

# Technology firm value: The role of intellectual capital, enterprise risk management, and sustainability reporting

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## ABSTRACT

This study examines the impact of intellectual capital, enterprise risk management, and sustainability reporting on the value of technology firms listed on the Indonesia Stock Exchange. Furthermore, this study investigates the moderating effect of profitability on the relationships above. A purposive sampling technique was employed to select a sample of 20 technology companies. Secondary data was collected from 2021 to 2023, yielding 60 observations. Moderated regression analysis (MRA) within a panel data framework was adopted for data analysis in this study. The research findings indicate that only intellectual capital exhibits significant positive associations with firm value. Conversely, enterprise risk management and sustainability reporting do not substantially influence firm value. Profitability could not moderate the relationships between intellectual capital, sustainability reporting, and firm value. Nevertheless, it moderated the relationship between enterprise risk management and firm value. The implications of these findings are expected to enrich both the theoretical and practical knowledge of firm value.

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## 1. Introduction

The technology sector has emerged as one of the most rapidly growing and dynamic economic sectors in recent years, driven by rapid technological innovation, high consumer demand, and digital advancements. However, technology companies in Indonesia have experienced fluctuations in their stock prices over the past five years, causing fluctuations in company value. The technology industry refers to a collection of companies operating in the information and communication technology field, encompassing software development, hardware, and the provision of related services, including the internet, consulting, and electronic component production (Bursa Efek Indonesia, 2024b).

Historical performance data from the technology stock index reported by the Indonesia Stock Exchange from 2018 to 2024 shows a substantial surge in 2021. Notably, technology stocks exhibited an extraordinary increase of 707.6% compared to the previous year. This surge was driven by the increased use of hardware and software in smartphone applications to support productivity during the COVID-19 pandemic. However, this upward trend was short-lived. The technology sector index suffered a precipitous decline of 42.6% in 2022, with subsequent drops of 14.1% and 24.3% in 2023 and April 2024, respectively (Bursa Efek Indonesia, 2024a). Consequently, the decrease in the stock price index also led to a decline in firm value, intensifying competition within the technology sector and compelling companies to enhance their performance through practical strategies to maximize firm value and shareholder prosperity.

The market valuation of a company is a direct reflection of its ability to generate sustainable returns for its investors. It quantifies the company's ability to efficiently transform assets and operations into economic value (Yanti & Ferdinan, 2024). Firm value is a reflection of investor perception of management's effectiveness in resource allocation, as evidenced by the company's share price (Silvia Indrarini, 2019). It comprehensively encompasses all facets of a firm's governance, decision processes, operational outcomes, and future potential, as appraised both internally and by external stakeholders (Malini et al., 2021). A company's valuation is contingent upon its operational performance, as evidenced by its share price. Market supply and demand dynamics, shaped by public sentiment towards the company's achievements, directly influence this valuation (Perangin-angin & Ginting, 2021). Tobin's Q provides a comparative measure of a firm's value by juxtaposing its market value with its book value (Chung & Pruitt, 1994). The fundamental objective of a company is to optimize enterprise value, which is quantified by factors such as the company's share price (Hanun et al., 2023). A company's sustainable growth is not solely dependent on its financial performance (single bottom line). Still, it is also influenced by various non-financial elements such as intellectual capital, enterprise risk management, and sustainability reporting (Hanun et al., 2023).

Intangible assets such as knowledge, skills, and innovations, collectively known as intellectual capital, are strategic resources that drive value creation and competitive differentiation within organizations (Indah Sari & Gantino, 2023). The utilization of the Value-Added Intellectual Coefficient (VAIC) is central to Pulic's approach for assessing intellectual capital (G. Puspita & Wahyudi, 2021). Efficient management of intellectual capital will lead to an increase in a company's market value (Hanun et al., 2023). Consistent empirical findings, as evidenced by studies conducted by B. C. Pratama et al. (2020), Putri & Wirajaya (2023), G. Puspita & Wahyudi (2021), and Nopagia et al. (2024) indicate a significant positive correlation between intellectual capital and firm value. However, the findings of Hanun et al. (2023) present a contradictory result, as no significant influence was found between the two variables.

