Research Article

The Influence of Enterprise Risk Management, Corporate Social Responsibility, Cost of Capital, and Firm Size on Firm Value

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Abstract.
Implementing corporate social responsibility (CSR) and enterprise risk management (ERM) is becoming more important, since it is an indication of a long-term sustainable business. Investigating the effects of ERM, CSR, cost of capital (CoC), and company size on the value of manufacturing sector enterprises in Indonesia is the aim of this study. 56 manufacturing companies that are listed on the Indonesia Stock Exchange and that provide annual reports and detailed financial statements for the fiscal years 2016 through 2019 make up the study's sample. Firm value is proxied by the Tobins'q (TQ) value. CoC is determined using WACC, CSR is evaluated using each company's disclosure index, and the firm's size is indicated by LnTotal Assets. The data in Eviews 12 was analyzed using panel data regression. The study results show that CSR and ERM are essential to raising a company's worth. The company value increases with the degree of ERM and CSR adoption. The study also found a significant negative correlation between company size and worth. However, this study is unable to show how capital expenses affect the value of a company.

Keywords: CSR, cost of capital, enterprise risk management, firm size, firm value

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1. Introduction

The concept of firm value remains intriguing for further exploration, because it acts as a gauge of an organization's leverage with investors. Increased firm value correlates with enhanced investor well-being. Achieving this augmentation requires harmonious collaboration among shareholders and pertinent stakeholders in decision-making processes.

Maximizing firm value is the company's long-term objective since it represents the long-term prosperity of shareholders. Shareholder prosperity is often measured by increases in stock market prices [1]. Greater shareholder prosperity is directly linked to heightened share prices.

ERM represents a comprehensive strategy for managing risks within an organization. Historically, companies have addressed risks stemming from individual business units in isolation. ERM improves upon this traditional method by integrating and overseeing all risks throughout the entire enterprise. The implementation of ERM is carried out to achieve synergy between existing risk management activities within the company. Studies that examine companies' decisions to start ERM programs prove that implementing ERM in companies provides direct economic benefits. This proves that ERM is related to increasing company performance and value. Prior research suggests that ERM offers value through various avenues, such as fostering synergy among diverse risk management endeavors, optimizing capital utilization, mitigating underinvestment in financially restricted firms, and curbing external financing expenses [2].

Incorporating Enterprise Risk Management, which involves comprehensive and interconnected risk oversight, exemplifies the principle of transparency within a company. Organizations need to adeptly recognize, assess, and address their risks within defined thresholds, which constitutes the objective of integrated risk management implementation [3]. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) designed and developed a general guideline for risk management. This guideline is comprehensive and integrated, recommended as an ERM scheme in achieving company goals [4]. A company that is ready to face risks is the goal of a well-managed ERM [4]. A company's readiness to face risks is a condition of well-managed ERM [5].

Adopting ERM with the main objective of maintaining and increasing firm value. By implementing ERM, a company demonstrates its dedication to investors through the proactive identification of risks, as asserted by Bertinetti et al. [6], because ERM is viewed as a value driver rather than a cost driver, its deployment adds value to the company. The research results of Hoyt and Liebenberg [7], there is compelling evidence demonstrating a favorable and substantial impact of ERM on firm value. Specifically, companies that embrace ERM practices tend to possess greater value in comparison to those that do not integrate ERM into their operations.

However, the empirical data paints a rather ambiguous and nuanced picture of the relationship between ERM and business value. Studies show that there is a negative correlation or positive correlation between firm value or corporate performance and the use of ERM. Numerous scholars have investigated how Enterprise Risk Management (ERM) affects company value, adding to the current discourse on this subject. Krause and Tse [8], Iswajuni et al. [9], Phan et al. [10], Handayani [5], Rao [11], Husaini [12], and, McShane et al. [13] provide evidence that ERM implementation can increase firm value.

However, other researchers such as Tahir and Razali [14], Emar and Ayem [15], and, Agustina and Baroroh [16], found the opposite from the results of their research. Several limitations such as the research sample, variables studied, and over time, research has led to the discovery of instances where the relationship between ERM with firm value appears to be insignificant.

Research Phan et al. [10] on Vietnamese businesses from 2012 to 2018 shows a substantial, positive correlation between the value of the business and the implementation of ERM. In a similar vein, Tahir and Razali's study [14] of businesses listed on the Malaysia Stock Exchange discovered a link between increasing firm value and putting ERM into practice. This suggests that, in both Vietnam and Malaysia, a company's value can be raised by excellent risk management.

