

Effect of Risk Management, Intellectual Capital Disclosure, and Leverage on Firm Value

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Abstract

Purpose: This study aims to examine the effect of enterprise risk management disclosure, intellectual capital disclosure, and leverage on firm value in food and beverage companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period.

Methodology/Approach: The research applies a quantitative descriptive method using secondary data from annual and sustainability reports of food and beverage companies listed on the Indonesia Stock Exchange from 2019–2023. Samples were selected through purposive sampling, and data were analyzed using Microsoft Excel and SPSS 25.

Results/Findings: The regression model passed the classical assumption tests: normality (sig. 0.077 > 0.05), no multicollinearity (tolerance > 0.10), and no heteroscedasticity (sig. > 0.05). Although initial results indicated positive autocorrelation (DW = 0.925), the Cochrane-Orcutt method resolved this issue. The Adjusted R² value is 0.160, indicating that 16% of firm value variation is explained by the three independent variables. The F-test confirms the model's overall significance (p = 0.000). Individually, risk management disclosure (X1) shows a significant positive effect on firm value (p = 0.000), while intellectual capital disclosure (X2) and leverage (X3) have negative but insignificant effects (p = 0.225 and 0.070).

Conclusions: Risk management disclosure significantly enhances firm value, whereas intellectual capital disclosure and leverage do not show a meaningful impact. Thus, disclosure of risk management plays a vital role in determining firm value in IDX-listed food and beverage companies.

Limitations: The scope is limited to food and beverage sub-sector firms listed on the IDX during 2019–2023.

Contribution: This study contributes to financial management and corporate governance research by highlighting the importance of risk management disclosure. It offers practical insights for companies, regulators, and investors in improving firm value through transparent risk reporting.

Keywords: *Enterprise Risk Management Disclosure, Firm Value, Intellectual Capital Disclosure, Leverage*

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1. Introduction

Various sectors have been significantly affected by the COVID-19 pandemic (Lorenza, Octavia, Shafitranata, & Madyoningrum, 2022). For example, community events have experienced a substantial decrease as individuals remain at home to prevent the virus from spreading (Khalifa et al., 2021). The global shutdown of numerous manufacturing plants in China has disrupted international supply networks, impacting various industrial sectors worldwide (Yu et al., 2022). The complexities and ambiguities of the contemporary global business landscape necessitate that enterprises adopt

comprehensive management strategies that extend beyond financial considerations, which may damage organizational performance. The significant uncertainty over the pandemic's health and economic effects leads investors to exercise caution, hence creating hesitation in making investment decisions (Ahiadu, Abidoye, & Yiu, 2024). The COVID-19 pandemic has adversely impacted the valuations of corporations across nine sectors on the IDX, including the non-cyclical consumer market (Xia & Fu, 2019). Organizations must mitigate risk, augment intangible assets, and sustain a balanced capital structure. Addressing these difficulties necessitates openness, operational efficiency, and the establishment of sustainable value for shareholders and other stakeholders. Consequently, firm value serves as a crucial metric representing the market's evaluation of the company's future profitability. A crucial metric for evaluating a company's success and prospects is its valuation. This value represents the evaluations of investors and the market regarding the company's ability to generate future profits. The disclosure of information about risk management, intellectual capital, and leverage policy or capital structure is a vital aspect that requires additional examination (Amrulloh & Amalia, 2020).

The food and beverage sector is anticipated to exhibit greater confidence in 2024, continuing its substantial contribution to Indonesia's economy. This positive outlook is supported by several strategic initiatives, notably the adoption of INDI 4.0 by 115 companies and manufacturing facilities. A key indicator of this advancement is the launch of Food Ingredients Asia Indonesia at JIExpo, Jakarta. According to Ignatius Warsito, Special Staff to the Minister of Industry for Enhancing Domestic Industrial Competitiveness, the food and beverage industry plays a critical role in driving national economic growth. In the second quarter of 2024, the sector achieved a growth rate of 5.53%, exceeding the national economic growth rate, and contributed 40.33% to the country's GDP, particularly within the non-oil and gas sectors.

To enhance a firm's value, a company's stock price must either stabilize or exhibit an upward trajectory. The volatile stock prices in the food and beverage sub-sector indicate instability in corporate valuation. Thus, initiatives to enhance business value should underpin all strategic decisions undertaken by management. This is intricately associated with the execution of Enterprise Risk Management (ERM) disclosure. Risk management is a systematic process that identifies, assesses, and mitigates risks faced by a firm to enhance operational performance and efficiency (Ghazieh & Chebana, 2021). Moreover, as indicated by Bao (2023), risk management disclosure signifies the company's effort to enhance transparency in its annual reports, thereby furnishing stakeholders with pertinent information for informed decision-making. Companies are becoming increasingly exposed to various types of risk as the industrial landscape evolves, particularly in the food and beverage sector. This study examines enterprises in the food and beverage sub-sector for their sustained operation and resilience during the COVID-19 pandemic despite probable revenue decreases.

Shareholders also delegate risk assessment activities to managers. Managers must control the risk associated with each decision by implementing both traditional and modern risk management approaches. Disclosure of Corporate Risk Management is beneficial for companies in identifying, evaluating, and managing potential risks that may arise within the organization. Additionally, disclosing transparent risk management practices will increase investors' confidence in the company.

Alongside the disclosure of corporate risk management, corporations are also seen to enhance their value by revealing intellectual capital in their annual reports. Intellectual capital disclosure refers to the extent to which a firm discloses information related to its intellectual capital, which contributes to enhancing organizational performance and facilitating the creation of corporate value. The disclosure of intellectual capital in annual reports enhances investors' decision-making efficacy and bolsters corporate governance by improving management performance and yielding economic benefits (Candra & Wiratmaja, 2020). Intellectual capital disclosure encompasses quantitative statistics and descriptive elements that convey the strategic information held by the company, particularly regarding intellectual assets and non-financial performance. The submitted information encompasses employee competency development programs, customer participation in corporate operations, internal and external knowledge sharing, organizational structure, and additional elements.

