (ESG) practices, signals corporate responsibility and ethical orientation. Together, these non-financial disclosures enhance investor trust and stakeholder confidence, which can positively influence firm valuation and market performance (Eccles, Ioannou, & Serafeim, 2014; Hoyt & Liebenberg, 2011).

Stakeholder Theory

Stakeholder Theory (Freeman, 1984) extends a firm's accountability to broader stakeholder groups. SR functions as a medium for reporting ESG performance, which, when transparently presented, contributes to legitimacy and long-term support (Clarkson *et al.*, 2011). However, symbolic or superficial reporting may yield limited value (Sejati & Prastiwi, 2015).

Agency Theory

Agency Theory (Jensen & Meckling, 1976) highlights conflicts between principals and agents, particularly under conditions of asymmetric information. Enterprise Risk Management, Intellectual Capital, and Sustainability Report disclosures can serve as governance tools that reduce agency costs and align managerial interests with those of shareholders. Yet, their effectiveness may vary across firms, depending on governance quality and implementation (Munawwaroh *et al.*, 2021).

Contingency Theory

Contingency Theory (Donaldson, 2001) argues that no single management strategy is universally effective; its impact depends on contextual factors. This study positions

profitability as a moderating variable that may influence the strength of the relationship between Enterprise Risk Management, Intellectual Capital, and Sustainability Report, and firm value. While firms with strong profitability may better utilize enterprise risk management or Intellectual Capital, empirical findings remain inconsistent. For instance, Istiqomah and Rusgowanto (2024) found a positive moderating effect of profitability on enterprise risk management and firm value, whereas Munawwaroh *et al.* (2021) reported no significant interaction.

Firm Value

Firm Value reflects a company's performance as perceived by the market, typically measured through stock price, which represents investor confidence and expected future earnings (Mayangsari, 2018; Septiyuliana, 2016). One widely used indicator is Tobin's Q, a ratio comparing the market value of a firm's assets to their replacement cost (Tobin, 1969). A value above 1 indicates strong market expectations, while a value below 1 suggests undervaluation or perceived risk. Tobin's Q is considered more informative than traditional book value ratios, as it captures both current asset efficiency and future growth potential (Ghosh & Jain, 2014).

Enterprise Risk Management

Enterprise risk management is defined as an integrated framework for identifying and managing organizational risks (COSO, 2020). It aims to reduce uncertainty and enhance long-term performance. While Hoyt and Liebenberg (2011) support its positive link to firm value, other studies highlight implementation gaps, particularly in firms with weak strategic alignment (Munawwaroh *et al.*, 2021).

Intellectual Capital

Intellectual Capital, introduced by Stewart (1998) and operationalized via Pulic's VAIC model (1998), captures intangible assets such as human, structural, and relational capital. These assets drive innovation and competitiveness. Empirical studies show mixed results: while Chen *et al.* (2005) and Sakti and Desmiza (2024) report positive effects on firm value, others (e.g., Rahmadhanty & Darsono, 2020) find no significant financial impact.

Sustainability Report

Sustainability report, structured through frameworks like GRI, provides transparency on ESG practices. Eccles *et al.* (2014) argue that robust sustainability disclosures reduce risk premiums and enhance capital market access. Nonetheless, the quality and credibility of such disclosures are crucial, as mere formal compliance may fail to affect firm value (Sejati & Prastiwi, 2015).

Return On Asset

Return on assets, reflecting profitability, is expected to condition the effectiveness of Enterprise Risk Management, Intellectual Capital, and Sustainability Report. Firms with high profitability may have greater resources and managerial capacity to leverage these practices. However, studies offer contrasting results. Fitriyani (2022) found that profitability strengthens the Intellectual Capital firm value link, while Qudratulloh and Desmiza (2024) reported otherwise.

In summary, existing literature highlights the complex and context-dependent nature of Enterprise Risk Management, Intellectual Capital, and Sustainability Report in

driving firm value. This study contributes by integrating these theories and testing the moderating role of profitability within the pharmaceutical sector in an emerging market context.