The classification of corporate risk frequently impacts investors' decisions, highlighting the necessity for organizations to improve their risk management by adopting an enterprise risk management framework (Rahmi & Wijaya, 2022). Enterprise risk management is a mechanism for identifying and controlling risks that may affect a business entity, aligned with the entity's risk tolerance (Petricia & Sakti, 2024). The Enterprise Risk Management Disclosure Index (ERMDI) is a metric for measuring the extent of enterprise risk management Herawati & Riswandari (2022). Empirical evidence provided by B. C. Pratama et al. (2020), Herawati & Riswandari (2022), and Patricia & Sakti (2024) supports the idea that enterprise risk management has a positive and substantial impact on firm value. This finding, however, contrasts with the results of Rahmi & Wijaya (2022), who found no significant impact of enterprise risk management on firm value.

Sustainability reporting entails a corporate disclosure of the principal effects of its operations on the economic, environmental, and social spheres (M. F. G. P. Pratama et al., 2019). The escalating trend of sustainability reporting attests to its status as a critical benchmark for evaluating the extent to which businesses can align their operations with environmental, social, and governance principles (Saleh, 2020). Sustainability reporting disclosures attract investor interest and enhance stakeholder confidence in the entity's future sustainability, thereby increasing firm value (Muslim et al., 2024). The research findings of M. F. G. P. Pratama et al. (2019) and N. Puspita & Jasman (2022) suggest that sustainability reports can influence firm value. Meanwhile, the research results of Novia & Halmawati (2022) indicate that sustainability reports don't significantly impact firm value.

Moreover, profitability substantially impacts the valuation of a corporation. Profitability is a financial measure that gauges a company's effectiveness in converting inputs into profits (Pramudita & Budiwitjaksono, 2024). The profitability of a firm can be evaluated through the calculation of the Return on Assets (ROA) ratio. This ratio is calculated by dividing net income after taxes by total assets (Pramudita & Budiwitjaksono, 2024). The sustainability of a company's business is highly dependent on its ability to generate sustained profits (Munawwaroh et al., 2021). Given the importance of profitability for firm value, this study chooses this variable as a moderating variable. Research findings by Amirullah et al. (2021) and Muasiri & Sulistyowati (2021) indicate that profitability acts as a moderating variable between intellectual capital and firm value, while Pramudita & Budiwitjaksono (2024) research indicates that there is no interaction effect of profitability on the association between intellectual capital and firm value. Furthermore, empirical results by Pamungkas & Meini (2023) show that profitability serves as a moderating variable in the relationship between sustainability reporting and firm value. In contrast, studies by Prasetyo (2024) and N.

Puspita & Jasman (2022) found no evidence to suggest that profitability moderates the relationship between sustainability reporting and firm value.

Limited research has been conducted on analyzing non-financial and sustainability factors influencing firm value, particularly in the Indonesian technology sector. By amalgamating these variables within a singular study, this research distinguishes itself from prior investigations and enriches the existing corpus of knowledge. Given the identified research gaps and phenomena, this study aims to empirically examine the relationship between intellectual capital, enterprise risk management, and sustainability reporting and their subsequent impact on firm value. Profitability will be employed as a moderating variable to elucidate this relationship further. Hopefully, this research can provide deeper insights into the determinants of firm value, thereby supporting better investment decision-making for potential investors and the public. Furthermore, this study is anticipated to provide a framework for corporate executives, particularly those in the technology industry, to develop more robust competitive business strategies.

## 2. Research Method

This research is a quantitative causal-associative study. The purpose of this study is to use statistical methods to determine the strength of any correlations that may exist between the variables under investigation. (Sugiyono, 2021). The research population is defined as all technology firms listed on the Indonesia Stock Exchange up to and including 2023, resulting in a population size of 44 companies. This study utilized annual financial and sustainability reports, acquired from both [www.idx.co.id](http://www.idx.co.id) and the companies' official websites, as secondary data. The data collection period extended from 2021 to 2023. The following criteria were used to select technology firms listed on the Indonesia Stock Exchange using a purposive sampling method: 1) inclusion in the 2023 stock exchange listing; 2) complete annual report disclosure for the 2021-2023 period; and 3) regular publication of sustainability reports during the same period. A sample of 20 companies was selected from an overall population of 44 eligible companies. By observing each company for three years, the final sample comprised 60 observations.