In addition to the company's financial statements disclosures, some companies have increased their debt, survived during the pandemic, and managed to increase their company value. Indonesia's relatively improved company performance is expected to have a positive impact on investors and shareholders. Companies can manage additional debt effectively; the market tends to respond positively to this, which can increase a company's value through changes in its capital structure. In this study, DER, or debt-to-capital ratio, is the measurement companies use to calculate their Leverage. The high amount of Leverage an issuer owns shows how dangerous their investment decisions are. Excessive use of debt is a concern, as it increases investment risk and decreases the level of return that will be obtained. As a result, investors should reconsider their investment decision.

This study evaluates firm value using Tobin's Q. A Tobin's Q value exceeding one signifies that the market assigns a higher valuation to the company than its book value, indicating a positive market perception. This indicates that investors perceive the company as having robust potential. Multiple factors can impact business value, including corporate risk management, disclosure of intellectual capital, and leverage. The primary objective of this research is to analyze and substantiate the impact of three variables enterprise risk management disclosure, intellectual capital disclosure, and leverage on firm value.

However, a research gap remains regarding the extent to which risk management disclosure, intellectual capital disclosure, and leverage, both collectively and individually, affect firm value, particularly in the food and beverage sub-sector listed on the Indonesia Stock Exchange during the COVID-19 pandemic and the subsequent economic recovery. Therefore, this study is focused on addressing this issue.

2. Literature Review and Hypothesis Development

2.1 Literature Review

2.1.1 Agency Theory

Agency theory posits that individuals are inherently motivated by self-interest, which may diverge from the interests of others, particularly in principal agent relationships. In the corporate context, managers (agents) often prioritize short-term financial outcomes or business investments, aiming to maximize personal utility. Meanwhile, principals or owners expect agents to act in alignment with organizational goals and are compensated accordingly over a specific period. This divergence in objectives can lead to agency conflicts as both parties seek to optimize their respective benefits. Managers may pursue strategies that enhance reported performance metrics—such as accelerating investments to increase dividend payouts thereby creating the appearance of superior performance. However, such behavior may involve earnings management or manipulation of financial statements to present a favorable image to shareholders. This opportunistic behavior underscores the need for mechanisms that can align managerial actions with shareholder interests.

As noted by Al Astal, Ateeq, Milhem, and Shafie (2024), the implementation of corporate governance practices serves as an effective tool for mitigating agency conflicts. Corporate governance mechanisms, including oversight structures, performance-based incentives, and transparent reporting, ensure that stakeholders are assured that managerial decisions are made according to the firm's objectives. Agency theory further asserts that conflicts arise due to the misalignment between shareholders' goals typically focused on maximizing firm value—and managerial preferences, which may include securing higher compensation or minimizing personal risk. Without adequate oversight, these conflicting interests can undermine organizational performance. To address such conflicts, agency theory recommends the establishment of appropriate monitoring mechanisms and incentive systems, such as those embedded in robust corporate governance frameworks. These instruments foster managerial accountability and motivation to act in the best interests of shareholders. Consequently, effective corporate governance not only reduces agency problems but also contributes to improved firm performance and enhanced corporate value.

Although research on corporate risk management disclosure, intellectual capital disclosure, and leverage on firm value has been widely conducted, studies specifically examining the impact of these three variables on the food and beverages subsector listed on the Indonesia Stock Exchange (IDX) from

2019 to 2023 are still very limited. Most previous studies have focused more on the industry in general or on specific sectors without considering the unique characteristics of the food and beverages subsector. Furthermore, the influence of leverage and intellectual capital disclosure on firm value in this sector has not been widely explored, despite the fact that the food and beverage sector experiences fast market dynamics and is highly influenced by external factors. Therefore, this study is highly relevant and important to fill the existing literature gap and provide new insights into how these three factors affect the performance and firm value in this rapidly growing subsector.

Previous studies have explored the link between intellectual capital disclosure and firm value, with findings ranging from significant effects to mixed results. For instance, Supriyadi and Setyorini (2020) examined risk management disclosure in the Indonesian banking sector, but their results may not apply to other industries. Salvi, Vitolla, Raimo, Rubino, and Petruzzella (2020); (Vitolla, Raimo, Marrone, & Rubino, 2020) assessed intellectual capital disclosure's impact on firm value but did not address the role of risk management disclosure. As a result, there is a gap in understanding how both disclosures jointly affect firm value, especially in the Indonesian food and beverages industry. This study seeks to address this gap through a comprehensive analysis.

2.1.2 Enterprise Risk Management Disclosure

Enterprise risk management disclosure refers to the disclosure of the various risks a company manages in its efforts to control potential future risks. Such disclosure is essential, as it enables stakeholders to obtain the necessary information to understand the company's risk profile and how management addresses those risks. Information regarding risk management is typically presented in the bank's financial statements. (Supriyadi & Setyorini, 2020)

2.1.3 Intellectual Capital Disclosure

Pamungkas and Meini (2023) said the disclosure of intellectual capital plays a significant role in enhancing the credibility and reliability of annual financial statements. Comprehensive and well-structured intellectual capital reporting contributes to greater transparency within the firm, thereby narrowing the information asymmetry gap between management and external stakeholders, particularly investors. This increased transparency fosters investor confidence, facilitates more informed decision-making, and ultimately leads to an improvement in both the firm's perceived and actual market value. Moreover, intellectual capital disclosure reflects a company's commitment to openness and long-term strategic thinking, which can further strengthen its competitive advantage and stakeholder trust (Monteiro, Cepêda, & Silva, 2022).