The research model is illustrated in the following diagram:

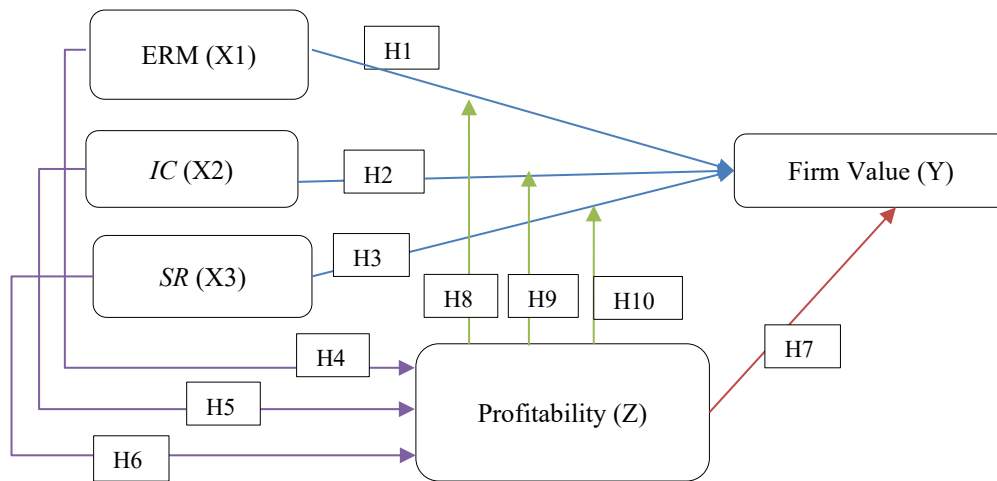


Figure 1. Research Constellation
 Source: Own Compilation, 2025

Research Hypotheses

Based on the theoretical review and conceptual framework above, the research hypotheses are as follows:

- H1: Enterprise risk management has a positive effect on firm value.
- H2: Intellectual Capital has a positive effect on firm value.
- H3: Sustainability report has a positive effect on firm value.
- H4: Enterprise risk management has a positive effect on profitability.
- H5: Intellectual Capital has a positive effect on profitability.
- H6: Sustainability report has a positive effect on profitability.
- H7: Profitability has a positive effect on firm value.
- H8: Profitability moderates the relationship between enterprise risk management and firm value.
- H9: Profitability moderates the relationship between Intellectual Capital and firm value.
- H10: Profitability moderates the relationship between the sustainability report and firm value.

RESEARCH METHOD

This study was conducted on pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange from 2017 to 2023. The pharmaceutical industry was selected due to its exposure to operational and regulatory risks, making it relevant for analyzing the roles of Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting in enhancing firm value. A quantitative approach with a causal-associative design was used to examine the effects of Enterprise Risk Management, Intellectual Capital, and Sustainability Report on firm value, with profitability serving as a moderating variable.

The research population included all pharmaceutical firms listed on the IDX during the study period. Using purposive sampling, nine companies were selected based on the completeness and consistency of their annual and sustainability reports, resulting in 63

firm-year observations (9 companies over 7 years). Secondary data were obtained from official company websites and the IDX, including financial statements and disclosure reports.

Enterprise risk management was measured using a disclosure index based on the COSO ERM Framework (2020). IC was assessed using the VAICTM model by Pulic, which includes capital employed, human capital, and structural capital efficiency. SR was measured using a disclosure index aligned with the Global Reporting Initiative. Firm value was measured using Tobin's Q, and profitability was measured using return on assets.

Data were collected through document analysis and analyzed using EViews. Statistical methods included descriptive analysis, classical assumption testing (normality, multicollinearity, autocorrelation, heteroscedasticity), panel regression modeling (based on Chow, Hausman, and Lagrange Multiplier tests), and Moderated Regression Analysis to assess the moderating role of return on assets. Table 1 below presents the operationalization of variables as a reference for measurement.

