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The power of integrated reporting: market responses and the role of corporate reputation

O poder do relato integrado: respostas do mercado e o papel da reputação corporativa

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Abstract: This study investigates the market reaction to the adoption of Integrated Reporting (IR) among businesses listed on the Indonesia Stock Exchange, as well as the function of corporate reputation as a moderating factor. Descriptive analysis indicated no significant corporate reputation, size, or leverage differences between IR adopters and non-adopters. Companies that implemented IR, on the other hand, showed better growth and more positive market response, as measured by the Cumulative Abnormal Return (CAR), compared to non-adopters. The investigation undertaken before and after the COVID-19 pandemic yielded consistent results, with IR adoption positively influencing the market response regardless of the period. Hypothesis testing utilizing the Common Effect model demonstrated that IR adoption had a beneficial impact on the market response, consistent with the Signaling Theory, which emphasizes the benefits of transparent and thorough reporting. However, the company's reputation, as measured by the company's Image Index (CII), had no meaningful impact on the market reaction to IR and did not mitigate the association between IR adoption and the market response. These data imply that while the market rewards IR for its transparency, a company's previous reputation has little impact on this perception. This research has substantial consequences for businesses, investors, and standard setters. Companies are encouraged to use IR to improve market perception and garner favorable investors' responses. Investors should regard IR adoption as a key component in their investment decisions. Policymakers should promote IR practices to increase market transparency and efficiency.

Keywords: Company reputation; Corporate image index; Integrated reporting; Market response.

Resumo: Este estudo analisa a reação do mercado à adoção do Relato Integrado (RI) entre as empresas listadas na Bolsa de Valores da Indonésia, bem como a função da reputação corporativa como fator moderador. A análise descritiva não indicou diferenças significativas de reputação corporativa, tamanho ou alavancagem entre adotantes e não adotantes de RI. Já as empresas que implementaram o RI apresentaram melhor crescimento e resposta mais positiva do mercado, medida pelo Retorno Anormal Acumulado (CAR), em comparação às não adotantes. A investigação realizada antes e depois da pandemia da COVID-19 produziu resultados consistentes, com a adoção dos RI influenciando positivamente as respostas do mercado, independentemente do período. O teste de hipóteses utilizando o modelo de Efeito Comum demonstrou que a adoção de RI tem um impacto benéfico na resposta do mercado, consistente com a teoria da sinalização,

que enfatiza os benefícios de relatórios transparentes e completos. No entanto, a reputação da empresa, medida pelo Índice de Imagem da Empresa (CII), não teve impacto significativo na reação do mercado ao RI e não mitigou a associação entre a adoção do RI e a resposta do mercado. Estes dados implicam que, embora o mercado recompense o RI pela sua transparência, a reputação anterior de uma empresa tem pouco impacto nesta percepção. Esta pesquisa tem consequências substanciais para empresas, investidores e normatizadores. As empresas são incentivadas a usar o RI para melhorar a percepção do mercado e obter respostas favoráveis dos investidores. Os investidores devem considerar a adoção do RI como um componente-chave nas suas decisões de investimento. Os decisores políticos devem promover práticas de RI para aumentar a transparência e a eficiência do mercado.

Palavras-chave: Reputação da empresa; Índice de imagem corporativa; Relatórios integrados; Resposta do mercado.

1 Introduction

Integrated Reporting began to be developed in 2011 by the International Integrated Reporting Council (IIRC), supported by the Global Reporting Initiative (GRI), and the Integrated Reporting Framework was launched in 2013. Integrated Reporting is an evolution of the corporate reporting system that integrates financial information and non-financial information, such as environmental, social, and corporate governance, in one report (Eccles & Krzus, 2010; Nishitani et al., 2021; Villiers et al., 2014; Akisik & Gal, 2020). IIRC (2013) reveal that integrated reporting is a fundamental concept that communicates the company's integrated thinking in the short-, medium-, and long-term value creation process. Integrated Reporting (IR) has been proposed as an innovation in corporate reporting (Oktorina et al., 2022). The implementation of Integrated Reporting is considered that it can improve the quality of company reporting (Haji & Hossain, 2016) compared to prior reporting (Stubbs & Higgins, 2018). Integrated Reporting is considered that it increases transparency and corporate accountability (Perego et al., 2016; Dumay et al., 2016). Recently, more and more companies have adopted integrated reporting to report company performance because it is considered that it provides a competitive advantage for the company.

