

# Integrated Report Disclosure in ESG Index Companies on the Indonesia Stock Exchange: Its Impact on the Cost of Equity Capital

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## Abstract

With the growing emphasis on sustainability and transparency in capital markets, the importance of analyzing the influence of integrated reporting on equity financing costs becomes a crucial topic for research. This study aims to examine the effect of Integrated Report disclosure on equity capital costs, against the backdrop of companies' needs in the era of globalization, which no longer focus solely on financial aspects but also on sustainability aspects. The Integrated Report approach serves as a strategy to communicate these aspects comprehensively, including in the process of creating value for stakeholders, which directly impacts equity capital costs. Using multiple linear regression method, this study explores the relationship between integrated report and cost of equity capital, with a sample of companies incorporated in the Environment, Social, and Governance (ESG) index on the Indonesia Stock Exchange (IDX) for the period 2019-2023. The results showed that the integrated report has a positive effect on the cost of equity capital. This shows that the implementation of an integrated report requires considerable time and cost at the beginning, thus requiring higher capital. Ultimately, this research is expected to assist companies in reviewing the quality of reporting from both financial and non-financial information, so as to increase investor confidence with better transparency.

**Keywords:** Cost of Equity Capital, ESG Index, Integrated Report, Sustainability Reporting, Voluntary Disclosure.

## 1. Introduction

Business development in the era of globalization requires companies to not only focus on financial aspects, but also sustainability. Sustainability involves three main pillars: environmental, social, and governance, often abbreviated as ESG (Environmental, Social, Governance). These three aspects form the basis for creating relevant business strategies amidst global attention to environmental issues, social justice, and good governance practices (IIRC, 2021; Semenova & Hassel, 2015). Sustainability has evolved into a need that is not only related to regulation and reputation but also as a key element in creating added value for all stakeholders.

In the context of integrated reports, sustainability plays a significant role in providing a long-term perspective on company performance. Integrated reports combine financial and non-financial information in a concise document, providing a comprehensive picture of how the company creates value through the use of resources and capital, both financial and non-financial (Maama & Marimuthu, 2022). This report is not only a reporting tool, but also a communication medium that shows the company's commitment to sustainability to stakeholders, including investors (Fauzi & Ghofar, 2016).



Investors, as one of the main elements of stakeholders, pay close attention to the value of the company as this affects their decision to provide capital. The cost of equity capital is the rate of return expected by investors as compensation for the risk of investing in a particular company. Research shows that disclosure through integrated reports has a negative correlation with the cost of equity. This means that companies that have better quality disclosures through integrated reports are generally able to attract equity capital at a lower cost (Maama & Marimuthu, 2022; Ghofar, 2023). This provides significant benefits for companies, especially in creating cost efficiency and increasing investment attractiveness.

However, the relationship between integrated report and cost of equity is not always consistent. Research by Utami (2016) and Pirgaip & Rizvić (2023) found that not all information presented in integrated reports is considered relevant by investors. Non-financial information is often not convincing enough to influence investment decisions, while financial disclosures tend to have a more tangible effect on reducing the cost of capital. This context suggests that the relevance and quality of disclosures, particularly ESG-related ones, are crucial in enhancing the effectiveness of integrated reports.

In Indonesia, the quality of ESG disclosures can be measured through the ESGLEADERS, ESGSKEHATI and ESGQKEHATI indices, which assess company performance and disclosures based on environmental, social and governance aspects. These three indices become important benchmarks in assessing how well companies manage sustainability and how it can affect their cost of capital. This study uses voluntary disclosure theory, which assumes that voluntary disclosure of information by companies can reduce information asymmetry between managers and investors. Quality disclosures are thought to provide clarity on the company's long-term performance, increase investor confidence, and attract more potential investors (Healy & Palepu, 2021; Permatasari & Tjahjadi, 2023).

This study aims to provide empirical evidence on the effect of integrated report disclosure on the cost of equity capital in Indonesia, a developing country with an evolving corporate governance system and varying levels of transparency. The results of this study can not only help companies understand how to improve the quality of their reporting, but also support the development of a more sustainable capital market. In addition, the findings are relevant for policymakers and investors in assessing the benefits of sustainability in business practices amid increasing global attention to ESG.

## 2. Literature Review

### 2.1. Voluntary Disclosure Theory

Voluntary disclosure theory discusses voluntary disclosure as information provided by companies without legal demands. Disclosure between companies varies because there are no regulations governing it, allowing companies to choose information that management considers relevant. This theory is the focus of accounting and finance research, explaining why companies disclose information beyond legal obligations, with the aim of signaling quality, reducing information asymmetry, and gaining legitimacy (Hummel & Schlick, 2016; Healy and Palepu, 2021).