Table 1. Operationalization of research variables

Variable	Type of Variable	Indicators	Measurement Scale	Source
Enterprise Risk Management (X1)	Independent	8 ERM Dimensions: internal environment, objective setting, event identification, risk assessment, risk response, control activities, information & communication, monitoring	Ratio (Index ERMD) Desender (2007)	Published in annual reports
Intellectual Capital (X2)	Independent	VAIC TM (VACA, VAHU, STVA): 1. VA = OUT – IN 2. VACA = VA / CE 3. VAHU = VA / HC 4. STVA = SC / VA 5. VAIC TM = VACA + VAHU + STVA	Ratio (VAIC TM) Pulic (1998)	Calculated by the researcher
Sustainability Report (X3)	Independent	GRI G3 Guidelines: economic, environmental, human rights, labor practices & decent work, society, product responsibility	Ratio (SDRI) Elkington (1997), Christophorus <i>et al.</i> (2023)	Published in annual reports
Firm Value (Y)	Dependent	Tobin's Q = (Market value of equity + total liabilities) / total assets	Ratio Tjandrakirana & Monika (2014)	Calculated by the researcher
Profitability (Z)	Moderating	ROA = (Net Income / Total Assets) x 100%	Ratio (%) Brigham & Houston (2019)	Calculated by the researcher

Source: Own compilation (2025)

Data Analysis Technique

This study applies quantitative data analysis using panel data regression techniques supported by SPSS and EViews software. The analysis process consists of several sequential steps to ensure the validity and reliability of the empirical model.

Descriptive Statistical Analysis

This step provides a general overview of the data through metrics such as mean, standard deviation, minimum, and maximum values for each research variable, including

Enterprise Risk Management, Intellectual Capital, Sustainability Report, Firm Value (Tobin's Q), and Profitability (ROA).

Classical Assumption Testing

Before regression analysis, classical assumptions are tested to ensure model validity. These include: Normality test (e.g., using histogram and skewness-kurtosis values); Multicollinearity test (Variance Inflation Factor, VIF); Autocorrelation test (Durbin-Watson test); Heteroscedasticity test (e.g., Glejser test).

Panel Regression Model Selection

To determine the most appropriate model for analysis, three types of panel regression models are compared: Common Effect Model; Fixed Effect Model; Random Effect Model; The Chow test, Hausman test, and Lagrange Multiplier test are used to decide which model best fits the data.

Panel Data Regression Analysis

This technique is used to test hypotheses H1 through H7. Regression is conducted to analyze the direct influence of Enterprise Risk Management, Intellectual Capital, and Sustainability Report on firm value (Tobin's Q), as well as their effect on profitability (ROA).

Moderated Regression Analysis

To examine the role of profitability (ROA) as a moderating variable (hypotheses H8 to H10), the Moderated Regression Analysis (MRA) method is applied. This involves including interaction terms between ROA and the independent variables ($ERM \times ROA$, $IC \times ROA$, $SR \times ROA$) in the regression model.

Hypothesis Testing

Each hypothesis is tested using t-statistics and p-values, with a significance level of 5% ($\alpha = 0.05$). The results determine whether the independent variables and interaction terms have significant effects on the dependent variable. The final model is assessed based on goodness-of-fit indicators and explanatory power (e.g., Adjusted R-squared), ensuring the robustness of the conclusions drawn from the data.

RESEARCH RESULTS

Results of Descriptive Statistical Test

Table 2. Descriptive statistical test result

Statistic	ERM	IC	SR	TOBINS_Q	ROA
Mean	0,670627	3,694527	0,666203	1,924236	0,173001
Median	0,666117	3,698271	0,663412	1,924332	0,164589
Maximum	0,957385	4,054352	0,948968	2,192720	0,294329
Minimum	0,403436	3,309013	0,457630	1,659232	0,116136
Std. Dev.	0,126004	0,159476	0,135666	0,131027	0,039378
Skewness	0,169566	-0,169414	0,356396	-0,070218	-1,065884
Kurtosis	2,623979	2,685122	2,243106	2,494381	4,102480
Jarque-Bera	0,673058	0,561624	2,837523	0,722854	14,908040
Probability	0,714245	0,755170	0,242014	0,696682	0,000579
Sum	42,249500	232,755200	41,970790	121,226900	10,899060
Sum Sq. Dev.	0,984375	1,578626	1,141128	1,064421	0,096137
Observations	63	63	63	63	63