Integrated Reporting contains complete information compared to separate reports (IIRC, 2013; Steyn, 2014; Robertson & Samy, 2020). Integrated Reporting provides the information that the stakeholders need (Lee & Yeo, 2016; Giorgino et al., 2017; Simona et al., 2018; Nakajima & Inaba, 2022). Several studies also state that market decisions are quite strongly influenced by Integrated Reporting (Reimsbach et al., 2018; Akisik & Gal, 2020; Simona et al., 2018). However, other studies found that there was no correlation between Integrated Reporting and market response (Hsiao & Kelly, 2018; Stubbs & Higgins, 2018). Market attention to the Integrated Reporting framework is still lacking (Perego et al., 2016). According to Hsiao & Kelly (2018), the market in Taiwan still needs to gain awareness of the Integrated Reporting framework when making decisions. The different results of this research invalidate the relationship between Integrated Reporting and market response.

Previous research also tested how Integrated Reporting influenced the stakeholders' perspectives (Sciulli & Adhariani, 2023). Thus far, researchers have yet to find research regarding the market response to Integrated Reporting. Existing research still focuses on responses from stakeholders regarding the implementation of Integrated Reporting, both mandatory and voluntary (Ahmed Haji & Anifowose, 2017; Giorgino et al., 2017; Landau et al., 2020; Nakajima & Inaba, 2022). There is still a significant quantity of research that focuses on market response. Company reputation

plays an important role because it can influence financial performance and long-term competitiveness (Narteh et al., 2012).

Reputation serves as a signal of corporate effectiveness and long-term competitiveness, influencing the stakeholders' trust and investment decisions (Raithel & Schwaiger, 2015; Camilleri, 2017). Companies with stronger reputations are often more engaged in sustainability initiatives and provide credible disclosures, which may enhance the perceived value of their Integrated Reporting efforts (Hussainey et al., 2022; Singh & Misra, 2021). However, existing studies have largely neglected to explore how reputation interacts with IR to influence market responses. Afrin & Rahman (2023) revealed that the influence of sustainability on investment quality depended on the company's reputation. Tischer & Hildebrandt (2014) found a positive influence of company reputation on the shareholders' values. According to Camilleri (2017), companies that have a good image tend to be more involved in social and environmental responsibility. Companies with a good reputation will report the best sustainability performance compared to less reputable companies (Hussainey et al., 2022; Singh & Misra, 2021).

This study fills these gaps by investigating the role of corporate reputation in improving market reactions to Integrated Reporting. Specifically, it investigates the conditions and the ways reputation influences the relationship between IR and market perception. By integrating this essential but underexplored component, the study advances our understanding of IR's broader impact and provides practical insights for organizations that use reputation as a strategic asset in their reporting procedures.

This research is divided into five parts. Part 1 is an introduction; part 2 discusses the literature review; part 3 presents the research method; part 4 is the analysis and discussion, and it ends with conclusions and recommendations in part 5.

2 Literature review and hypothesis

2.1 Signaling and stakeholder theory

Signaling Theory is a concept where the party giving the information can choose how the information will be displayed, and the party receiving the information can choose how to interpret the information received (Khairudin & Wandita, 2017). Signaling Theory explains that companies, as signalers and owners of information, provide signals to the market and stakeholders as receivers regarding the quality and performance of their companies so that they can reduce information asymmetries and increase the quality of decision making (Spence, 1973; Karaman et al., 2020; Ching & Gerab, 2017). Companies provide information not only in the form of financial reports but also in the form of non-financial information that can increase positive responses to the company.

Integrated Reporting is implemented to provide a more comprehensive view of the company's overall performance. In line with signaling theory, the implementation of Integrated Reporting provides a perception of information transparency, where companies convey not only financial achievements but also non-financial aspects, such as the company's attitude towards environmental and social problems (Torelli et al., 2020). This Integrated Reporting also describes how management views the company's prospects so that external parties can assess the company more comprehensively. Through this reporting, the company provides a positive signal to the market to fulfill the stakeholders' expectations by providing the required company's information (Fernando et al., 2018).

Stakeholder Theory enhances this approach by emphasizing that organizations are accountable to a broader range of stakeholders, including consumers, suppliers, employees, and investors (McAbee, 2022). This idea emphasizes the firms' dual responsibility to reconcile the interests of various stakeholder groups while addressing their informational demands. Stakeholder Theory is separated into two branches: normative theory, which contends that corporations should manage equitably for all stakeholders, and empirical management theory, which investigates how stakeholders affect corporate operations. Companies that actively address the stakeholders' interests are more likely to achieve public support, confidence, and legitimacy for their activities (Nel & Van der Spuy, 2021).