Voluntary disclosure theory emphasizes that it increases the availability of corporate information, aiding analytical understanding of business prospects. Integrated reports expand the evaluation of voluntary disclosure theory, involve financial and non-financial information, and become a new norm in corporate reporting. Voluntary disclosure in integrated reports is driven by the motivation to reduce uncertainty about the company's future, emphasizing

strategy, business model and forward-looking information. For less well-known companies, voluntary disclosures can attract a wider range of investors and inform their existence (Permatasari & Tjahjadi, 2023).

## 2.2. The Effect of Integrated Report Disclosure on the Cost of Equity Capital

Integrated report is one way for companies to provide a more complete picture of their performance. Integrated reports are made by focusing on a capitalist view of the company, where the main attention is given to parties with financial interests (IIRC, 2021), making it practical for companies and investors to understand the disclosure of information on the company. Voluntary disclosure theory reveals that there are no regulations governing disclosure between companies, allowing companies to choose information that management considers relevant. This theory is the focus of research in explaining why companies disclose information beyond legal obligations, with the aim of signaling quality, reducing information asymmetry, and gaining legitimacy (Hummel & Schlick, 2016; Healy and Palepu, 2021).

Isabel Maria & Ligia (2017), Maama & Marimuthu (2022) and Ghofar (2023) found that companies that disclose integrated reports have a lower cost of capital, thus confirming the use of integrated information in decision making. So, the information in the integrated report (financial and non-financial) can be a tool in decision making for stakeholders. Therefore, the hypothesis proposed in this study is as follows:

**H1:** Integrated Report disclosure negatively affects the Cost of Equity Capital

## 3. Methods

### 3.1. Research Methods

This research is quantitative in nature, using the multiple linear regression method to analyze the relationship between the independent variable and the dependent variable in depth. This method allows systematic identification of factors that affect the main variables, resulting in accurate findings. The data used is secondary data obtained from annual reports. This data is accessed through the official website of the Indonesia Stock Exchange (IDX) and the official website of each company. This study uses panel data, which is a combination of cross-section and time-series data, which allows analysis of the same individual or company within a certain period of time (Savitri et al., 2021). The research sample includes all companies incorporated in the ESG Index (ESGLEADERS, ESGSKEHATI, and ESGQKEHATI) during the period 2019 to 2023 with a total of 75 observations. This sample selection aims to obtain a comprehensive picture of ESG disclosure and its relation to the cost of equity capital of companies listed on the Indonesia Stock Exchange.

### 3.2. Control Variables

Control variables are applied in this study to reduce bias in the model, given that this study uses an archival approach. The control variables used in the study are company size and audit quality. Company size refers to a scale used to classify the size of a company based on various indicators, such as total assets, log size, sales, and stock market value. In this study, company size is determined based on total assets, because total assets are considered more stable and able to represent company size more reliably (Nurminda et al., 2017; Dwiastuti & Dillak, 2019).

According to Thohiroh & Aisyaturrahmi (2022), audit quality refers to the audit's ability to provide reasonable assurance that the financial statements are free from material

misstatement. Audit quality is achieved by reducing information asymmetry between users of financial statements and their preparers, thereby reducing information risk for users of financial statements and simultaneously lowering the company's cost of equity capital. According to Majid & Yanthi (2025) audit quality includes several key attributes that affect the company's cost of equity capital. Audit quality measurement can be done with dummy variables, where companies audited by Big Four audit firm affiliates are assigned a value of 1, while companies that are not audited by these affiliates are assigned a value of 0.

### 3.3. Estimation of research models

This study applies multiple linear regression models to test the hypotheses that have been formulated. The form of the regression model used in this study is as follows:

$$COE_{it+1} = \alpha + \beta_1 IR_{it} + \beta_2 FS_{it} + \beta_3 KA_{it} + \varepsilon_{it}$$

with:

- COE<sub>it+1</sub> = The value of the cost of equity capital for observation i in year t + 1.
- IR<sub>it</sub> = Variables that indicate the presence or quality of the breadth of integrated report disclosure for the i-th observation.
- FS<sub>it</sub> = Company size for observation i.
- KA<sub>it</sub> = Audit quality measure for observation i.
- α = Intercept or constant of the model.
- β<sub>1</sub> = Regression coefficient that shows the impact of Integrated Report on the cost of equity capital.
- β<sub>2</sub>, dan β<sub>3</sub> = Regression coefficients for control variables (firm size, asymmetric information, and audit quality).
- ε<sub>it</sub> = Error term or residual for observation i, which reflects the variability of the cost of equity capital that is not explained by the variables in the model.

## 4. Results and Discussion

### 4.1. Research Results

#### 4.1.1. Descriptive Statistics and Frequency Distribution

Based on Table 1, shows the results of descriptive statistics for the entire sample. The cost of equity capital has an average value of 0.061, a standard deviation of 0.027, a minimum value of 0.040, and a maximum value of 0.160. Integrated report disclosure shows an average value of 0.501, a standard deviation of 0.086, a minimum value of 0.316, and a maximum value of 0.684. company size has an average of 16.097 (around 9.8 trillion), a standard deviation of 1.677, a minimum value of 13.694, and a maximum value of 21.413.