Intellectual capital, enterprise risk management, and sustainability reporting are employed as independent variables in this research. Firm value serves as the dependent variable. Additionally, this study examines the interaction effects among the research variables, with profitability rolling as a moderator. A comprehensive operationalization of these variables is provided in the subsequent section.

**Table 1.** Measurement of research variables

Variables	Notation	Measurement
Firm Value	FV	Tobin's Q = $\frac{\text{Market Value of Equity} + \text{Debt}}{\text{Total Asset}}$ (Chung & Pruitt, 1994).
Intellectual Capital	IC	VAIC = VAHU + VACA + STVA (Pulić, 1998). Value Added = Out – In VACA = Value Added/Capital Employee VAHU = Value Added/Human Capital STVA = Structural Capital/Value Added
Enterprise Risk Management	ERM	ERMDI = $\frac{\text{Disclosed ERM items score}}{\text{Expected total ERM items score}}$ A binary coding scheme was employed, assigning a value of 1 to each disclosed ERM item and 0 to each undisclosed ERM item. The expected number of disclosed ERM items was 20 (Pertiwi & Suhartini, 2022).
Sustainability Report	SR	SRDI = $\frac{\text{Disclosed SR items score}}{\text{Expected total SR items score}}$ A binary coding scheme was employed, assigning a value of 1 to each disclosed SR item and 0 to each undisclosed SR item. The total expected number of disclosed SR items was 71 (Nugrahani et al., 2023).
Profitability	ROA	ROA = $\frac{\text{Net Profit}}{\text{Total Asset}}$ (Pramudita & Budiwitjaksono, 2024).

The research utilizes Moderated Regression Analysis (MRA) with panel data to examine the relationships among variables. MRA is particularly suitable for analyzing how a moderating variable can influence the relationship between two or more other variables (Putri & Wirajaya, 2023). Statistical analysis was performed utilizing Eviews 12 software. In this research, the Chow, Hausman, and Lagrange Multiplier tests were employed to select the most appropriate model for the regression analysis. The Jarque-Bera test was utilized for normality, the correlation matrix for multicollinearity, and the Glejser test for heteroscedasticity to ensure the fulfillment of classical assumptions. The regression model equation in this study is as follows.

Model 1:

$$FV_{it} = \alpha + \beta_1 IC_{it} + \beta_2 ER_{Mit} + \beta_3 SR_{it} + e_{it} \dots\dots\dots (1)$$

Model 2:

$$FV_{it} = \alpha + \beta_1 IC_{it} + \beta_2 ER_{Mit} + \beta_3 SR_{it} + \beta_3 ROA_{it} + \beta_4 (IC_{it} * ROA_{it}) + \beta_5 (ER_{Mit} * ROA_{it}) + \beta_6 (SR_{it} * ROA_{it}) + e_{it} \dots\dots\dots (2)$$

Description:

- FV = Firm Value  
 $\alpha$  = Constant Term  
 $\beta_1 - \beta_6$  = Regression Coefficients  
 IC<sub>it</sub> = Intellectual Capital  
 ER<sub>Mit</sub> = Enterprise Risk Management  
 SR<sub>it</sub> = Sustainability Reporting  
 ROA<sub>it</sub> = Profitability  
 e<sub>it</sub> = Error Term  
 i = Cross section  
 t = Time series

## Hypothesis Development

### Intellectual Capital and Firm Value

Strategic resources that drive value creation and competitive differences inside firms include intangible assets, such as knowledge, skills, and inventions, collectively known as intellectual capital (Indah Sari & Gantino, 2023). According to Pulic, intellectual capital can be measured using the Value-Added Intellectual Coefficient (VAIC) model, which assesses the effectiveness of value added as a result of a company's intellectual capital capacity (G. Puspita & Wahyudi, 2021). The principal elements of intellectual capital assessed by the VAIC model are: 1) Value Added Human Capital (VAHU), which measures the extent to which investments in human capital development impact a company's performance; 2) Value Added Capital Employed (VACA), which measures the amount of value added that can be obtained from invested capital; and 3) Structural Capital Value Added (STVA) quantifies the degree of involvement of structural capital in innovation and new product creation.