Quon et al. [17], found differences in ERM implementation. ERM cannot explain company performance after the financial crisis. This research proxies ERM using annual financial reports on 156 non-financial companies in North America. The research did not identify any factors that could account for fluctuations in sales, Tobin's Q, and EBIT. Likewise, Lin and colleagues' study [18] on 105 property and casualty insurance companies from 2000 until 2007 showed a detrimental link between ERM implementation and Tobin's Q and ROA. This discovery is credited to changes in certain risk management practices (like reduced reinsurance purchases) coinciding with the implementation of ERM initiatives. They also propose that individuals involved in the market may view ERM as expensive and intricate to put into practice, which could result in them avoiding related uncertainties [18].

In tandem with the escalation of global environmental concerns, the concept and practice of CSR are gaining traction, even in Indonesia. This trend highlights a growing awareness that natural resources are finite and economic progress must be pursued sustainably, in line with the principles of sustainable development. Reflecting these shifts, the Indonesian government has introduced various regulations mandating corporate entities to fulfill their social and environmental responsibilities. These regulations are encapsulated in Article 74 of Law Number 40 of 2007 regarding Limited Liability Companies, which pertains to the implementation of sustainable finance, and in Article 66, Paragraph 6, which stipulates that the Social and Environmental Responsibility Implementation Report must be included in companies' annual reports to the public. Furthermore, Government Regulation (PP) No. 47 of 2012 concerning Social and Environmental Responsibility mandates companies to fulfill social and environmental

obligations and subsequently disclose them in their annual reports, thereby being held accountable to the General Meeting of Shareholders.

Understanding how CSR affects firm value has been the focus of recent study [19]. Current research on the relationship between corporate social responsibility (CSR) and company value yields two contradictory predictions. The first idea, which is based on agency theory, contends that managers may overspend on CSR in an effort to boost their reputations and gain personal advantages, which could lower the value of the company. On the other hand, the stakeholder theory-based conflict resolution hypothesis asserts that managers participate in corporate social responsibility (CSR) programs in order to reduce disagreements with stakeholders and, in turn, increase the firm's value. Many studies have presented evidence in favor of the positive effect of corporate social responsibility (CSR) on a company's value, despite the existence of competing hypotheses [20].

CSR plays a pivotal role in fostering corporate sustainability and significantly influences firm value. By implementing CSR practices, companies can bolster investor confidence in the management of company resources, enhance investment security, ensure sustainability, and mitigate investment risks. Acting as agents for shareholders and creditors, company management exhibits heightened awareness and prudence in corporate governance. Moreover, company activities serve as crucial information for external stakeholders when making resource allocation decisions. The implementation of CSR not only boosts investor confidence by fortifying investment security but also enhances company performance and sustainability, thereby augmenting the company's reputation as a secure investment option. Improved investment security opens avenues for companies to access cost-effective funding sources. Through CSR initiatives addressing economic, environmental, and social aspects, companies demonstrate accountability to stakeholders and secure community legitimacy in their operations [21].

Firm size serves as a significant determinant of firm value and can be assessed through various metrics such as total assets, logarithm of total assets, sales figures, market capitalization, among others. Larger businesses' easier access to both internal and external finance sources is said to be the reason for the relationship between firm size and value. This connection is consistent with the signaling hypothesis, which holds that larger businesses are more easily accessible to financial markets, which increases firm value. In contrast, newer and smaller companies encounter challenges in accessing capital markets, limiting their ability to increase firm value.

Research conducted by Ha and Minh [22], Dang et al. [23], and Aduroh et al. [24] present findings that indicate a robust and statistically significant correlation between a company's size and its overall value. These studies suggest that companies with larger assets tend to experience higher stock prices in the market. However, the findings from Hirdinis [25] research present conflicting results, suggesting an inverse correlation between a company's size and its value.

This study aims to investigate the impact of ERM, CSR, cost of capital, and firm size on firm value, while controlling for profitability, within manufacturing companies in Indonesia. By exploring these factors, this research seeks to enrich existing theories and literature on corporate finance and governance [26].