Source: Own compilation (2025)

Based on Table 1 result for descriptive statistical test result the average value of Enterprise Risk Management was 0.67, indicating a moderate level of risk governance implementation among sampled firms. Intellectual Capital had a mean of 3.69, suggesting that pharmaceutical firms had relatively consistent intellectual resource efficiency. The average Sustainability Reporting score was 0.67, reflecting a growing adoption of environmental, social, and governance disclosures. Tobin's Q, as a proxy for firm value, averaged 1.92, implying that most firms had a market value above their book value. Lastly, Return on Assets averaged 0.17, denoting moderate profitability levels. The Jarque-Bera test revealed that all variables Enterprise Risk Management, Intellectual Capital, and Sustainability Report, and firm value followed a normal distribution ($p > 0.05$).

Results of Classical Assumption Test

To validate the robustness of the regression models, classical assumption tests were conducted. The normality test showed a p-value of 0.5048 for the residuals, confirming that they are normally distributed. Skewness and kurtosis values were also within acceptable ranges. The Durbin-Watson statistic of 2.418 indicated no presence of autocorrelation among residuals. Multicollinearity was assessed using the Variance Inflation Factor (VIF), with all values falling well below the threshold of 10, confirming the absence of linear dependence among the independent variables. Furthermore, the Breusch-Pagan-Godfrey test yielded a p-value of 0.4852, indicating homoskedasticity or constant variance of residuals across observations. Together, these results support the reliability of the subsequent regression analysis.

Panel Regression Model Selection

To determine the most appropriate panel regression approach, a series of model comparison tests were conducted for three models. In Model 1, which examines the impact of Enterprise Risk Management, Intellectual Capital, and Sustainability Report on firm value, the Chow test suggested the rejection of the Common Effects Model in favor of the Fixed Effects Model. However, the subsequent Hausman test indicated no significant difference between Fix Effects Model and the Random Effects Model, leading to the selection of REM for analysis. Similar procedures in Model 2 (ERM, IC, SR → ROA) and Model 3 (ROA → Tobin's Q) also resulted in REM being the preferred model. For the Moderated Regression Analysis, the Chow test showed that CEM was the most appropriate model, and hence, the Hausman and LM tests were deemed unnecessary.

Regression Results and Hypothesis Testing

Table 3. Regression and hypothesis testing result

Model 1 : ERM, IC, SR -> Tobins'Q					T Table
Variable	Coefficient	Prob	t-statistic	R Squared	df = 63-4-1= 58
ERM	0,411644	0,0000	6,768693	0,800895	T Table = 1,672
IC	0,344636	0,0000	7,735031		
SR	0,598409	0,0000	10,02687		
Model 2 : ERM, IC, SR -> ROA					
Variable	Coefficient	Prob	t-statistic	R Squared	
ERM	-0,0164724	0,6115	-0,510702	0,720419	
IC	0,004100	0,8643	0,171703		
SR	0,171528	0,0009	3,502786		

Model 3 : ROA -> Tobins'Q				
Variable	Coefficient	Prob	t-statistic	R Squared
ROA	0,86472	0,0279	2,251871	0,727655

Source: Eviews 12, 2025

Based on the table 3, the regression analysis consisted of three models to examine the effects of Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting on firm value (proxied by Tobin's Q) and profitability (ROA), as well as the direct impact of ROA on firm value. All hypotheses were tested at a 5% significance level with a critical t-value of 1.672 (df = 58).

In Model 1, the results show that Enterprise Risk Management, Intellectual Capital, and Sustainability Report each have a statistically significant and positive effect on firm value. Enterprise risk management yielded a coefficient of 0.4116 with a t-statistic of 6.77 and a p-value of 0.0000. Since the t-statistic exceeds the critical value, the effect of ERM on firm value is statistically significant, indicating that better risk governance leads to higher market valuation. Similarly, IC had a coefficient of 0.3446 and a t-statistic of 7.74 ($p = 0.0000$), which confirms that intellectual capital plays a valuable role in enhancing firm value. The strongest effect was observed in SR, which had a coefficient of 0.5984 and a t-statistic of 10.03 ($p = 0.0000$), suggesting that sustainability disclosure contributes substantially to improving firm value. The model's R-squared value of 0.8009 indicates that 80.09% of the variance in firm value is explained by these three variables. Based on the t-test results, H1, H2, and H3 are supported.