According to the resource-based view theory, intellectual capital, as an intangible asset, can serve as a sustainable competitive advantage. This is due to its ability to create unique value and attract investor interest, thereby increasing firm value. Intellectual capital constitutes a crucial intangible asset of a corporation that profoundly influences its performance; thus, proper utilization of intellectual capital enhances firm performance and elevates its value (Saleh, 2023). Research by B. C. Pratama et al. (2020), Putri & Wirajaya (2023), G. Puspita & Wahyudi (2021), dan (Nopagia et al., 2024) indicates that intellectual capital can have a significant positive impact on firm value. H<sub>1</sub>: Intellectual capital has a positive impact on firm value.

### Enterprise Risk Management and Firm Value

Enterprise risk management is a mechanism for identifying, evaluating, and controlling risks that affect an organization's objectives (Petricia & Sakti, 2024). The goal is to ensure that the organization can achieve its objectives within its risk appetite. ERM not only emphasizes risk reduction but also capitalizes on the opportunities presented by these risks to enhance the organization's total value (Judijanto, 2024). Enterprise risk management can be quantified via the Enterprise Risk Management Disclosure Index (ERMDI) (Herawati & Riswandari, 2022). ERMDI indicators are quantitative and qualitative metrics that convey details about an enterprise's risk management policies, processes, and practices in yearly reports (Elamer et al., 2020). The measurement of risk management disclosure is based on the COSO ERM 2017 framework, which includes 20 critical principles across five components: governance and culture (5 principles), strategy and objective-setting (4 principles), performance (5 principles), review and revision (3 principles), and information, communication, and reporting (3 principles) (Pertiwi & Suhartini, 2022).

Based on signalling theory, a company's transparency in disclosing its risk management may be perceived as a favorable indication by the market. ERM constitutes a significant informational cue for investors to evaluate the efficacy of a company's risk management strategies. Shareholders can be better educated to make well-informed investment decisions and reduce information asymmetry when ERM-related

disclosures are included in annual reports (Kristiani & Hadiprajitno, 2023). This signal can enhance investor confidence and ultimately increase firm value. Research by M. F. G. P. Pratama et al. (2019), Herawati & Riswandari (2022), and Petricia & Sakti (2024) demonstrate that enterprise risk management positively influences firm value. H<sub>2</sub>: Enterprise risk management has a positive impact on firm value.

### Sustainability reporting and firm value

Sustainability is a multifaceted concept encompassing three interdependent dimensions: environmental stewardship, social equity, and economic prosperity (Raihan, 2024). Sustainability reporting is a process where businesses disclose the most significant impacts of their operations on the economy, environment, and society (Novia & Halmawati, 2022). The extent of sustainability report disclosure can be quantified using the Sustainability Reporting Disclosure Index (SRDI) (Muslim et al., 2024). SRDI measures disclosures on human rights, the environment, the economy, and product responsibility (Novia & Halmawati, 2022). The measurement is based on the disclosure index guidelines of POJK No.51/POJK.03/2017, which includes sustainability strategy and governance (30 items) and sustainability performance (41 items), totalling 71 items (Nugrahani et al., 2023).

Based on signalling theory, the transparency of information within sustainability reports can be construed as a positive indication of a firm's dedication to sustainability and corporate social responsibility. It is perceived as having good prospects, which can increase the company's value. Sustainability reporting attracts and increases shareholder confidence in the entity's future sustainability, ultimately increasing company value (Muslim et al., 2024). Research by M. F. G. P. Pratama et al. (2019) and N. Puspita & Jasman (2022) confirms that sustainability reports can positively influence firm value. H<sub>3</sub>: Sustainability reporting has a positive impact on firm value.

### Profitability moderates the influence of intellectual capital on firm value

Profitability is a financial measure that gauges a company's effectiveness in converting inputs into profits. A company's profitability level can be measured through the ROA ratio, which is obtained by dividing net income after tax by total assets (Pramudita & Budiwitjaksono, 2024). A high ROA is a testament to a firm's efficient asset utilization, enhancing profitability. This operational excellence reflects sound asset management and the company's capacity to generate substantial revenue (Batistuta et al., 2024).