2. Literature Review and Hypothesis Development

The total market value of a company's debt and equity, known as firm value, is a critical measure of its worth in the financial markets. According to Fama [27], share prices accurately reflect this value, representing investors' perceptions of a company's current and future prospects. Conversely, Weston and Copeland [28] define firm value as its fair value, reflecting investor sentiment and the market's assessment of the company's intrinsic worth. Increasing stock prices contribute significantly to enhancing a company's overall value, instilling confidence in investors regarding its present performance and future potential. Several factors influence the value of a firm, including corporate governance, ERM, CSR, and company size. Effective corporate governance practices ensure transparency, accountability, and fairness, which can positively impact a company's valuation. Implementation of ERM helps mitigate risks, enhancing investor confidence and potentially increasing firm value. Similarly, engaging in CSR initiatives not only fosters goodwill but also improves stakeholder relationships, contributing to long-term value creation. Additionally, the size of a company plays a crucial role in determining its value, with larger firms often commanding higher valuations due to their scale, resources, and market influence. Despite differing definitions and methodologies, the consensus remains that firm value is influenced by a combination of market perceptions, financial performance, and strategic initiatives, reflecting the complex interplay of factors shaping investor sentiment and company valuation.

Factors influencing firm value encompass the disclosure of ERM practices and good corporate governance. A company's efficacy is often gauged by its ability to uphold principles of information transparency [29]. Aditya and Naomi [30] emphasize that ERM

implementation is crucial for starting effective risk management. ERM endeavors to identify and manage potential events that could impact the company, ensuring risks are maintained at manageable levels. Investors perceive the implementation of ERM as a positive signal, leading to favorable responses that enhance the company's value [9].

Implementing ERM for companies can lead to decreased fluctuations in earnings and stock prices, improved capital efficiency, and increased coordination between different risk management efforts [2,31]. The implementation of ERM seems to promote sensitivity to risk (risk awareness), where it supports better operations and strategic decision making for the company [30].

As risk management practices become more transparent, the implementation of ERM enables companies to effectively communicate their risk profiles and underscore their dedication to risk management. ERM implementation empowers management to devise strategic plans aligning with company objectives, particularly in delivering value to shareholders. Consequently, this facilitates the assessment of company performance and success.

Studies consistently show a positive relationship between the implementation of ERM and firm value. [7,32]. Research from Bertinetti et al. [6], Hoyt and Liebenberg [7], and Li et al. [33] all support the idea that implementing ERM greatly improves the value of a company. Research findings show that companies that implement ERM typically experience greater firm value in comparison to those that do not [9]. Moreover, Khan and colleagues [34] discovered a strong positive correlation between implementing ERM in the previous year and the value of the company. These results highlight the significance of companies adopting thorough risk management systems to strengthen their activities.

This means, if ERM implementation is better, the firm value will increase. Meanwhile, other research finds that there is no significant influence of ERM and firm value. From this argument, the hypothesis is as follows:

Ha1: Enterprise risk management has a positive effect on firm value

Engaging in CSR can greatly influence the value of a company by creating a favorable image among society and stakeholders. According to legitimacy theory, companies that disclose their CSR activities and achieve favorable financial performance are likely to garner public acknowledgment for adhering to societal norms. Similarly, stakeholder theory suggests that companies disclosing CSR initiatives and exhibiting strong financial

performance can deliver benefits to stakeholders, thereby enhancing their reputation and ultimately increasing firm value.

In addition, CSR helps companies achieve competitive benefits, such as lowering costs or standing out from competitors, by building relationships with stakeholders and creating a favorable public perception. Corporate sustainability, which is often referred to as CSR, can be smoothly incorporated into a firm's broader sustainable development strategy. This approach helps the business remain in operation for a long time and encourages sustainable growth for the company, society, and the environment at large.

Numerous researches exploring the connection between CSR and the value of a company have produced varied outcomes. At first, scholars believed that CSR was like a gift from shareholders to stakeholders, based on shareholder theory and neoclassical economic theory, which could lead to lower profits because of competition. Furthermore, CSR initiatives could stem from conflicts of interest between shareholders and managers, where managers' personal motives might impact CSR choices. On the other hand, scholars who adhere to stakeholder theory suggest that CSR has a beneficial effect on a company's value.