2.1.4 Leverage

Leverage serves as a crucial financial factor in regulating operating cash flows and limiting managerial discretion (Ramdani & Prayitno, 2023). Firm value (FV) can be influenced by entrenched managers who may intentionally increase leverage as a signaling mechanism to demonstrate their commitment to asset sales or corporate restructuring (Liviani & Rachman, 2021). This strategy can deter potential takeover attempts by external parties aiming to replace existing assets to boost firm value. Moreover, the agency costs associated with debt may incentivize such managers to raise leverage beyond its optimal level by engaging in high-risk activities, underinvesting in productive assets, or extracting private benefits from company resources. (Tulcanaza-Prieto, Lee, & Anzules-Falcones, 2024)

2.1.5 Firm Value

Firm value is no longer based solely on its assets; instead, it is based on a company's perception of its management, growth potential, and level of investor confidence. This perception is captured in the company's firm value, which reflects the economy's perception of a company's worth based on shareholding and owning relationships. This value is not measured solely through financial statements but rather through market expectations, premeditation, and prospects. The firm's strategic vision, the credibility of its executives, and its reputation significantly impact a company's financial value. Therefore, firm value measures both tangible and intangible aspects, providing a comprehensive metric that encompasses all aspects of worth. A firm's equity and debt capital ratio considerably impacts the value of a company. An increase in equity over debt leads to a heightened perception and confidence in

the firm, signifying stability. Sustaining this perception elevates the firm's market and actual value. A high firm value indicates that the company demonstrates strong performance and that investors may have confidence in its prospects. A firm's value is often closely tied to its stock price. The higher the stock price, the greater the firm value, and enhancing firm value increases shareholder wealth, which is a fundamental objective of the company. Firm value serves as an important indicator of attractiveness for entities currently operating in the market.

2.2 Hypothesis Development

2.2.1 The Effect of Risk Management Disclosure on Firm Value

Companies interact with their stakeholders through multiple channels, including the disclosure of their risk management methods and policies. Comprehensive risk management disclosure not only shows a commitment to meeting stakeholders' information requirements but also indicates the organization's ability to manage encountered risks. Such disclosures have demonstrated the ability to enhance corporate value. Risk Management Disclosure signifies a strategy methodology employed by organizations to maintain resilience in the face of escalating commercial rivalry. The use of Enterprise Risk Management (ERM) indicates a company's readiness and cognizance in foreseeing unforeseen hazards that may result in business failure.

The Committee of Sponsoring Organisations of the Treadway Commission (COSO) defines Enterprise Risk Management (ERM) as a synthesis of culture, competencies, and practices that are embedded in strategy development and implementation, providing a framework for organizations to manage risks and generate, sustain, and actualize value. This study evaluates corporate risk management disclosure using 108 indicators, categorized into eight principal dimensions as specified by COSO's ERM risk management disclosure framework. The dimensions encompass: (1) internal environment, (2) goal setting, (3) event identification, (4) risk assessment, (5) risk response, (6) control activities, (7) information and communication systems, and (8) monitoring procedures.

The disclosure addresses stakeholders' informational requirements and facilitates the attainment of corporate objectives concerning operations, strategy, financial reporting, and regulatory compliance (Wahyuni & Oktavia, 2020). This disclosure is crucial for maintaining organizational stability through the effective implementation of robust internal controls. This positively impacts stakeholders and cultivates favorable market impressions, ultimately augmenting the firm's value. Risk management disclosure substantially influences corporate value by enhancing transparency for stakeholders, especially investors. Transparent communication about the company's strategies for detecting, managing, and mitigating risks enhances investor confidence. Enhanced investor trust generally leads to heightened investment interest, thus increasing share demand and elevating the company's valuation.

Research findings suggest that transparent risk management positively impacts corporate value. The pivotal function of risk management in value creation necessitates the proficient identification and assessment of potential operational threats, which can augment investor and stakeholder confidence, elevate the company's market reputation, and boost competitiveness, hence raising firm value.

Research shows that transparent risk management can increase a company's value. Agency theory explains that sharing information about risk management helps close the information gap between managers and stakeholders. When companies explain how they handle risks, they show accountability, reduce conflicts, and build investor trust, which can boost firm value.

H1: Risk Management Disclosure has a positive effect on Firm Value

2.2.2 The Effect of Intellectual Capital Disclosure on Firm Value

The aggregation of intellectual capital is essential for augmenting a firm's value. Organizations, particularly in knowledge-intensive sectors such as technology and services, frequently invest considerable resources in intellectual capital due to its significance and the advantages it brings to their operations. Intellectual capital encompasses all knowledge possessed by employees and the organization's ability to create additional value and maintain a competitive advantage. When correctly

managed, intellectual capital serves as an intangible asset that enhances profitability and competitiveness (Rahmawati & Harymawan, 2022).

Value is created through the organization's diverse activities and relationships. The proficient and optimal utilization of intellectual resources offers additional value and a competitive edge to organizations. Organizations can boost value creation by optimizing essential components of intellectual capital, specifically human capital, structural capital, and physical capital. Data regarding intellectual capital is essential for forecasting an organization's prospects and assessing investment viability, thereby enabling more informed decision-making. Marketing strategies outline the company's trajectory and goals, demonstrating its capacity to generate enduring economic value and enhance the brand. Furthermore, the revelation of intellectual capital improves the quality of financial reporting, consequently augmenting stakeholder trust and loyalty.