**Table 1. Descriptive Statistics**

	<b>Obs</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
COE <sup>a</sup>	75	0.027	0.040	0.160
IR <sup>b</sup>	75	0.086	0.316	0.684
FS <sup>c</sup>	75	1.677	13.694	21.413

<sup>a</sup>COE = cost of equity capital  
<sup>b</sup>IR = integrated report  
<sup>c</sup>FS = firm size

Source: Processed by the author based on Stata17 Output, 2025

**Table 2. Frequency Distribution**

KA	Freq.	Percent	Cum.
0	34	45.33	45.33
1	41	54.67	100.00
total	75	100.00	

Source: Processed by the author based on Stata17 Output, 2025

Based on Table 2, it is known that out of a total of 75 observations, 34 observations (45.33%) were audited by non-big four audit firm affiliates. Meanwhile, 41 observations (54.67%) are affiliated with big four audit firms. Thus, the majority of observations are affiliated with big four audit firms, although the difference is not too large, which is around 9.34%. This indicates that more companies use big four audit firm affiliates.

#### 4.1.2. Pearson Correlation Matrix r

Based on Table 3, there is a relationship between company size and integrated report, audit quality and integrated report, as well as audit quality and company size with a positive correlation value (respectively 0.565 significant at 1% level, 0.232 significant at 5% level and 0.440 significant at 1% level).

**Table 3. Pearson r Correlation Matrix**

Variable	COE	FS	KA
COE <sup>a</sup>	1.000	0.062	0.111
IR <sup>b</sup>	0.068	0.565***	0.232**
FS <sup>c</sup>	0.062	1.000	0.440***
KA <sup>d</sup>	0.111	0.440***	1.000

<sup>a</sup>COE = cost of equity capital

<sup>b</sup>IR = integrated report

<sup>c</sup>FS = firm size

<sup>d</sup>KA = audit quality

\*\* significant at the 5% level

\*\*\* significant at the 1% level

Source: Processed by the author based on Stata17 Output, 2025

However, the cost of equity capital variable shows no relationship with other variables, namely integrated report, company size, and audit quality. This indicates that the cost of equity capital does not have a substantial relationship with the independent variables or control variables in this study, so further analysis is needed to explore deeper relationships, especially through regression models.

#### 4.1.3. Generalized Least Squares Regression (GLS)

Based on the results of the classical assumption test in this study, it reveals that there are several problems that can affect the validity of the tested model, namely autocorrelation, multicollinearity, heteroscedasticity, and abnormal distribution. These conditions can cause the pooled OLS method to be ineffective, and produce a less valid model. Together, these problems can affect the validity of the parameter estimates in the model, making the interpretation of the analysis results potentially biased or unreliable. To overcome this problem, this study uses the Generalized Least Squares (GLS) method. According to Permatasari & Narsa (2022), GLS regression works by transforming the pooled OLS model, changing the variance of the error to be homoskedastic or have uniform variability. This procedure involves transforming the original variables so that they can fulfill the problematic

classical assumption test. Thus, the transformation of the pooled OLS method will produce a BLUE (Best Linear Unbiased Estimator) estimator.

The GLS method is also relevant for handling autocorrelation, where the GLS beta estimator includes the autocorrelation parameter in its calculation. Unlike pooled OLS which ignores the parameter, GLS regression is able to utilize the additional information available, resulting in a more optimal estimate. This is the reason why the GLS estimator is considered better than pooled OLS under certain conditions, as it is able to produce efficient estimates and maximize the use of information in the model.

**Table 4. Generalized Least Squares Regression (GLS)**

Variable	Coeff.	z	P> z
IR <sup>a</sup>	0.040	2.13	0.033**
FS <sup>b</sup>	0.002	1.15	0.251
KA <sup>c</sup>	0.007	1.44	0.149
Years FE	Ya		
Industry FE	Ya		
Num of obs	75		
Wald chi2(26)	583.67		
prob > chi2	0.000		

<sup>a</sup>IR = integrated report  
<sup>b</sup>FS = firm size  
<sup>c</sup>KA = audit quality  
 \*\* significant at the 5% level

Source: Processed by the author based on Stata17 Output, 2025

Based on Table 4, it is known that the Wald chi<sup>2</sup> value (26) = 583.67 with prob> chi<sup>2</sup> = 0.000. These results indicate that the independent variables as a whole have an influence on the dependent variable. Thus, this regression model is good to use in further analysis.