Integrated Reporting exemplifies these concepts by offering a framework for aligning corporate behavior with stakeholders' expectations. It allows stakeholders to evaluate not only the company's financial performance but also its societal and environmental contributions (Adams, 2015). Integrated Reporting fosters transparency and stakeholder involvement.

2.2 Hypothesis development

Integrated Reporting is a new disclosure model introduced by the IIRC in 2013 that combines financial and non-financial aspects in one report. Integrated Reporting aims to provide more holistic and comprehensive information than separate sustainability reports and annual reports (Rowbottom & Locke, 2016). Integrated Reporting shows how companies use various types of capital, such as financial, manufacturing, intellectual, human, social, relational, and natural capital (IIRC, 2013). The elements reported in Integrated Reporting include an overview of the organization and external environment, governance, business model, risks and opportunities, strategy and resource allocation, performance, outlook, and finally, the basis for preparation. In preparing Integrated Reporting, the management is encouraged to instill integrated thinking within the company and see the dependencies between each aspect of the company so that it can help form the business strategies. The reporting is transparent about how the company will maintain the values created, thus providing additional relevant information for the market (Abeywardana et al., 2022; Nishitani et al., 2021). IIRC (2013) developed integrated reporting to improve the quality of information that will be received by the market, which can provide information about how the company produces value for all its stakeholders. Value creation disclosures align with stakeholders' requirements and expectations, reducing asymmetry and risk to the company.

There are several reasons why the market responds more positively and chooses companies that implement Integrated Reporting. First, integrated reporting contains a complete picture of the company's potential and values. Second, Integrated Reporting increases accountability for the types of resources owned by the company and supports integrated thinking in decision-making and actions that focus on creating the short-, medium--, and long-term company values (IIRC, 2013). The positive reaction of the market to the implementation of Integrated Reporting is marked by an increase in share prices around the publication date and a higher level of acceptance by the market compared to companies that do not implement it (Simona et al., 2018; Nakajima & Inaba, 2022).

According to Stakeholder Theory, Integrated Reporting is aimed at meeting the stakeholders' needs for financial and non-financial information, such as environmental impacts, social performance, and other aspects. The market will respond positively to companies that implement Integrated Reporting because these companies are

considered more transparent and accountable. Apart from that, Integrated Reporting also builds good relationships between the company and its stakeholders, which will later improve the company's performance and reputation from the stakeholders' perspective (Karaman et al., 2020; Ching & Gerab, 2017).

The information provided by the company on the market is essential for market consideration when making investment decisions. Integrated Reporting provides certainty regarding the company's prospects by including information that can help reduce asymmetry between the company and external parties. The arguments above underline the following research hypothesis:

H1: Disclosure of integrated reporting has a positive effect on the market response.

A company's reputation is the public's perception of the company and its overall performance. A company's reputation comes from the characteristics of the company that have been built and trusted by the public over time (Rahman & Akhter, 2021). The built reputation will become a competitive advantage for the company (Balmer & Greyser, 2003). A company's reputation can be formed by producing products or services that are economically strong, trustworthy, have extraordinary management, and are efficient in their operations (Afrin & Rahman, 2023).

A company that has a good reputation will influence the market response because reputation is the company's intangible asset that will contribute to the company's sustainability—with a high reputation, supporting companies to increase their profits, performance, and social status. Referring to the Legitimacy Theory, companies that prioritize the community interests and have a good image will receive the community support (Aluchna et al., 2019). Companies can improve their public reputation by carrying out their responsibilities.

A company's reputation is important because it can reduce the risk of being poorly perceived by the market (Cowan & Guzman, 2020). Publication of a company's reputation rankings strengthens the company's signal as a good company, and the market will respond positively to these companies (Jao R. et al., 2020). A company's high ranking can motivate the market to invest capital because a strong reputation is generally associated with assured quality. Based on the previous explanation, the following hypothesis is proposed.

H2: A company's reputation has a positive effect on the market response.

In their research, Afrin & Rahman (2023) prove that the influence of CSR on the quality of an organization's investment varies according to its reputation. This finding implies that companies with a high reputation can increase market confidence in the information provided (Anwar & Malik, 2020). A company can improve its reputation through various things, including superior management, high efficiency in its industry, or producing high-quality products. Reputable companies will always strive to improve the quality of their reports, especially those related to their sustainability reports.