Enhancing these elements enables investors to discern and value the quality of a company's intellectual capital. This acknowledgment has a beneficial effect on the organization's intellectual capital. Research findings consistently indicate that the revelation of intellectual capital has a positive impact on corporate value. Research consistently shows that revealing intellectual capital positively impacts corporate value. Agency theory suggests that disclosing intellectual capital helps stakeholders better understand the company's intangible resources. This reduces information asymmetry and the potential for opportunistic manager behavior, fostering trust and improving firm value.

H2: Intellectual capital disclosure has a positive effect on firm value.

2.2.3 The Effect of Leverage on Firm Value

Leverage denotes the use of a corporation's financial resources or assets, which compels the company to bear fixed costs linked to the utilisation of these resources (Ridhwan & Dwiati, 2022). It indicates the degree to which a corporation funds its assets via borrowing or debt instruments. An overdependence on debt results in excessive leverage, wherein the organisation encounters substantial financial obligations and finds it challenging to manage or diminish them. Leverage is crucial for organisations, since it can enhance investor trust in the company's financial position and asset portfolio. It functions as a financial instrument to finance both operating activities and investment initiatives. Effective management of leverage is essential, since decisions about elevated debt levels can possibly enhance business value by reducing taxable revenue. Leverage is a prevalent tactic utilised by corporations to acquire cash, augment profits, or produce supplementary income. Empirical research conducted by Santosa, Setianingrum, and Yusuf (2022) demonstrates that leverage exerts a positive and statistically significant influence on business value. This positive association indicates that an increase in leverage correlates with a greater business value.

Empirical research indicates that leverage has a positive and statistically significant impact on business value. From the lens of agency theory, leverage can act as a disciplinary mechanism that limits managerial opportunism, since debt obligations require managers to be more prudent and transparent in resource allocation. This reduction in agency costs can increase efficiency and, in turn, enhance firm value.

H3: Leverage has a positive effect on Firm Value

3. Research Methods

3.1 Research Type and Data Source

This research utilizes quantitative approaches to analyze the causal relationship between two variables. It employs a descriptive quantitative methodology. Rooted in the positivist perspective, the quantitative method seeks to objectively evaluate hypotheses by examining the relationships between variables. This perspective perceives reality as tangible, consistent, and quantifiable via empirical data. The data comprises documentary sources obtained from annual and sustainability reports of enterprises within the food and beverage subsector for the years 2019 to 2023. These secondary data comprise documented proof, records, or historical facts that are archived and publicly available. The study utilizes annual reports from companies in the food and beverage subsector listed on the Indonesia Stock Exchange.

3.2 Overview of the Population (Type of Research)

The population in research encompasses all elements involved, including people or items possessing specified features and qualities. Population generally refers to all persons or entities within groups that possess specified qualities, such as humans, animals, events, or objects, situated in a designated location in a predetermined manner. This study examines firms in the food and drinks sector listed on the Indonesia Stock Exchange from 2019 to 2023. This sector was chosen because of forecasts indicating that the food and beverage industry will significantly contribute to Indonesia's economic growth in 2024 and because enterprises in this subsector continued operations during the COVID-19 pandemic despite a projected decline in revenue.

3.3 Sampling Technique

The sample is a subset of a population that is selected in a specific manner for analysis in quantitative research. The objective is to ensure that the results can be generalized and accurately reflect the characteristics of the population. This study employed a purposive sampling strategy. Purposive sampling is a methodical sampling strategy in which respondents are intentionally chosen based on factors deemed pertinent to the research aims. This method is employed to acquire comprehensive information from groups or individuals with specific traits that align with the study's requirements. The sample criteria for this study consist of companies listed on the Indonesia Stock Exchange from 2019 to 2023.

Table 1. Sampling

No.	Sample Criteria	Total
1	Companies in the food and beverages subsector registered on the Indonesia Stock Exchange from 2019 to 2023.	99
2	Companies in the food and beverages subsector that went public on the Indonesia Stock Exchange (IDX) after 2019.	(4)
3	Companies in the food and beverages subsector that have consecutively reported their annual financial statements to the IDX from 2019 to 2023.	(58)
3	Research Year	5
4	Outlier Data	(53)
5	The amount of observation data used in the study (37 x 5) - 53	132

3.4 Variables and Operational Definition of Variables

3.4.1 Variables

The variables used in this study consist of independent variables and dependent variables. The independent variables are risk management control, intellectual capital disclosure, and Leverage. At the same time, the dependent variable is firm value.

3.4.2 Dependent Variable

A dependent variable is one whose value is influenced or determined by changes in the independent variable; in other words, it represents the outcome or effect caused by variations in the independent variable. The worth of a company is assessed not only based on its tangible assets but also on the market's perception of its management quality, growth prospects, and investor confidence. Firm value serves as a crucial indicator reflecting the overall economic worth of a company from the shareholders' perspective, which goes beyond financial statement figures to include future potential as recognized by the market. The combination of a company's equity and debt plays a significant role in shaping its value. Firm value refers to how a corporation earns the trust of its investors. A high firm value suggests strong company performance and instills confidence in its future outlook among investors. Typically, a company's value is closely tied to its stock price: the higher the stock price, the greater the company's value, which ultimately enhances shareholder wealth—a primary corporate objective. The

attractiveness of a company's value also influences active business entities. Company value encompasses both tangible and intangible assets. This study utilizes Tobin's Q to measure firm value, where a Tobin's Q ratio exceeding one implies that the market values the company more highly than its book value of assets. This reflects greater market confidence in the company. The formula to calculate Tobin's Q is as follows:

$$TOBIN'S Q = \frac{MVS + D}{TA}$$

Description

MVS: Market Value of Equity

D: Debt (AVCL- AVCA) + AVLTD

AVCL: Current Liabilities of the Company

AVCA: Current Assets

AVLTD: Long-Term Liabilities

3.4.3 Independent Variable

a) Enterprise Risk Management Disclosure

One effective way for companies to manage activities that may reduce risks is by implementing an enterprise risk management (ERM) framework or an enterprise risk management disclosure (ERMD) policy. On February 14, 2018, the ISO released an updated version of the risk management guideline, ISO 31000:2018, which refines the previous 2009 edition. Indonesia has officially adopted this international standard through SNI 8615:2018. The SNI ISO 31000:2018 outlines the fundamental principles, framework structure, and stages of the risk management process. The disclosure and application of ERM reflect strong risk management practices, including the maintenance of internal controls, which can set a company apart from others. Effective risk management is vital for corporate sustainability, given the complexity of various risks faced by businesses. ERM provides a holistic method to identify, assess, manage, and mitigate risks, covering financial, operational, legal, and reputational areas. This research examines corporate risk management disclosures through 108 indicators grouped into eight main categories. These categories align with the COSO integrated risk management disclosure framework and include internal environment, goal setting, event identification, risk analysis, risk response strategies, control activities, information and communication, and continuous monitoring. ERM disclosure refers to the communication of the company's dedication to managing and controlling the risks it faces. Each of the 108 indicators is scored using a simple dichotomous scale: a score of 1 is assigned if the item is disclosed in the company's annual or sustainability report, and zero if it is not disclosed. The following formula is used to calculate the Enterprise Risk Management Disclosure Index (Listiani & Ariyanto, 2021).

$$ERMDI = \frac{\sum_{ij} Ditem}{\sum_{ij} ADitem}$$

Description:

ERMDI: ERM Disclosure Index

$\sum_{ij} Ditem$: Total Score of Disclosed ERM Items

$\sum_{ij} ADitem$: 108 ERM Items That Should Be Disclosed

b) Intellectual Capital Disclosure

Intellectual capital disclosure refers to a company's effort to communicate information about its intellectual assets through its annual report. This disclosure highlights the significant role intellectual capital plays in enhancing company performance and contributing to value creation. Since regulations do not mandate such disclosure, it is typically done voluntarily, especially by companies with strong performance that wish to showcase their achievements to the public (Wardoyo & Utami, 2024). To assess the extent of disclosure, the PMI index was developed following the approach by Singh and Mitchell Van der Zahn (2007). This index includes 81 indicators categorized into six main groups: 1)

human resources, 2) customer relationships, 3) information technology, 4) work systems and procedures, 5) research and development activities, and 6) organizational strategic statements. The formula below is employed to calculate the Intellectual Capital Disclosure Index (Listiani & Ariyanto, 2021).

$$IPMI = \frac{\sum_{ij} Pitem}{\sum_{ij} APitem}$$

Description:

IPMI: Intellectual Capital Disclosure Index

$\sum_{ij} Pitem$: Total Score of Intellectual Capital Items Disclosed in the Annual Report

$\sum_{ij} APitem$: 81 Intellectual Capital Items that Should Be Disclosed in the Annual Report

c) Leverage

The level of debt of a company can be used as an indicator of company size because an increase in debt can have an impact on reducing the value of the company. This situation makes investors reconsider investing, given the high investment risk. Generally, the greater the company's debt, the lower the company's value (Santosa et al., 2022). In a broad sense, Leverage refers to a business's proficiency in managing debt-funded assets to lower costs and increase the rate of return through additional capital. Leverage can be a valuable tool for saving a company from failure optimally. However, if managed improperly, Leverage has the potential to plunge a company into bankruptcy due to the inability to fulfill its debt obligations. Therefore, companies must carefully consider the level of debt that is reasonable to take and ensure the availability of adequate resources for debt repayment. Leverage refers to the company's ability to utilize assets or funds at a fixed cost to increase the potential profit that the company owner can obtain. The debt-to-equity ratio is one of the leverage indicators used to assess how much debt is used compared to own capital (equity) (Anita, Abdillah, & Suseno, 2023). This ratio helps to know the amount of money provided by lenders (creditors) compared to the amount provided by the company owner (which is the source of its own capital).

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

Description:

DER: Debt Equity Ratio

3.5 Data Analysis Technique

3.5.1 F test

The F-test is one of the most important statistical tests used in regression analysis to determine the overall significance of the model. This test checks whether the independent factors have a significant effect on the dependent variable when all are considered together. The F-test, sometimes referred to as the goodness-of-fit or model adequacy test, assesses how well the sample regression function predicts the actual values statistically. The simultaneous test, also known as the ANOVA test, is another name for this test. It examines how all the independent variables interact to influence the dependent variable. This test is used to determine whether the regression model is statistically valid and dependable or if it lacks significance. The F-test helps you decide whether to accept or reject the study hypothesis by using a significance level (alpha) of 0.05. This test is crucial for ensuring that the overall regression model is accurate and for determining the relationships between the variables in the study.

3.5.2 T-test

The T-test is used to examine how one independent variable affects a dependent variable in isolation. It is also used to check if the null hypothesis is true. The values that a t-test examines can vary depending on the research topic, the type of test being conducted, or the type of data being analyzed. William Sealy Gosset, a statistician, developed the t-test in 1908 and published it under the pseudonym "Student." When using regression analysis, you compare the obtained t-statistic to the crucial t-value from the t-distribution table to decide whether to accept or reject the effect of an independent variable:

- a) If the calculated t value exceeds the critical t value, the independent variable (X) is considered to have a significant impact on the dependent variable (Y).
- b) If the calculated t value is less than the critical t value, the independent variable (X) is deemed to have no significant effect on the dependent variable (Y).