Hu et al. [35], Titisari et al. [21], and Wirawan et al. [19] have all concluded that CSR positively influences firm value, indicating that the implementation of CSR initiatives enhances firm value. Therefore, the hypothesis formulated in this research is as follows:

Ha2: Corporate social responsibility has a positive effect on firm value

The Pecking Order Theory (POT) suggests that companies tend to prioritize using internal funds like retained earnings over seeking outside funding, and they generally prefer debt over equity for external financing. POT states that a consistent rise in profits can act as a financially beneficial way to fund operations without depending too much on outside funding. Companies that depend heavily on outside funding, especially by taking on more debt, could see a decrease in their shareholder value [36].

Research by Shadab and Sattar [37] indicates a considerable influence of Weighted Average Cost of Capital (WACC) on company value. Additionally, Kurniasih [38] has provided evidence of the impact of Cost of Debt (COD), Cost of Equity (COE), and Weighted Average Cost of Capital (COC) on company value. According to their findings, COD did not show a significant effect, while COE exhibited a negative effect, and COC had a positive effect on company value. These results suggest that understanding and effectively managing the components of WACC, particularly COE, is crucial for enhancing a company's overall value. By minimizing the cost of equity and optimizing

the overall cost of capital, firms can potentially improve their valuation and attractiveness to investors, thereby contributing to long-term financial performance and sustainability.

The market views the growing reliance on debt for funding in a favorable light, resulting in a rise in stock prices. Therefore, a rise in the combination of COD and COE, known as COC, could potentially boost the value of a company. Based on these findings, the hypothesis formulated is as follows:

Ha3: The cost of capital has a negative effect on company value

Financial analysts commonly utilize a company's size as a proxy, which typically encompasses total assets, total capital, and total sales. Firm size serves as a measure of the magnitude or extent of assets owned by the company and holds sway over firm value [39]. A larger-sized company tends to elicit a positive response from investors, thereby leading to an increase in firm value. Larger companies have an advantage because they have economies of scale and can produce more efficiently. Larger companies are more stable and can generate more sales because larger production capacity increases capital cost savings with economies of scale.

Multiple research efforts have examined how the size of a company is connected to its overall value. Studies by Ha and Minh, Dang et al., and Aduroh et al. show that firm size has a strong positive impact on firm value, which is statistically significant. Large companies with more assets typically see their stock prices increase in the market. On the other hand, Hirdinis [25] found conflicting results, showing a detrimental link between company size and company worth.

In this study, the size of the organization is seen as an indication of its scale, usually determined by the total value of the company's assets. This factor impacts investors' anticipations concerning company's dividend payments. A rise in interest in company stocks usually results in an increase in stock prices in the financial market, indicating a higher perceived worth of the company [25]. Ha and Minh [22] also confirmed that firm size has a positive impact on firm value.

Given these understandings, the hypothesis crafted to examine the impact of company size on company worth is as follows:

Ha4: Firm size has a positive effect on firm value

3. Research Methods

3.1. Design research

This research plan utilizes a causality research design, specifically used to test the influence, relationship, or impact of independent variables on the dependent variable [40]. In this layout, the researcher can typically anticipate the cause and effect connection, enabling them to determine the categorization of causal variables, intermediate variables, and dependent variables. In order to offer a comprehensive overview, this study starts by outlining the factors of enterprise risk management, corporate social responsibility, cost of capital, and firm value. The following step involves conducting panel data regression analysis to assess the formulated hypothesis.

3.2. Population and sampling

All companies in the manufacturing industry sector listed on the Indonesia Stock Exchange from 2016 to 2019 are included in the population for this study. The sample for the study was chosen through a method called purposive sampling, also known as judgment sampling. Sampling by judgment includes selecting samples based on certain considerations or criteria [41].

According to the criteria given, the study includes 54 companies from the manufacturing sector that are listed on the Indonesia Stock Exchange. These companies released full yearly reports each year from 2016 to 2019 in a row. Furthermore, the annual reports of each company include extensive data about the variables used in the study, and the companies consistently recorded profits annually.

Observing 54 companies for 4 years resulted in a total of 224 observations. This method guarantees that the sample accurately gathers the necessary data for the research examination.

