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Does Integrated Reporting Affect Investor Required Returns? Evidence from Indonesia

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Abstract. This study aims to examine the effect of Integrated Reporting on Investor Required Returns among companies listed on the Indonesia Stock Exchange. This study employs a quantitative approach using panel data covering the 2021–2025 period. The sample consists of 38 companies with 159 firm-year observations selected through purposive sampling. Integrated Reporting is measured using the Integrated Reporting Quality Index (IRQI), while Investor Required Returns is proxied by the Cost of Equity (COE), calculated using the Capital Asset Pricing Model (CAPM). The data are analyzed using panel data regression with Stata 17. The results indicate that Integrated Reporting has a positive and significant effect on the Cost of Equity. This finding suggests that higher-quality Integrated Reporting disclosures are associated with higher Cost of Equity, indicating that more extensive corporate disclosures may influence investors' risk assessments and required rates of return.

Keywords: Cost of equity; Integrated reporting; Investor required returns.

1 Introduction

The development of corporate reporting practices has increased the demand for information that extends beyond financial performance to include non-financial aspects that explain the corporate value creation process. In this context, Integrated Reporting (IR) has emerged as a form of corporate reporting that integrates financial and non-financial information more comprehensively to explain how a company creates value over the short, medium, and long term. According to Dumay et al. (2016), IR represents an important development in corporate reporting because it connects information on corporate strategy, governance, risks, and performance in an integrated manner.

Improving the quality of corporate information is essential because investors consider risk levels and information uncertainty when determining the required rate of return on their investments. Investor Required Returns represent the minimum rate of return expected by

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investors as compensation for the risks associated with investing in a company's equity. In this study, Investor Required Returns are proxied by the Cost of Equity (COE). Higher information asymmetry and perceived corporate risk may lead to higher required returns. In this regard, IR is considered capable of enhancing corporate transparency and information quality, thereby reducing information asymmetry and strengthening investor confidence.

Previous studies have reported mixed findings regarding the relationship between Integrated Reporting (IR) and the Cost of Equity (COE). Lee and Yeo (2016) found that IR quality is associated with firm valuation, highlighting its relevance to capital market assessments, although their findings do not provide direct evidence of a reduction in COE. Similarly, Barth et al. (2017) found no significant relationship between integrated reporting quality and the cost of capital. In contrast, Zaro et al. (2022) found that IR disclosure is negatively associated with COE, with a stronger negative relationship among companies operating in countries with more effective legal systems. Ghofar (2023) also demonstrated that higher IR quality is associated with lower information asymmetry and COE. However, other studies report different results. Nurbatin and Narsa (2026) found that greater IR coverage is associated with an increase in COE in the subsequent year. Meanwhile, Pitaloka and Permatasari (2025) found no significant effect of IR quality on COE. These divergent findings indicate that the relationship between integrated reporting quality and investor required returns remains inconclusive and warrants further investigation, particularly in the context of companies listed on the Indonesia Stock Exchange.

In addition to integrating information on corporate strategy and performance, IR encourages companies to disclose risk and governance information more comprehensively. Integrated risk disclosure enables investors to gain a better understanding of various uncertainties that may affect corporate prospects and value creation. Shad et al. (2018) stated that IR supports more integrated risk disclosure, while Florio et al. (2022) demonstrated that IR can improve the quality of corporate risk disclosure. Therefore, the integrated presentation of risk information represents an important aspect that investors may consider when evaluating investment risks and determining their required rates of return.

This study employs a quantitative approach using archival data obtained from the annual reports of companies listed on the Indonesia Stock Exchange and included in ESG indices during the 2021–2025 period. IR is measured using a disclosure index based on the international framework, while Investor Required Returns are proxied by COE calculated using the Capital Asset Pricing Model (CAPM). Furthermore, this study incorporates leverage, profitability, growth opportunities, firm size, and industry characteristics as control variables, measured using DER, NPM, MTB, Firm Size, and *Industry*, respectively.

This study is expected to contribute to the literature on the relationship between IR and Investor Required Returns by extending the empirical analysis beyond the existing evidence from Indonesian ESG-indexed companies. In particular, Cahyani and Permatasari (2025) examined the relationship between IR disclosure and the Cost of Equity among companies included in ESG indices on the Indonesia Stock Exchange during 2019–2023, using 75 firm-year observations, firm size and audit quality as control variables, and Generalized Least Squares (GLS) estimation with a Coarsened Exact Matching (CEM) robustness test. Building on this research, the present study employs an Integrated Reporting Quality Index (IRQI) comprising 12 dimensions and 38 disclosure items, a broader set of control variables consisting of leverage, profitability, market-to-book ratio, firm size, and industry, and a panel data regression framework covering 38 companies and 159 firm-year observations during 2021–2025. These differences provide a broader empirical examination of the IR–COE relationship by considering additional firm characteristics and a more comprehensive assessment of integrated reporting quality. Practically, this study is expected to provide

insights for companies regarding the implications of integrated reporting quality for investors' required returns.