3.5.3 Determination Coefficient Test

According to Nurliati Hasibuan, Yurmaini, and Erliyanti (2023), it is necessary to determine the coefficient of determination (R^2) to assess how well the independent factors explain the dependent variable. The coefficient of determination in regression analysis indicates how much the model's independent variables can explain the variation in the dependent variable. The coefficient of determination is a key measure of the overall strength of the regression model. The R^2 value can range from 0 to 1 ($0 < R^2 < 1$). Here is what it means:

- a) A coefficient of determination that is close to 1 means that the relationship between the independent and dependent variables is stronger, which means that the model is good.
- b) If the coefficient of determination is going down from 1, it suggests that the relationship between the independent variable and the dependent variable is getting weaker. This means that the model is not very good.

3.5.4 Normality Test

The purpose of the normality test, is to determine if the disturbance or residual variables in the regression model have a normal distribution. The normality test evaluates if the residuals from the regression model follow a normal distribution. In regression analysis, normality testing concentrates on the residuals or prediction errors rather than the variables themselves. The regression model is considered adequate if the residuals conform to a normal distribution (Budi, Septiana, & Mahendra, 2024). This research utilized the Kolmogorov-Smirnov Z test to evaluate the normality of the data. The significance level of this test is $\alpha = 0.05$ or 5%.

The subsequent criteria for decision-making in the Kolmogorov-Smirnov Z test are as follows:

- a) If the asymptotic significance (2-tailed) value is less than 0.05, it can be inferred that the information is not randomly distributed.
- b) On the opposite end, if the asymmetrical significance (2-tailed) value far exceeds 0.05, it can be inferred that the data is typically distributed.

3.5.5 Multicollinearity Test

The multicollinearity test aims to identify the interrelationship among independent variables in a regression model. A regression model is considered free of multicollinearity when there is no correlation among the variables. To ensure an accurate depiction of the regression results, the independent variables in the multiple regression model must be independent, meaning there should be no extremely high or nearly perfect correlation among these variables.

3.5.6 Heteroscedasticity Test

The heteroscedasticity test is used to assess if a variable's error variance is homogenous or heterogeneous across different values. Heteroscedasticity can be identified by graphical analysis. The Spearman rho test evaluates the degree of association between any independent variable and the absolute value of the residuals. A significant level beyond 0.05 suggests the absence of a heteroscedasticity issue.

3.5.7 Autocorrelation Test

Ghozali (2021) explains that the autocorrelation test aims to detect a relationship between residual errors in a period and residual errors in the previous period in a linear regression model. Autocorrelation itself shows the existence of a relationship between residuals from one observation to another.

3.5.8 Validity Test

The validity test using a rating scale and the Pearson Product-Moment formula at a 5% significance level ($df = n-2$). An item is valid if r_{hitung} exceeds r_{tabel} after comparing the calculated and table correlation values.

4. Results and Discussion

4.1 Normality Test

In this study, researchers used the Normal Probability Plot Test to prove that the variable data in this study were normally distributed after experimenting with one transformation.

Table 2. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardize d Residual
N		132
Normal Parameters	Mean	.0000000
	Std. Deviation	.28882600
Most Extreme Differences	Absolute	.074
	Positive	.074
	Negative	-.054
Test Statistic		.074
Asymp. Sig. (2-tailed)		.077 ^c

Source: The data were processed using SPSS 25

After transforming the data into a logarithmic form, the resulting significance value (Sig) shows a number greater than 0.05, precisely 0.077. This indicates that the residual value in the regression model has met the normality assumption. In the normality test, the Sig value that exceeds 0.05 indicates no significant difference between the residual and normal distributions, so it can be concluded that the residuals in this study are typically distributed. Therefore, the regression model used in this study has met one of the important requirements in regression analysis, namely residual normality.

4.2 Multicollinearity Test

Table 3. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	.982	1.019
	X2	.977	1.024
	X3	.969	1.032

Source: The data were processed using SPSS 25

The table indicates that the tolerance values are 0.982 for X1, 0.977 for X2, and 0.969 for X3, all of which exceed the threshold of 0.10. The findings of this regression test do not indicate the presence of multicollinearity. A tolerance coefficient of an independent variable below 0.10 suggests a strong connection with other independent variables, indicating the presence of multicollinearity. If the tolerance value significantly exceeds 0.10, it suggests that the variable is associated with its current variable in the model. The absence of multicollinearity indicates that the regression model test results demonstrate that the three variables significantly exceed the average. The minimum threshold is 0.10, suggesting that no independent variables exhibit a strong association with one another. Consequently, it can be inferred that the employed regression model. Multicollinearity is absent. This signifies that each independent variable may influence the dependent variable.

4.3 Heteroskedstisits Test

Table 4. Heteroskedstisits Test Results

Correlations

Correlations

		X1	X2	X3	Unstandardized Residual
Spearman's rho	X1	Correlation Coefficient	1.000	.027	-.167
		Sig. (2-tailed)	.	.757	.056
		N	132	132	132
	X2	Correlation Coefficient	.027	1.000	-.101
		Sig. (2-tailed)	.757	.	.247
		N	132	132	132
	X3	Correlation Coefficient	-.167	1.000	-.101
		Sig. (2-tailed)	.056	.	.247
		N	132	132	132
	Unstandardized Residual	Correlation Coefficient	.008	.109	1.000
		Sig. (2-tailed)	.926	.214	.
		N	132	132	132

Source: The data were processed using SPSS 25

A heteroscedasticity test is conducted to ascertain whether the error variance of the *independent* variables is homogeneous or heterogeneous. Based on the heteroscedasticity test, the significance value for each independent variable residual is > 0.05 , so there are no symptoms of heteroscedasticity, and it meets the requirements of homoscedasticity. Thus, the error variance can be considered constant and homogeneous across the entire range of independent variables.