The GLS regression results in Table 4 show that integrated report disclosure has a positive influence on the cost of equity capital (p-value <0.05). However, this research hypothesis formulates that integrated report disclosure has a negative influence on the cost of equity capital, so this research hypothesis is rejected. For the control variables, namely company size and audit quality (each has a coefficient of 0.002 with a p-value of 0.251 and a coefficient of 0.007 with a p-value of 0.149), based on these results, it can be concluded that both have no effect on the cost of equity capital.

#### 4.1.4. Robust Test

This study uses robust test as a method to test the robustness of the regression results that have been carried out. The robust test aims to ensure that the regression results remain consistent, despite potential bias or endogeneity issues that may affect the analysis (Nasih et al., 2022). To minimize this problem, this study applies the CEM (Coarsened Exact Matching) regression method as part of the robust test. This method strengthens the confidence that the correlation between the independent and dependent variables identified in the model represents the true correlation and provides a more reliable basis for interpretation

**Table 5. Robust Test Result**

Variable	Coeff.	t	$P >  t $
IR <sup>a</sup>	0.040	1.71	0.094*
FS <sup>b</sup>	0.002	0.92	0.363
KA <sup>c</sup>	0.007	1.16	0.254
Years FE	Ya		
Industry FE	Ya		
<i>R</i> <sup>2</sup>	0.886		
Adjusted <i>R</i> <sup>2</sup>	0.824		

<sup>a</sup>IR = integrated ieport  
<sup>b</sup>FS = firm size  
<sup>c</sup>KA = audit quality  
 \* significant at the 10% level

Source: Processed by the author based on Stata17 Output, 2025

In Table 5, the robust test results show that the integrated report disclosure has a positive influence on the cost of equity capital with a coefficient of 0.040 with a significance level of 10% ( $P > |t| = 0.094$ ). The results of this study proved robust.

#### 4.2. Discussion

Integrated reporting was introduced as a reporting approach that aims to integrate financial and non-financial information into one transparent and comprehensive report. This report is designed to support strategic decision-making and improve the communication of corporate value to stakeholders. In Indonesia, the implementation of integrated reports is still voluntary, which aligns with voluntary disclosure theory. This theory emphasizes that voluntary disclosure aims to reduce information asymmetry between managers and investors, as well as increase transparency and corporate reputation. However, despite the potential of integrated reports to enhance transparency (Nita & Kwarto, 2024), their adoption in Indonesia faces various challenges, both in terms of regulation and company readiness (Tjahjadi et al., 2020).

This study found that integrated report disclosure has a positive effect on the cost of equity capital, contrary to the hypothesis that assumes a negative effect. This result differs from the studies of Isabel María & Ligia (2017), Maama & Marimuthu (2022) and Ghofar (2023), which found that integrated reports lower the cost of equity capital. This discrepancy may stem from varying research contexts; countries with more mature integrated reporting practices tend to yield more reliable and relevant results. In Indonesia, however, the low quality of disclosures and imbalance in the application of integrated report elements contribute to an increased risk perception. The challenges in implementing integrated reports in Indonesia primarily stem from the overall quality and consistency of the elements contained in the report. Companies often struggle to effectively communicate their organizational overview, strategic focus, governance, and performance, leading to insufficient quality of disclosures (Eccles et al., 2019).

Overall, implementing an integrated report requires a significant initial investment in information technology infrastructure, employee training, and enhancing the capacity of external auditors. As a new reporting approach in Indonesia, it is crucial to allocate additional resources to meet higher international reporting standards. This could involve developing comprehensive training programs for companies and auditors, as well as establishing clearer regulatory frameworks to guide integrated reporting practices. These measures are expected to improve transparency and attract investors in the future. This process takes time and

money, so in the early stages of integrated report implementation, it requires higher capital. Consequently, this leads to an increased perception of risk, prompting investors to demand a higher rate of return, which results in an increase in the cost of equity capital.

## 5. Conclusion

The results showed that integrated report disclosure has a positive influence on the cost of equity capital. These results indicate that the implementation of integrated reports that are still in the early stages in Indonesia can lead to an increase in the cost of equity capital. This condition is caused by various challenges, such as low understanding of the integrated report concept, high implementation costs, and suboptimal disclosure quality. These challenges make the current integrated report require considerable time and cost at the beginning, thus requiring higher capital. In addition, financial and non-financial information requires a more complex reporting infrastructure and involves external auditors who focus not only on financial aspects, but also on non-financial information. These findings imply that businesses must enhance their understanding and readiness for integrated reporting through training, while policymakers should strengthen regulations by establishing clear standards and providing incentives for companies adopting integrated reports. This study is limited to analyzing the impact of integrated report disclosure on the cost of equity capital in the short term, so it does not reflect its influence in the medium and long term. Further research is recommended to expand the scope of analysis time to evaluate the sustainable benefits of integrated reports in creating value for companies and stakeholders.

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