3.3. Operational definition and variable measurement

3.3.1. Firm value

Firm value is the amount of money investors are prepared to spend. This study evaluates firm value using the Tobin's Q ratio, which gauges companies by assessing firm value through market prices, using the formula:

$$Q = \frac{EMV + D}{EBV + D}$$

Notes:
Q = Tobin's Q (Firm value)
EMV = Equity Market Value, obtained from multiplying the closing share price at the end of the year by the number of shares outstanding at the end of the year.
EBV = Equity Book Value of liabilities, obtained from the difference between the company's total assets and its total liabilities
D = Book value of total debt

3.3.2. Enterprise Risk Management (ERM)

The ERM variable is measured using assessments of ERM implementation conducted by Standard and Poor Ratings (S&P) [13,42]. S&P's evaluation criteria, including risk management culture, risk control, emerging risk management, risk models, and strategic risk management, determine the level of ERM implementation on a scale of 1 to 5. S&P analyzes yearly reports from financial industry firms to evaluate and rate certain elements, then combining the ratings to determine the overall level of ERM implementation for each company, as displayed in Table 1.

3.3.3. Corporate Social Responsibility (CSR)

CSR is a business activity that is committed to not only increasing financial company profits, but also overall, institutional and sustainable economic, social and environmental development, in accordance with the provisions of Law Number 40 Article 74 of 2007, Government Regulation Number 47 of 2012 and Regulations Minister of BUMN Number Per-05/MBU/2007.

The company's annual report will be evaluated by comparing the amount of CSR disclosures with the total possible disclosures to determine the level of CSR disclosure. The assessment checklist relies on indicators from the Global Reporting Initiatives (GRI) that cover economic, environmental, society, human rights, labor practices, and product responsibility, serving as the basis for sustainability reporting. The CSR variable

TABLE 1: S&P ratings for level of ERM implementation.

Level	Definition
Excelent (5)	The organization shows excellent ability to recognize, measure, and reduce risks within set tolerance limits.
Strong (4)	The organization has set standards for risk control and created a structured method to set risk boundaries within the overall risk tolerance framework, considering risk-adjusted returns.
Adequate (3)	The organization prides itself on having a fully functional risk control system that successfully deals with all significant risks. The risk management process that has been adopted is strong, clearly defined, and firmly set in place.
Weak (2)	At times, organizations might neglect incorporating risk management into corporate decision-making procedures. Management possibly did not put in place an appropriate risk management framework, resulting in a restricted use of risk management principles in business choices. On the other hand, if risk management procedures have only been implemented recently, they might not have been rigorously tested or verified.
No ERM (1)	The company does not currently have an ERM framework and does not have any intentions to establish one.

Note: Adopted from Standard and Poor Ratings (S&P) [13,42].

is measured by the disclosure index for each company, which is determined by the proportion of disclosed items to the total possible items that could be disclosed. The following formula represents this:

$$CSRD = \frac{n}{k}$$

Information:

CARD = corporate social responsibility disclosure index

n = number of CSR disclosure items fulfilled

k = number of all CSR disclosure items

3.3.4. Cost of Capital (CoC)

WACC, or weighted average of cost of borrowed capital and cost of equity, is used to estimate cost of capital (CoC) and is computed as follows:

$$WACC = \left[\frac{E}{D+E}\ x\ \left(r_e\right)\right] + [\frac{D}{D+E}\left(r_d\right)\ (1-t)]$$

Information:

WACC = Weighted Average Cost of Capital

E = market value of equity

D = Book value of debt

r_e = cost of equity

r_d = cost of debt

t = corporate tax rate

3.3.5. Firm size

Firm size is determined by the amount of assets in possession of the firm. The measurement is calculated by taking the natural logarithm (Ln) of the total assets of the company. The equation for determining the firm size can be expressed in the following manner:

Firm size = Ln (Total Assets)

3.3.6. Profitability

Profitability is utilized as a control variable in this research, and it is assessed by the The ROA ratio is computed by dividing the net profit by the total amount of assets.

3.4. Data analysis

Panel data regression analysis is employed as the data analysis method in this study. Panel data combines information from both cross-sectional data and time series Panel data regression model is employed for hypothesis testing. Panel data was selected due to the research covering multiple years and numerous companies. The analytical tool utilized in this study is comprised of Microsoft Excel and Eviews 12 software.

The equation model for panel regression in this study is presented as follows:

$FV = \beta_0 + \beta_1 ERM + \beta_2 CSR + \beta_3 CoC + \beta_4 FS + \beta_5 ROA + e_1$

Notes:

FV = Firm value

β_0 = constant

β_1ERM = enterprise risk management regression coefficient

β_2CSR = corporate social responsibility regression coefficient

β_3CoC = cost of capital regression coefficient

β_4FS = firm size regression coefficient

β_5ROA = profitability coefficient

E = error

4. Results and Discussion

4.1. Results

4.1.1. Descriptive statistic

Table 2 displays the statistical information of the research data. According to table 2, we can observe the average, middle value, highest and lowest values, and the variability of each variable.