4.4 Autocorrelation Test

Table 5. Autocorrelation Test Results

Model Summary ^b	
Model	Durbin-Watson
1	.925 ^a

Source: The data were processed using SPSS 25

The autocorrelation test is tested using the Durbin-Watson method; the regression model is considered good if the regression results do not experience autocorrelation symptoms. $dl = 1.6696$; $du = 1.7624$; $4 - du = 2.2376$, $dw = 0.925$ the value $du < dw < 4 - du$, then there is a correlation. Then, we will use the **Cochrane-Orcutt** formula.

Table 6. Autocorrelation Test Results using the Cochrane-Orcutt Formula

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	-.001	.055		-.010	.992
	lag_res1	.538	.074	.538	7.240	.000

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.395 ^a	.156	.136	.63831	1.896

Source: The data were processed using SPSS 25

After using the Cochrane-Orcutt formula, the regression result is > 0.05 , which means there is no autocorrelation problem. The autocorrelation test is one of the important steps in evaluating regression models, especially when the data used is time series data. This test detects a relationship (correlation) between the current and previous residual values. If autocorrelation is present, one of the classical regression assumptions, namely that the residuals should be independent of each other, has been violated. One of the most commonly used methods to test for autocorrelation is the Durbin-Watson Test (DW Test). The Durbin-Watson statistical value ranges from 0 to 4, with values close to 2 indicating no autocorrelation, values close to 0 indicating positive autocorrelation, and values close to 4 indicating negative autocorrelation. In the regression test results of this study, the Durbin-Watson (DW) value was 1.896. Based on the critical limits used, namely $dl = 1.6696$ and $du = 1.7624$, and the calculation of $4 - du = 2.2376$, it is known that the DW value is between the safe limits ($du < DW < 4 - du$). The results of the autocorrelation test indicate that there is no autocorrelation in this study. Therefore, the resulting regression model does not meet the assumption of free autocorrelation and needs to be adjusted or further tested. One solution that can be taken is to use a correction method such as the Cochrane-Orcutt Formula, which is an iterative technique to correct autocorrelation in linear regression so that the resulting model becomes more accurate and reliable.

4.5 Determination Coefficient Test (Adjusted) R^2

Table 7. Determination Coefficient Test Results Table (R^2)

Model	R		Adjusted Square	R	Std Error of the Estimate
1	.423 ^a	.179	.160		.75526

Source: The data were processed using SPSS 25

The coefficient of determination test results show that the acquisition of the *adjusted* value R^2 is 0.160. This means that the dependent variable (company value) of the food and beverages subsector listed on the Indonesia Stock Exchange in the period 2019 - 2023 can be influenced by 16% by the disclosure variable risk management, intellectual capital disclosure, and Leverage, while the remaining 84% is influenced by other independent variables not included in the study.

4.6 Model Feasibility Test (F Test)

Table 8. F Test Results

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.918	3	5.306	9.302	.000 ^b
	Residual	73.014	128	.570		
	Total	88.932	131			

Source: The data were processed using SPSS 25

The results of the F test on this research sample show that the significance value obtained is below the 0.05 level. This indicates that simultaneously or together, the three independent variables studied, namely enterprise risk management disclosure, intellectual capital disclosure, and leverage, significantly influence the dependent variable, namely firm value. In other words, the regression model used in this study as a whole is feasible and can be used to explain the variations that occur in firm value based on these three variables. These findings also reinforce that not only one but a combination of the three factors plays an important role in determining the value of food and beverages subsector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. These results align with Supriyadi and Setyorini (2020) findings. Therefore, companies are advised to pay attention simultaneously to risk management, intellectual capital development, and management of their capital structure in order to increase the value of the company in the eyes of investors and other stakeholders.

4.7 Hypothesis Test (T-Test)

Table 9. T Test Results

		<i>Coefficients^a</i>				
		<i>Unstandardized Coefficients</i>	<i>Standardized Coefficients</i>			
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	1.120	.448		2.501	.014
	X1	1.798	.383	.379	4.690	.000
	X2	-1.004	.824	-.099	-1.218	.225
	X3	-.170	.093	-.149	-1.826	.070

Source: The data were processed using SPSS 25

The t-statistical test results presented in Table 9 indicate that the coefficient for variable X1 is positive, whereas the coefficients for X2 and X3 are negative. A positive coefficient implies that an increase of one unit in X1 leads to an increase of approximately 1.798 units in Y. In contrast, a one-unit increase in X2 corresponds to a decrease of about 1.004 units in Y, and a similar rise in X3 results in a reduction of approximately 0.170 units in Y. This demonstrates a direct relationship between X1 and Y and an inverse relationship between both X2 and X3 with Y. Regarding statistical significance, the p-value for X1 is less than 0.05, indicating that X1 has a statistically significant and positive impact on Y, thus supporting the hypothesis. On the other hand, the significance values for X2 and X3 exceed the 0.05 threshold, suggesting that neither X2 nor X3 exerts a statistically significant influence on Y.