Consistent with signalling theory, superior profitability can be interpreted as evidence of the efficient deployment of intellectual capital within a firm. Such a positive signal will likely attract investor interest and enhance firm value. This finding aligns with the research Amirullah et al. (2021), Muasiri & Sulistyowati (2021), and Pamungkas & Meini (2023), which collectively indicate that profitability acts as a moderator in the impact of intellectual capital on firm value. H<sub>4</sub>: Profitability can moderate the influence of intellectual capital on firm value.

### Profitability moderates the influence of enterprise risk management on firm value

A company's ability to generate sustained profits enables management to make better strategic decisions in the face of various risks (Munawwaroh et al., 2021). According to signalling theory, companies with high profitability and robust ERM implementation will produce a highly positive signal, thereby increasing investor confidence in the company's current performance and future potential. Conversely, if a company's profitability is low, the effectiveness of ERM in enhancing firm value will decrease. H<sub>5</sub>: Profitability can moderate the influence of enterprise risk management on firm value.

### Profitability moderates the influence of sustainability reporting on firm value

The confluence of robust profitability and a comprehensive sustainability report can be interpreted as a compelling signal to investors. Empirical evidence provided by Pamungkas & Meini (2023) supports the notion that profitability acts a moderator variabel in the impact of sustainability reporting on firm value. H<sub>6</sub>: Profitability can moderate the influence of sustainability reporting on firm value.

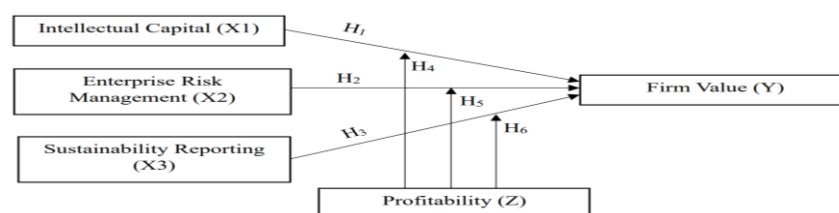


Figure 2. Conceptual framework

### 3. Result and Discussion

#### Descriptive Statistic

**Table 2.** Descriptive statistics

	FV	IC	ERM	SR	ROA
Mean	1.535	2.876	0.823	0.646	-0.044
Median	1.364	2.213	0.850	0.676	0.060
Maximum	3.090	9.370	1.000	0.887	1.256
Minimum	0.547	0.054	0.650	0.282	-3.764
Std. Dev	0.654	2.479	0.282	0.153	0.604
Observation	60	60	60	60	60

Source: Eviews 12 output results, processed data, 2024.

The descriptive statistics indicate that the mean scores for all variables fall between -0.044 and 2.876. The standard deviations, ranging from 0.153 to 2.479, suggest considerable dispersion in the data.

#### Model Selection

Statistical tests, including the Chow test, Hausman test, and Lagrange Multiplier test, were performed to identify the best appropriate panel data model by comparing the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

**Table 3.** Model testing results

Model Selection Test	Cross Section		Results
	Model-1	Model-2	
Chow Test	Prob 0.000 < 0.05	Prob 0.000 < 0.05	FEM
Hausman Test	Prob 0.702 > 0.05	Prob 0.192 > 0.05	REM
Lagrange Multiplier Test	Prob 0.000 < 0.05	Prob 0.000 < 0.05	REM

Source: Eviews 12 output results, processed data, 2024.

The model selection tests presented in the table above indicated that, for both the Model-1 and Model-2 regressions, the Random Effects Model (REM) was the best fit.

#### Classical Assumption

**Table 4.** Classical assumption test results

Variables	Normality		Multicollinearity		Heteroscedasticity
	Jarque-Bera	Prob.	Correlations		Prob.
			ERM	SR	
IC			-0.297	0.232	0.182
ERM	3.607	0.159		-0.017	0.307
SR					0.450

Source: Eviews 12 output results, processed data, 2024.

This data is homoscedastic (p-value > 0.05), there is no multicollinearity (correlations < 0.80), and the diagnostic tests verified that the data follows the traditional assumptions of normalcy (p-value > 0.05).