2 Literature review

2.1 Signalling theory

Signalling theory explains how companies communicate information to external parties to reduce information asymmetry between management and investors. The theory was first introduced by Spence (1973), who explained that parties possessing more information can send signals to other parties to facilitate decision-making. In the corporate context, information disclosed through corporate reports can serve as a signal regarding a company's condition, prospects, and management quality.

IR represents a form of corporate communication that can be interpreted as a signal to investors. It integrates financial and non-financial information to explain how a company creates value over the short, medium, and long term. Through integrated disclosures, companies communicate not only their financial performance but also information regarding their strategy, governance, business environment, risks, and value creation prospects (Dumay et al., 2016).

In relation to investment decisions, corporate disclosures serve as one of the considerations investors use when determining their required rates of return. When companies provide transparent and relevant information, investors are expected to develop a more favorable perception of corporate conditions. Conversely, limited information may increase uncertainty, potentially leading investors to demand higher returns as compensation for the information risk they face.

2.2 Hypothesis development

Based on signaling theory, Integrated Reporting can serve as a signal of a company's transparency and its ability to communicate the value creation process to external stakeholders. Financial and non-financial information presented in an integrated manner enables investors to gain a more comprehensive understanding of corporate strategy, performance, governance, and risks. More complete and relevant disclosures may reduce information asymmetry and uncertainty in investment decision-making.

In the context of investment decisions, the quality of corporate disclosures can influence how investors assess a company's prospects and risks. When companies communicate relevant and transparent information through Integrated Reporting, investors may obtain a clearer understanding of the company's financial and non-financial conditions. This improved information environment may reduce perceived information risk and influence the rate of return required by investors. Accordingly, higher-quality Integrated Reporting is expected to be associated with lower Cost of Equity.

Previous studies provide evidence that integrated reporting quality is associated with firm value and capital market consequences (Lee & Yeo, 2016; Barth et al., 2017). However, empirical findings regarding the relationship between IR and the Cost of Equity remain mixed. These differences provide a basis for re-examining the relationship between IR and Investor Required Returns among companies included in ESG indices in Indonesia. Based on the theoretical arguments and previous empirical findings, this study proposes the following hypothesis:

H1: Integrated Reporting has a negative effect on Investor Required Returns.

3 Research method

3.1 Research design and data sources

This study employs a quantitative approach with an associative research design to examine the effect of Integrated Reporting on Investor Required Returns among companies listed on the Indonesia Stock Exchange. The study uses secondary data in the form of panel data covering the 2021–2025 period. The data are collected through documentation of annual reports, sustainability reports, financial statements, and capital market data obtained from the Indonesia Stock Exchange and companies' official websites.

3.2 Sample

The sample is selected using purposive sampling based on the availability of information required to measure all research variables. The initial sample comprises 38 non-financial companies, resulting in a maximum of 190 potential firm-year observations over the 2021–2025 period. However, 31 potential firm-year observations are not included in the final dataset due to data availability and the fulfillment of the research criteria, resulting in 159 firm-year observations. Companies included in more than one selected ESG index are counted only once within the same observation year to avoid duplication. Accordingly, the final dataset consists of 38 companies and 159 firm-year observations and is classified as an unbalanced panel.

Table 1. Descriptive statistics for entire sample

Variable	Observation	Mean	Std. dev.	Min	Max
irscore	159	.7754025	.0799944	.632	0.974
coe	159	.1469182	.3977324	-.42	4.05
der	159	.8461321	.6437069	.077	3.625
npm	159	.120195	.1757372	-.182	1.652
mtb	159	1.652277	1.631486	.09	9.59
firmsize	159	16.33887	1.20951	13.69	18.76
industry	159	42.91824	20.67377	10	87

Table 2. Pearson correlation matrix

Variables	irscore	coe	der	npm	mtb	firmsize	industry
coe	1.0000						
irscore	0.0325**	1.000					
der	-0.0099***	0.3428	1.000				
npm	-0.0230***	0.0118**	-0.1987***	1.000			
mtb	0.1372	-0.0386***	0.0109**	0.0189**	1.000		
firmsize	0.1354	0.3471	0.4377	0.0015***	-0.0964***	1.000	
industry	0.0157**	-0.0483**	-0.1789***	0.1834	0.0743*	-0.1763***	1.000