4.8 Validity Test

Table 10. Validity Test Results

Correlations					
		X1	X2	X3	Y
X1	Pearson Correlation	1	.080	-.120	.389**
	Sig. (2-tailed)		.361	.172	.000
	N	132	132	132	132
X2	Pearson Correlation	.080	1	-.137	-.048
	Sig. (2-tailed)	.361		.116	.586
	N	132	132	132	132
X3	Pearson Correlation	-.120	-.137	1	-.180*
	Sig. (2-tailed)	.172	.116		.039
	N	132	132	132	132
Y	Pearson Correlation	.389**	-.048	-.180*	1
	Sig. (2-tailed)	.000	.586	.039	
	N	132	132	132	132
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Source: The data were processed using SPSS 25

The validity assessment employed Pearson correlation coefficients. Both X1 (Enterprise Risk Management Disclosure) and X3 (Leverage) satisfied the validity threshold, whereas X2 (Intellectual Capital Disclosure) did not. The Pearson correlation for each variable was compared to the r-table value of 0.1697, which was determined using a sample size of 132 and a 5% significance level. The correlation between X1 and Y (Firm Value) was 0.389, exceeding the threshold and confirming X1's validity. The correlation between X3 and Y was -0.180; its absolute value also exceeded the threshold, indicating the validity of X3. In contrast, the correlation between X2 and Y was -0.048, with an absolute value below the threshold, rendering X2 invalid. Therefore, only X1 and X3 are considered valid variables in this study.

4.9 Discussion

4.9.1 The Effect of Enterprise Risk Management Disclosure (ERMD) on Firm Value

The findings indicated that risk management transparency substantially affects corporate value. The initial hypothesis in this study is affirmed. This yields a significance value of 0.000, indicating its significance as it is less than 0.05. The disclosure of risk management within the food and beverages subsector indicates that the company not only adheres to legislation but also ensures the safety and long-term viability of its operations. Entities within the food and beverage subsector encounter numerous risks, including volatility in raw material costs, shifts in customer preferences, health and product safety hazards, and regulatory challenges pertaining to food safety. Transparent disclosure of Enterprise Risk Management practices regarding the business's handling of risks conveys a favourable indication to investors that the company possesses an effective control system and foresees future losses. Maintaining stakeholder trust is crucial, especially within consumer-related sectors. Effective risk management disclosure can enhance the company's value by bolstering its trustworthiness and credibility among investors and members of the public. The company can also mitigate the uncertainty that is likely to stem from inadequately managed risks. Investors exhibit optimism regarding the company's risk management capabilities, leading to favourable evaluations of its shares and increased investment in firms with substantial value. This aligns with the studies conducted by Wahyuni and Oktavia (2020).

4.9.2 The Effect of Intellectual Capital Disclosure (ICD) on Firm Value

The results showed that intellectual capital disclosure has no significant adverse effect on firm value, which is why the second hypothesis was rejected. The results showed that the significance value of the intellectual capital disclosure variable was 0.225, which was more than 0.05. Several factors can cause the insignificance of this effect. One of them is that information about intellectual capital has not been the primary consideration for investors in assessing the company's value. The quality or way of disclosing intellectual capital in the annual report is not clear enough or standardized, so it does not provide information that is considered value-added by the market. Also, how companies present

intellectual capital disclosure information varies greatly and subjectively. The effect of intellectual capital on company performance will also usually occur or affect the company in the long term. In contrast, the capital market tends to be reactive to short-term information, such as employee *training*, which only impacts the company after several years. Investors need some short-term information where the impact of intellectual capital disclosure is not reflected or does not affect market value. The findings of this study are consistent with the research conducted by Setyowati et al., (2023) and Salim Saputra et al., (2023), which found that the disclosure of intellectual capital negatively and significantly impacts firm value.

4.9.3 The Effect of Leverage on Firm Value

The results suggest that leverage disclosure does not have a significant negative impact on firm value, thereby rejecting the third hypothesis. The significance value of the leverage variable in this study was greater than 0.05, specifically 0.070. This suggests that the level of corporate debt does not directly influence investors' perception of the company's market value. Changes in leverage do not show a direct or consistent effect on the firm value within the sample studied. Investors and the market do not seem to consider leverage a key factor in evaluating a company's performance or prospects, particularly in the food and beverage sub-sector analyzed in this research. The results of this study are in line with the journals by (Santosa et al., 2022) as well as Lamba & Atahau (2022), which indicate that leverage has a significant negative effect on firm value.

5. Conclusion

This study demonstrates that risk management disclosure significantly increases firm value in the Indonesian food and beverage subsector, while intellectual capital disclosure and leverage show negative yet insignificant effects. The findings highlight the central role of transparent, structured risk management in strengthening investor trust and corporate valuation. Firms should enhance the quality and standardization of risk management and intellectual capital reporting, aligning them with strategic decision-making and long-term competitiveness. Investors are advised to integrate these non-financial aspects into their analysis, and regulators such as OJK and IDX are encouraged to enforce standardized disclosure guidelines. For academics, further studies could include additional variables such as profitability, firm size, governance, ESG, or managerial reputation, and expand across industries and periods. Overall, companies are expected to integrate risk management disclosure into annual and sustainability reports to ensure transparency in handling operational, supply chain, food safety, and market risks, thereby reinforcing investor and consumer confidence, corporate reputation, and long-term competitiveness.

Litigation and Further Study

Several limitations to this research should be acknowledged. One notable constraint is the limited scope, as the analysis is restricted to the food and beverage industry due to time and resource limitations. This sector was specifically selected due to the significant impact it has experienced as a result of the COVID-19 pandemic. Despite its relevance, the statistical analysis revealed no significant relationship between the sector and the variables under examination. Furthermore, the study's time frame, spanning from 2019 to 2023, primarily captures the pandemic period and may not adequately represent long-term patterns. To enhance the robustness of future research, it is advisable to broaden the analysis to include other industries such as manufacturing, technology, and services. Additionally, extending the study period beyond the pandemic years would enable a more in-depth examination of the long-term effects of the observed variables on firm value.

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This study highlights the novelty of applying the COSO ERM disclosure framework, which utilizes 108 indicators in the food and beverage sub-sector, and reinforces agency theory by demonstrating how transparency reduces information asymmetry. The findings offer both theoretical and practical implications, providing insights for managers and investors to enhance firm value through non-financial disclosures and effective management.

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