#### Hypothesis Testing

**Table 5.** Hypothesis test result

Model	Variables	Coefficient ( $\beta$ )	Std. Error	t-Statistic	Prob.
1	Constant	3.7489	1.4007	2.6764	0.0097
	IC	0.1225	0.0392	3.1266	0.0028
	ERM	-2.3199	1.6162	-1.4354	0.1567
	SR	-1.0185	0.5546	-1.8364	0.0716
	Adjusted R-Square	0.2076			
	F-statistic	6.1522			
	Prob(F-statistic)	0.0011			
2	Constant	4.4260	1.3677	3.2360	0.0021
	IC	0.1001	0.0506	1.9780	0.0532
	ERM	-3.2429	1.5865	-2.0440	0.0460
	SR	-0.8489	0.5491	-1.5462	0.1281
	ROA	10.6233	2.9248	3.6322	0.0006
	IC*ROA	-0.0420	0.2688	-0.1564	0.8764
	ERM*ROA	-12.5490	3.4729	-3.6134	0.0007

Model	Variables	Coefficient ( $\beta$ )	Std. Error	t-Statistic	Prob.
	SR*ROA	0.5546	0.7262	0.7637	0.4485
	Adjusted R-Square	0.3133			
	F-statistic	4.8455			
	Prob(F-statistic)	0.0003			

Source: *Eviews 12 output results, processed data, 2024.*

Based on the regression results presented above, the regression equation is derived as follows:

Model 1:

$$FV = 3.7489 + 0.1225IC - 2.3199ERM - 1.0185SR + \epsilon$$

Model 2:

$$FV = 4.4260 + 0.1001IC - 3.2429ERM - 0.8489SR + 10.6233ROA - 0.0420IC*ROA - 12.5490ERM*ROA + 0.5545SR*ROA + \epsilon$$

A regression analysis (Model 1) was performed to assess the influence of IC, ERM, and SR on FV. The findings revealed a significant positive relationship between IC and FV (p-value = 0.0028,  $\beta$  = 0.1225), supporting Hypothesis 1. However, the impact of ERM (p-value = 0.1567,  $\beta$  = -2.3199) and SR (p-value = 0.0716,  $\beta$  = -1.1085) on FV was not statistically significant, resulting in the rejection of Hypotheses 2 and 3.

Model 2, a moderated regression analysis, was utilized to assess the moderating effect of ROA on the predictive relationships between the independent variables and firm value. The results showed that ROA did not significantly moderate the relationship between IC and FV (p = 0.8764,  $\beta$  = -0.0420), failing to support Hypothesis 4. In contrast, ROA significantly moderated the relationship between ERM and FV (p = 0.0007,  $\beta$  = -12.5490), supporting Hypothesis 5. Then, ROA did not significantly moderate the relationship between SR and FV (p = 0.4885,  $\beta$  = 0.5446), leading to the rejection of Hypothesis 6.

As shown in Table 5, Model 1 indicates that IC, ERM, and SR collectively explain 20.76% of the variation in FV. The residual 79.24% of the variation is ascribed to variables not encompassed in this study. Following moderation by ROA in Model 2, the concurrent impact of the independent variables on FV rose to 31.33%, leaving 68.67% attributable to extraneous factors beyond the purview of this study.

## Discussions

### The Influence of Intellectual Capital on Firm Value

A quantitative regression analysis demonstrates a robust positive correlation between the intangible assets constituting intellectual capital and firm value. This suggests that firms with superior intellectual capital typically receive elevated valuations. This finding is inconsistent with the empirical evidence presented by Hanun et al. (2023), which suggests that intellectual capital does not significantly influence firm value. Prior research by B. C. Pratama et al. (2020), Putri & Wirajaya (2023), G. Puspita & Wahyudi (2021), and Nopagia et al. (2024) has similarly shown a favourable correlation between intellectual capital and business value. These results provide empirical support for resource-based theory, suggesting that tangible and intangible resources are critical for achieving competitive advantage and enhancing firm value. As an intangible asset, intellectual capital can be leveraged to foster innovation and create value for technology firms, attracting investors and boosting firm value.

### The Influence of Enterprise Risk Management on Firm Value

Empirical findings indicate no statistically significant correlation between the adoption of ERM and increased firm value. This finding contradicts the results of studies conducted by Herawati & Riswandari (2022) and Petricia & Sakti (2024). Still, it aligns with the empirical findings of Rahmi & Wijaya (2022), which found no significant impact of enterprise risk management on firm value. Although ERM is a relevant factor in investment decision-making, the voluntary nature of ERM disclosure makes it a less prominent consideration for investors in technology companies. The diverse objectives of investors lead them to prioritize specific factors that align with their unique needs and expectations.