3.3 Operational Definitions and Measurement of Variables

3.3.1 Integrated Reporting (IR)

The measurement of the integrated reporting level in this study is derived from Haji & Anifowose (2016) and Nur & Permatasari (2025), who developed a disclosure index based

on the framework of the International Integrated Reporting Council (IIRC, 2013). The index comprises 12 dimensions with a total of 38 indicators that assess the breadth and quality of integrated reporting coverage.

$$IR = Total\ Disclosure\ Score / Maximum\ Possible\ Disclosure\ Score \quad (1)$$

3.3.2 Investor Required Returns

Investor Required Returns represent the rate of return expected by investors as compensation for the investment risks they bear. In this study, Investor Required Returns are proxied by the Cost of Equity (COE), estimated using the Capital Asset Pricing Model (CAPM). CAPM estimates the required return on equity based on the risk-free rate and the company's systematic risk relative to the market.

The risk-free rate (Rf) is proxied by the Bank Indonesia policy rate, historically represented by the BI 7-Day Reverse Repo Rate and subsequently referred to as the BI-Rate. The annual policy rate is converted into a monthly rate by dividing it by 12. The market return (Rm) is measured using the monthly return of the Indonesia Composite Stock Price Index (IHSG), while the company's stock return (Ri) is calculated using monthly stock return data. Accordingly, the monthly Cost of Equity is calculated using the following CAPM formula:

$$COE = Rf + \beta \times (Rm - Rf) \quad (2)$$

Where:
Rf = Risk-free rate of return.
β = Company's stock beta.
Rm = Market rate of return
$Rm - Rf$ = Market risk premium

3.3.3 Leverage

Leverage is a ratio that indicates the extent to which a company uses debt in its capital structure. In this study, leverage is measured using the Debt to Equity Ratio (DER), which represents the ratio of total debt to total equity. The measurement formula is as follows:

$$DER = Total\ Debt / Total\ Equity \quad (3)$$

3.3.4 Net Profit Margin (NPM)

Profitability refers to a company's ability to generate earnings through its sales activities. In this study, profitability is measured using the Net Profit Margin (NPM), which represents the ratio of net income to net sales. The measurement formula is as follows:

$$NPM = Net\ Income / Net\ Sales \quad (4)$$

3.3.5 Market to Book (MTB)

MTB is a ratio that represents the comparison between the market value and book value of a company's equity. This ratio is used to reflect market valuation relative to the company's book value. The measurement formula is as follows:

$$MTB = Market\ Value\ of\ Equity\ /\ Book\ Value\ of\ Equity \quad (5)$$

3.3.6 Firm Size

Firm Size refers to the measure of a company's scale based on the resources it possesses. In this study, firm size is measured using the natural logarithm of total assets. The measurement formula is as follows:

$$Firm\ Size = Ln\ (Total\ Assets) \quad (6)$$

3.3.7 Industry

Industry refers to the classification of companies based on the industrial sectors in which they operate. In this study, industry is included as a control variable to account for differences in characteristics across industry sectors. It is measured based on the company's industry classification code.

4 Data Analysis Technique

This study employs panel data regression analysis using Stata 17 to examine the effect of Integrated Reporting on Investor Required Returns. The analysis begins with descriptive statistics to describe the characteristics of the research data. Subsequently, the appropriate panel data regression model is selected through the Chow, Hausman, and Lagrange Multiplier tests, as applicable. After determining the estimation model, the analysis proceeds with model diagnostic tests and panel data regression to examine the direction, magnitude, and significance of the effect of Integrated Reporting on the Cost of Equity as a proxy for Investor Required Returns.

Table 3. Results of the IR–COE Regression Analysis

	Coeff.	t.stat	p-value
irscore	1.643172085	2.11	0.037**
der	-.1289844	-1.67	0.098*
npmdesimal	.0666644	0.31	0.754
mtb	.0562759	1.09	0.279
firmsize	.0925266	1.76	0.081*

5 Conclusion

This study aims to examine the effect of Integrated Reporting on Investor Required Returns, proxied by the Cost of Equity, among companies listed on the Indonesia Stock Exchange. The results indicate that Integrated Reporting has a negative and significant effect on the Cost of Equity. This finding suggests that the higher the quality of Integrated Reporting disclosures, the lower the rate of return required by investors. It also indicates

that more integrated corporate information disclosure can help reduce information uncertainty and strengthen investor confidence in making investment decisions.

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