Model 2 examines the effect of ERM, IC, and SR on firm profitability (ROA). The findings indicate that only SR has a statistically significant effect on profitability. The coefficient for SR is 0.1715 with a t-statistic of 3.50 ($p = 0.0009$), surpassing the critical t-value. This suggests that sustainability reporting enhances firm profitability, potentially by improving operational efficiency and stakeholder trust. In contrast, ERM has a coefficient of -0.0165 with a t-statistic of -0.51 ($p = 0.6115$), and IC has a coefficient of 0.0040 with a t-statistic of 0.17 ($p = 0.8643$); both values fall below the critical threshold, indicating no significant impact on profitability. The model's R-squared is 0.7204, meaning it explains 72.04% of the variation in ROA. Therefore, only H6 is supported, while H4 and H5 are not.

Model 3 investigates the effect of profitability (ROA) on firm value. The results indicate that ROA has a positive and statistically significant impact on Tobin's Q, with a coefficient of 0.8647 and a t-statistic of 2.25 ($p = 0.0279$), which exceeds the critical t-value. This supports the notion that firms with higher profitability are more highly valued in the market. The R-squared value of 0.7277 demonstrates that profitability accounts for 72.77% of the variation in firm value. Thus, H7 is supported by the data.

Moderated Regression Analysis (MRA) Test

Table 4. Moderated Regression Analysis (MRA) result

Variable	Coefficient	Prob	R Squared
X1Z	0,310273	0,8683	0,862554
X2Z	- 0,414357	0,7438	
X3Z	0,900723	0,8349	

Source: Eviews 12, 2025

Based on Table 4 MRA result show interaction term for $ERM \times ROA$ had a coefficient of 0.3103 ($p = 0.8683$), $IC \times ROA$ had -0.4144 ($p = 0.7438$), and $SR \times ROA$ had 0.9007

($p = 0.6385$). These findings indicate that profitability does not significantly moderate the effect of ERM, IC, or SR on firm value. While ROA has a significant direct effect on firm value, its moderating role is statistically unsupported. This suggests that ROA functions as an independent predictor rather than a contingent factor in enhancing the effect of the independent variables. The resulting regression model demonstrated a high explanatory power ($R^2 = 0.8625$)

DISCUSSION

This study provides evidence on the influence of Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting on firm value and profitability within the Indonesian pharmaceutical sector. The findings are discussed in relation to relevant theories and prior research.

The positive and significant effect of ERM on firm value supports both agency theory and signaling theory, suggesting that strong risk governance enhances investor confidence. However, its lack of impact on profitability implies that ERM's financial benefits may be realized in the long term, aligning with the COSO framework and earlier findings (Hoyt & Liebenberg, 2011; Pagach & Warr, 2011).

IC significantly improves firm value but not profitability, consistent with the resource-based view (Barney, 1991). While intangible assets contribute to market perception and long-term value (Chen *et al.*, 2005), they may not yield immediate financial returns, especially if not effectively leveraged operationally (Marr *et al.*, 2004). SR demonstrates the strongest and most consistent influence, positively affecting both firm value and profitability. This reinforces stakeholder theory (Freeman, 1984), highlighting how transparent ESG disclosures enhance legitimacy, reduce risk, and improve performance (Clarkson *et al.*, 2011; Eccles *et al.*, 2014).

Profitability (ROA) also has a significant positive effect on firm value, supporting signaling theory (Spence, 1973), as it reflects managerial effectiveness and future growth potential. However, the moderation analysis shows that ROA does not strengthen the relationship between ERM, IC, or SR and firm value, challenging assumptions of contingency theory (Donaldson, 2001). This suggests that profitability acts more as an independent performance driver.