TABLE 2: Descriptive statistic.

	FV	ERM	CSR	CoC	SIZE	ROA
Mean	1.438309	3.441964	0.153159	0.045274	28.90998	3.911293
Median	1.161746	3.000000	0.120879	0.041096	28.53974	3.981225
Maximum	6.069593	5.000000	0.549451	1.047451	34.50354	24.69112
Minimum	-0.518635	1.000000	0.032967	-0.067701	25.64046	-220.0888
Std. Dev.	1.066162	0.959366	0.093114	0.071656	1.968713	16.42988
Skewness	1.705360	0.028140	1.535220	12.29314	0.924520	-11.32873
Kurtosis	6.471151	2.563702	5.272932	172.4466	3.430245	155.7582
Sum	322.1811	771.0000	34.30769	10.14136	6475.835	876.1297
Sum Sq. Dev.	253.4843	205.2455	1.933477	1.145026	864.3099	60196.86
Observations	224	224	224	224	224	224

Source: output eviews, 2023

4.1.2. Classic assumption test

In this study, panel data regression analysis is performed with the Ordinary Least Squares (OLS) method and a fixed effect model. The OLS technique necessitates two classic assumption evaluations: the multicollinearity evaluation and the heteroscedasticity evaluation.

The study's investigation includes evaluating the relationship between dependent variables to identify multicollinearity. Table 3 displays the correlation findings of the dependent variables. The data presented in the table reveals that the correlation

coefficients between the dependent variables are all less than 0.8, suggesting that multicollinearity is not an issue.

TABLE 3: Correlation test between dependent variables.

	WACC	SIZE	ROA	ERM	CSR
WACC	1	-0.094469991965	-0.045080324697	-0.0062344145147	0.0091883149109
SIZE	-0.094469991965	1	0.091082443396	0.24614214613	0.44641851468
ROA	-0.045080324697	0.091082443396	1	0.17475448917	0.11786753664
ERM	-0.0062344145147	0.246142146134	0.17475448917	1	0.42651768218
CSR	0.0091883149109	0.44641851468	0.11786753664	0.42651768218	1

Source: eviews output, 2023

The heteroscedasticity test determines whether the variance of residuals varies between different observations in the regression model [43]. The research used the Glejser test as a method to test for heteroscedasticity (Table 4). The variables in the Glejser test have p-values that are greater than 0.05. This indicates that the regression model does not show any signs of heteroscedasticity.

TABLE 4: Glejser test.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.601018	0.760456	1.905339	0.0568
ERM	-0.047585	0.042057	-1.131435	0.2595
CSR	0.101581	0.266559	0.381083	0.7036
WACC	-0.119719	0.165685	-0.722571	0.4710
SIZE	-0.043212	0.025283	-1.709146	0.0893
ROA	-0.001929	0.000840	-1.995731	0.0530

Source: eviews output, 2023

4.1.3. Hypothesis test

Choosing the right model for hypothesis testing in Panel regression analysis with the eviews software involves two steps: the Chow test and the Housman test. According to the Chow test findings in table 5, the chi-square probability for the cross-section is 0.000 which is less than 0.05, indicating that the appropriate model to employ is the fixed effect model. Similarly, the Housman test outcomes are shown in table 6. The

cross-section probability value of 0.0015 is less than 0.05, indicating that the appropriate model to utilize is the fixed effect model.

Table 5: Chow test results.

Effect Test	Statistic	d.f.	Prob.
Cross-section F	27.435213	(55,163)	0.0000
Cross-section Chi-square	521.469255	55	0.0000

Source: eviews output, 2023

Table 6: Housman test results.

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	19.525798	5	0.0015

Source: eviews output, 2023

Based on table 7, the results of the F test with the fixed effect model show a probability value of 0.000 less than 0.05, this means that the variables ERM, CSR, cost of capital and firm size simultaneously influence firm value.

The R-squared value, which has been adjusted to 0.909026, suggests that 90.90 percent of variations in firm value can be accounted for by the factors studied in this research, leaving 9.1 percent attributed to variables not explored in this study.

Table 7: F test results with fixed effect model.