### The Influence of Sustainability Reporting on Firm Value

This research indicates that sustainability reporting does not significantly contribute to increased firm value. This finding contradicts the empirical evidence from M. F. G. P. Pratama et al. (2019) and N. Puspita & Jasman (2022). Still, it aligns with the findings of Novia & Halmawati (2022), which suggest that sustainability reports do not substantially affect corporate value. The lack of a significant correlation between sustainability disclosure and changes in firm value can be attributed to several factors, including investor preferences that prioritize short-term financial gains and the absence of comprehensive regulations and strict

enforcement mechanisms. The existing regulations, such as POJK No. 51/POJK.03/2017, primarily focuses on the financial services sector and does not comprehensively cover all business entities, resulting in sustainability reporting being a less prominent consideration for investors in technology companies.

#### **The Influence of Intellectual Capital on Firm Value with Profitability as a Moderating Variable**

This research reveals that profitability does not play a substantial moderating role in elucidating the impact of intellectual capital on firm value. This finding contradicts the research by Amirullah et al. (2021) and Muasiri & Sulistyowati (2021). Still, it aligns with the empirical findings of Pramudita & Budiwitjaksono (2024), which suggest that profitability neither amplifies nor diminishes the impact of intellectual capital on firm value. Firms' employment of intellectual capital, irrespective of their profitability, does not substantially affect the valuation of technology firms. This analysis suggests that ROA only acts as a predictor for IC, as evidenced by the change in significance after the interaction, indicating no significant relationship.

#### **The Influence of Enterprise Risk Management on Firm Value with Profitability as a Moderating Variable**

Empirical evidence suggests that profitability serves as a moderating variable in the relationship between ERM and firm value. This research finding contradicts the study by Munawwaroh et al. (2021), which stated that profitability cannot moderate the impact of ERM on firm value. Statistical analysis indicates that ROA is a pure moderator, as ERM and FV had no significant relationship before the interaction. Still, a significant relationship emerged after the interaction. Profitable firms may have a higher risk tolerance, leading them to emphasize enterprise risk management disclosure and opt for more extensive and detailed disclosure. However, this excessive disclosure can signal negatively to risk-averse investors.

#### **The Influence of Sustainability Reporting on Firm Value with Profitability as a Moderating Variable**

This research indicates that profitability does not serve as a significant moderating variable in explaining the influence of sustainability reporting on firm value. This finding contradicts the research conducted by Pamungkas & Meini (2023). Still, it aligns with the studies of N. Puspita & Jasman (2022) and Prasetyo (2024), which suggest that profitability cannot strengthen or weaken the impact of sustainability reports on firm value. Statistical analysis indicates that ROA roles solely as a homoligiser moderator for SR, as it does not exhibit significant value before or after the interaction.

## **4. Conclusion**

The empirical evidence obtained from the analysis unequivocally supports the hypothesis that there is a positive correlation between intellectual capital and firm value. However, enterprise risk management and sustainability reporting were found to have no substantial effect on firm value. Furthermore, the impact of enterprise risk management on firm value is moderated by profitability. Conversely, the moderating effect of profitability is not discernible in the relationships involving intellectual capital and sustainability reporting. Investors should comprehensively analyze companies, considering various factors when making investment decisions. The findings of this research offer several practical implications for various stakeholders. Investors should prioritize companies that invest in intellectual capital, as it has a substantial positive impact on firm value. This includes intangible assets such as human capital, structural capital, and relational capital. While enterprise risk management and sustainability reporting are crucial corporate practices, their direct impact on firm value might be limited. However, effective risk management can enhance firm value, especially when coupled with robust financial performance. Policymakers should encourage corporate investment in intellectual capital and sustainable business practices, as these factors can contribute to long-term economic prosperity and societal well-being.

A limitation of this research is the restricted availability of sustainability reports for technology companies before 2021. The short observation period of three years may have influenced the findings. Future research should consider a longer time frame, especially for long-term concepts like intellectual capital and sustainability reporting. Additionally, given the volatility of the technology sector, analyzing other, more stable sectors could provide valuable insights.

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