The findings partially support contingency theory, which suggests that the effectiveness of organizational strategies depends on contextual factors such as firm characteristics and environmental uncertainty (Donaldson, 2001). Although ERM and IC significantly influence firm value, the absence of a moderating effect from profitability suggests that these non-financial drivers create value independently of short-term financial performance. This challenges the assumption that profitability necessarily enhances the impact of intangible strategies, particularly in sectors like pharmaceuticals, where innovation and regulatory pressures are more critical.

Overall, the results confirm that ERM, IC, and SR are important contributors to firm value, with SR also positively affecting profitability. Profitability remains a strong predictor of firm value, yet it does not condition the effects of ERM, IC, or SR. These findings emphasize the strategic role of ESG disclosure and performance alignment in enhancing market valuation, especially in emerging markets.

CONCLUSIONS

This study investigated the influence of Enterprise Risk Management, Intellectual Capital, and Sustainability Reporting on firm value, with profitability examined both as

a direct predictor and a moderating variable. Using panel data from pharmaceutical firms listed on the Indonesia Stock Exchange between 2017 and 2023, the findings reveal several key conclusions.

First, ERM, IC, and SR each have a significant and positive effect on firm value (Tobin's Q). This confirms that strategic risk management, intellectual resource efficiency, and transparent ESG disclosure are integral to building firm valuation in capital markets. Among the three, SR exhibited the strongest impact, highlighting the rising importance of sustainability practices in shaping investor perceptions.

Second, only SR significantly affected profitability, while ERM and IC did not show direct effects on profitability. This suggests that the financial benefits of SR are more immediate and measurable, whereas the impacts of ERM and IC may require longer time horizons or more effective operational integration.

Third, profitability itself was found to positively and significantly affect firm value, consistent with signaling theory. However, moderation analysis showed that profitability did not significantly moderate the relationship between ERM, IC, and SR with firm value, indicating that its role is more as an independent driver rather than a conditional enhancer.

Overall, this study contributes to the understanding of how intangible and strategic non-financial factors influence firm performance, particularly in emerging markets. The results underline the importance of integrating sustainability initiatives and leveraging intangible assets to enhance both financial and market outcomes.

This study is not without limitations. First, the sample is limited to nine pharmaceutical companies listed on the IDX, which may restrict the generalizability of the findings to other industries or countries. Second, the use of profitability as the sole moderating variable may not capture the full spectrum of financial conditions that influence firm value. Third, while the study spans seven years, it does not fully account for lag effects or non-linear relationships, which may exist between non-financial disclosures and market performance. Lastly, the reliance on secondary data and disclosure indices may not reflect the depth or authenticity of implementation in practice.

Future studies could extend this analysis to other sectors or regions to enhance generalizability and uncover industry specific patterns. Additional moderating or mediating variables such as corporate governance or firm size may offer deeper insights into the relationship between financial and non-financial performance. Employing longitudinal or dynamic models is also recommended to capture delayed effects of ERM and IC. Lastly, qualitative or mixed-method approaches may enrich understanding of how firms implement ERM, manage intellectual capital, and pursue sustainability, particularly in emerging markets.

REFERENCES

- Agung, I. G. N., Anggraini, P., & Surya, R. (2022). Pengaruh intellectual capital terhadap nilai perusahaan: Studi pada perusahaan farmasi. *Jurnal Akuntansi dan Keuangan*, 13(2), 123–132.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of financial management* (15th ed.). Cengage Learning.
- Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, 6(2), 159–176. <https://doi.org/10.1108/14691930510592771>
- Christophorus, A., Suhardi, S., & Arfan, M. (2023). Sustainability report, GCG, dan kinerja keuangan. *Jurnal Riset Manajemen dan Bisnis (JRMB)*, 8(1), 45–55.

- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2011). Does it really pay to be green? Determinants and consequences of proactive environmental strategies. *Journal of Accounting and Public Policy*, 30(2), 122–144. <https://doi.org/10.1016/j.jaccpubpol.2010.09.013>
- Committee of Sponsoring Organizations of the Treadway Commission. (2020). *Enterprise risk management—Integrating with strategy and performance*. <https://www.coso.org>
- Deloitte. (2024). *Sustainability and climate disclosures: 2024 global report*. <https://www2.deloitte.com>
- Desender, K. A. (2007). The relationship between the ownership structure and the role of the board. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.987988>
- Donaldson, L. (2001). *The contingency theory of organizations*. Sage Publications.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of a corporate culture of sustainability on corporate behavior and performance. *Harvard Business School Working Paper*, No. 12-035. <https://doi.org/10.2139/ssrn.1964011>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Ghosh, S., & Jain, A. (2014). Firm value, corporate governance, and agency costs: Evidence from India. *International Journal of Economics and Finance*, 6(6), 116–127. <https://doi.org/10.5539/ijef.v6n6p116>
- Global Reporting Initiative. (2013). *G4 sustainability reporting guidelines*. <https://www.globalreporting.org>
- Hoyt, R. E., & Liebenberg, A. P. (2011). The value of enterprise risk management. *Journal of Risk and Insurance*, 78(4), 795–822. <https://doi.org/10.1111/j.1539-6975.2011.01413.x>
- Istiqomah, F., & Rusgowanto, T. (2024). Moderasi ROA pada pengaruh ERM terhadap nilai perusahaan. *Jurnal Akuntansi & Keuangan Indonesia*, 21(1), 87–99.
- Marr, B., Schiuma, G., & Neely, A. (2004). The dynamics of value creation: Mapping your intellectual performance drivers. *Journal of Intellectual Capital*, 5(2), 312–325. <https://doi.org/10.1108/14691930410533722>
- Mayangsari, R. (2018). Pengaruh struktur modal, keputusan investasi, kepemilikan manajerial, dan komite audit terhadap nilai perusahaan sektor aneka industri yang listing di Bursa Efek Indonesia periode 2012–2016. *Jurnal Ilmu Manajemen (JIM)*, 6(4), 1–10.
- Munawwaroh, M., Saputri, N. D., & Santosa, P. W. (2021). ERM dan nilai perusahaan dengan ROA sebagai variabel moderasi. *Jurnal Manajemen Indonesia*, 15(2), 114–125.
- Pagach, D., & Warr, R. (2011). The characteristics of firms that hire chief risk officers. *Journal of Risk and Insurance*, 78(1), 185–211. <https://doi.org/10.1111/j.1539-6975.2010.01378.x>
- Pulic, A. (1998). Measuring the performance of intellectual potential in knowledge economy. *Proceedings of the 2nd McMaster World Congress on Measuring and Managing Intellectual Capital*. Hamilton, Canada.
- Qudratulloh, A., & Desmiza, R. (2024). The role of profitability in moderating sustainability reporting and firm value. *Jurnal Ilmu Ekonomi dan Bisnis Islam*, 6(1), 22–34.
- Rahmadhanty, A., & Darsono, D. (2020). Intellectual capital dan kinerja keuangan. *Jurnal Ilmu & Riset Akuntansi*, 9(6), 1–17.
- Sakti, R. P., & Desmiza, R. (2024). Intellectual capital, firm value, and the moderating role of profitability. *Jurnal Keuangan dan Perbankan*, 28(1), 1–12.
- Sejati, R. H., & Prastiwi, A. (2015). Sustainability reporting terhadap nilai perusahaan. *Jurnal Akuntansi Multiparadigma*, 6(3), 428–443.
- Siregar, S. V., & Safitri, T. N. (2019). Sustainability report terhadap nilai perusahaan. Dalam Christophorus, A., Suhardi, S., & Arfan, M. (2023). *Jurnal Riset Manajemen dan Bisnis (JRMB)*, 8(1), 45–55.
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Stewart, T. A. (1998). *Intellectual capital: The new wealth of organizations*. Doubleday.
- Tjandrakirana, C., & Monika, I. (2014). Pengaruh kepemilikan manajerial terhadap nilai perusahaan dengan kinerja keuangan sebagai variabel intervening. *Jurnal Manajemen Bisnis*, 11(2), 178–196.
- Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, 1(1), 15–29. <https://doi.org/10.2307/1991374>
- World Economic Forum. (2024). *Global risks report 2024*. <https://www.weforum.org/reports/global-risks-report-2024>