R-squared	0.933503
Adjusted R-squared	0.909026
S.E. of regression	0.321575
Sum squared resid	16.85596
Log likelihood	-28.10472
F-statistic	38.13728
Prob(F-statistic)	0.000000

Source: eviews output, 2023

Based on table 8, performing a partial hypothesis test (t test) on how ERM affects firm value showed a p value of $0.045 < 0.05$ and a coefficient of 0.184. Thus, the alternative hypothesis Ha1 is confirmed, showing that ERM has a significant positive impact on firm value. This shows that increasing the company's ERM will improve the company's value.

The theory of how CSR affects company value was studied, showing a significance level of $p = 0.0269 < 0.05$ and a coefficient of 1.291, supporting the acceptance of Ha2

which suggests a notable beneficial influence of CSR on company value. This shows that increasing corporate social responsibility will increase the company's worth.

Testing the hypothesis on the influence of CoC on firm value showed a p-value of 0.4748 > 0.05 and a coefficient of -0.257, rejecting Ha3, suggesting that CoC does not notably affect firm value.

The hypothesis test evaluating the effect of company size on company value showed a p-value of 0.000, indicating significance at a 0.05 level. In addition, the coefficient is negative 0.2576. Thus, the null hypothesis H04 is accepted, suggesting that firm size does not have a meaningful positive effect on firm value. However, the firm's value is adversely affected by its size. This shows that smaller companies can increase firm value more than larger companies.

The significance of the independent variable, profitability, is evident with a p value of 0.0003 < 0.05 and a coefficient of 0.0068, indicating that greater profitability leads to a rise in the firm's value.

Table 8: Fixed effect model t test results.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.040633	1.648674	4.877029	0.0000
ERM	0.184186	0.091180	2.020027	0.0450
CSR	1.290688	0.577902	2.233402	0.0269
CoC	-0.257297	0.359206	-0.716292	0.4748
SIZE	-0.257660	0.054813	-4.700674	0.0000
Control Variable: ROA	0.006809	0.001822	3.736976	0.0003

Source: eviews output, 2023.

4.2. Discussion

The findings of the Ha1 hypothesis test suggest a favorable association between Enterprise Risk Management (ERM) and firm value. This underscores the importance of efficient communication and administration of ERM practices in augmenting a company's overall value. The study aligns with previous research by Hyot and Lienbenberg, Husaini, Bertinetti et al., and Li et al., which have all highlighted a substantial correlation between ERM adoption and enhanced company worth. Empirical evidence further substantiates these claims, indicating that firms integrating ERM into their operations tend to possess greater firm value compared to those neglecting such measures [9]. Furthermore,

research conducted by Khan and colleagues identified a noteworthy link between firm value and the implementation of ERM in the preceding year. Collectively, these findings accentuate the constructive impact of ERM on a company's value proposition. Effective risk management not only safeguards against potential threats but also contributes positively to the overall financial health and market perception of the organization. As such, businesses are encouraged to prioritize the integration and effective execution of ERM strategies to bolster their competitive edge and sustain long-term value creation.

The findings of this research reinforce the significance of ERM in fostering company stability, as ERM serves as a crucial tool for enhancing internal control within the organization. The implementation of ERM signifies the company's firm commitment to establishing robust corporate risk governance practices. Moreover, ERM disclosure provides valuable insights for predicting the sustainability of a company, as the market tends to respond positively to companies that voluntarily disclose their ERM information. By embracing ERM and transparently disclosing related information, companies can bolster their credibility and instill confidence among stakeholders regarding their ability to effectively manage risks and maintain stability over time.

The results of the Ha2 hypothesis test reveal a positive correlation between CSR and firm value. This indicates that the company's endeavors in economic, environmental, and social management contribute significantly to its overall valuation. Specifically, these actions foster consumer trust in the company's products, enhance investor interest in its stocks, and reinforce confidence in the company's long-term viability and financial robustness. These findings are consistent with prior research conducted by Hu et al. [35], Titisari et al. [21], and Wirawan et al. [19], all of which have highlighted the beneficial effects of CSR on company valuation. Essentially, these results affirm that integrating CSR initiatives yields favorable outcomes for firm value, underlining the importance of corporate social responsibility in enhancing both company performance and sustainability. By prioritizing CSR activities, companies can not only generate positive societal impacts but also bolster their competitive position, attract investors, and fortify their reputation, thus fostering a virtuous cycle of value creation and responsible business practices.

Moreover, the implementation of CSR initiatives can reinforce investor confidence and cultivate favorable perceptions among stakeholders, potentially resulting in lower financing expenses from both creditors and stockholders. As a result, this can contribute significantly to the augmentation of firm value [21]. In essence, CSR activities function as a mechanism to align the interests of diverse stakeholders, foster positive societal

change, and ultimately elevate the comprehensive value proposition of the company. By integrating socially responsible practices into their operations, businesses can not only mitigate risks and enhance their reputation but also attract investment and fortify their competitive standing in the marketplace. This symbiotic relationship between CSR and firm value underscores the integral role of responsible business conduct in driving sustainable growth and fostering enduring relationships with stakeholders. Therefore, prioritizing CSR initiatives represents a strategic imperative for companies aiming to achieve long-term success while making meaningful contributions to society.

The findings of the Ha3 hypothesis test suggest that there is no significant impact of the cost of capital (CoC) on firm value. While there appears to be a link indicating that cutting the cost of capital might boost firm worth, this connection lacks statistical importance. These results contrast with earlier studies by Shadab and Sattar [37], Kurniasih [38], and Azhar and Noriza [44], all of which identified a notable impact of CoC on firm value. Nevertheless, these outcomes are consistent with Kartinah et al.'s research [45], which similarly determined that the expense of capital has no significant effect on the worth of a company. Although previous research has shown a strong connection between CoC and firm value, the findings of this study indicate a different outcome. Considering different organizational and market conditions is crucial in understanding how the cost of capital can impact firm value, as there are various factors and contexts that may influence these relationships.

The measurement method used for cost of capital is responsible for the lack of impact it has on firm value. In this research, capital expenses are assessed through the WACC, determined as the combined average of the CoE and the CoD. The cost of capital is determined using the Capital Asset Pricing Model (CAPM). Using WACC to gauge the cost of capital might not completely account for the intricacies and subtleties of how capital costs are linked to the value of a company. Additionally, the reliance on the CAPM model for calculating the cost of capital may introduce certain assumptions and limitations that could affect the results. Several opinions reveal the weaknesses of this model using market beta and market return calculations. According to Botosan [46], research using CAPM is less representative and does not reflect the relationship with disclosures made by the company.

The outcomes of the Ha4 hypothesis testing reveal a notable adverse impact of firm size on firm value, diverging from earlier research conducted by Ha and Minh [22], Dang et al. [23], and Aduroh et al. [24], all of which indicated a robust and positive correlation between company size and worth. Traditionally, businesses with substantial assets often

experience an uptick in their market stock values. However, this study's findings align with the conclusions drawn by Hirdinis [25], who also identified a relationship between smaller company size and diminished company value. Moreover, Niesh and Velnampy [47] asserted that firm size exerts a negative influence on firm value. Typically, a company's performance is evaluated based on its total assets, which inherently reflect its size. Companies with expansive assets and inventory may encounter challenges in profit distribution due to asset accumulation in accounts receivable and inventory [25]. These findings suggest a nuanced understanding of the relationship between firm size and value, indicating that while larger firms may benefit from economies of scale and market recognition, they could face hurdles related to asset management and distribution. On the other hand, smaller companies might demonstrate agility and efficiency but could struggle with market visibility and access to resources. Thus, comprehensive strategies that account for both the advantages and challenges associated with firm size are crucial for optimizing firm value and sustaining long-term growth and competitiveness.

5. Conclusion

The research findings suggest that ERM and CSR positively influence firm value. Conversely, firm size exhibits a significant negative impact on firm value. Meanwhile, the cost of capital has no effect on firm value. These findings suggest that organizations need to focus on implementing integrated risk management to effectively handle risks. In addition, businesses should focus more on corporate social responsibility to boost their reputation and ultimately enhance their value.

Contribution and Recommendation

This research has proven the role of ERM and CSR in increasing firm value. This can be a good reference for company management in managing their company for survival in the future.

This work advances scientific knowledge by adding to the body of empirical data about the variables affecting business value. Subsequent research endeavors could augment these findings by incorporating additional factors that either bolster or diminish firm value, such as dividend policy, investment opportunity set, or corporate governance mechanisms.

Furthermore, even though it was not possible to demonstrate a substantial relationship between the cost of capital and company value, academics in the future can build on this work by investigating this relationship using various measures. The Ohlson model, for instance, which evaluates the cost of capital using the discount rate of future cash flows that investors would utilize, may provide deeper insights into this relationship [46].

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