A good reputation will influence the market perception and response to the information contained in Integrated Reporting (Singh & Misra, 2021). Companies with a high reputation will be more trusted and credible, so the information contained in Integrated Reporting can be well received by the market compared to reports issued by unreputable companies.

H3: A company's reputation moderates the influence of Integrated Reporting on the market response.

2.3 Control variables

Control variables aim to minimize the influence of external variables other than the specified variables. The control variables used in this study include company size, leverage, sales growth, and COVID-19, which occurred in Indonesia between 2020 and 2022. Company size is a scale used to determine the size of a company and can significantly influence the company's performance (Qian & Xing, 2018). Company size can be measured in various ways, such as total assets, number of sales, or number of shares owned by the company. However, in this research, company size uses total assets and is calculated by using the natural logarithm (Juniarti et al., 2023).

Leverage refers to a company's ability to fulfill its obligations, which can influence the value and performance of the company. This leverage variable is measured by dividing the total debt by the total assets (Ruan & Liu, 2021). The higher the leverage value of a company is, the lower the company's ability to fulfill its obligations becomes. Another control variable is sales growth. This variable shows the increase in a company's sales from one period to the next. If sales increase, the company's assets also increase. Sales growth is calculated by subtracting the total sales of the previous year from the total sales of the current year, then dividing the result by the total sales of the previous year (Juniarti et al., 2023; AlHares, 2020; Wahl et al., 2020).

The final control variable is the COVID-19 pandemic, which can influence the market response to the implementation of Integrated Reporting. The COVID-19 outbreak has had a significant impact on the capital market, closely related to the investors' confidence (Priscilla et al., 2023). Investors who feel pessimistic about future profits in the stock market decide to sell their shares at a cheap price (Huang et al., 2020; Baker et al., 2020).

3 Research method

3.1 Research sample

The sample was selected from companies that had been listed on the Indonesia Stock Exchange until the end of 2017 and met the following criteria: (1) had trading activity for the previous six months or more; (2) the company's data was included in the Corporate Image Index during the research year, indicating a reputation for the business.

Based on the criteria mentioned above, 34 companies meet the criteria, and a total of five-year period has collected 170 samples that meet the requirements for testing. The data is taken from the official IDX website, Yahoo Finance, investing.com, and each company's official website. Table 1 presents the sample selection process.

Table 1. Sample Selection.

No	Criteria	Total
1	Number of companies registered on the Indonesia Stock Exchange until the end of 2017	549
2	Number of companies that have not actively traded for more than six months	(87)
3	Number of companies that are not found in the Corporate Image Index during the research period	(413)
4	Number of companies with incomplete data	(15)
	The number of selected companies	34
	The total selected samples for five years	170

3.2 Analysis model

The relationship between research variables, as stated in the hypothesis, is outlined in the analysis model, as presented in Figure 1.
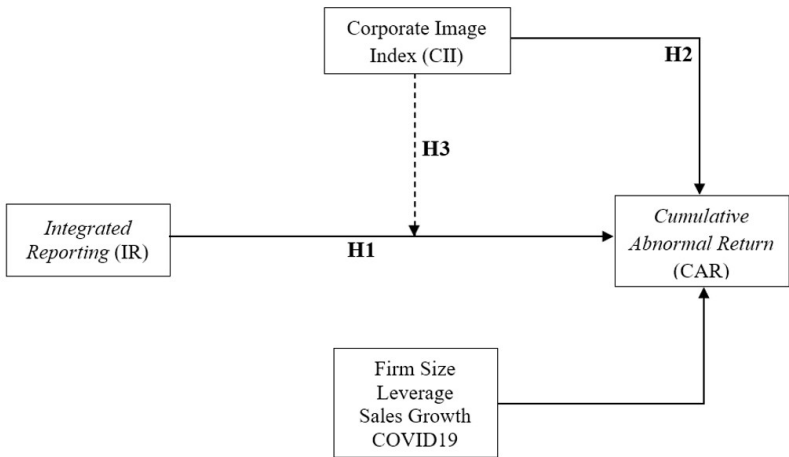

Figure 1. Analysis Model.

This research includes several control variables such as company size, leverage, sales growth, and COVID-19, which can influence the market response (Juniarti et al., 2023; Ruan & Liu, 2021; AlHares, 2020; Wahl et al., 2020; Priscilla et al., 2023). The analysis model is also presented in the following Equation 1:

$$CAR_{i,t} = \beta_0 + \beta_1 IR_t + \beta_2 CII_t + \beta_3 IR_t * CII_t + \beta_4 SIZE_t + \beta_5 LEV_t + \beta_6 GROWTH_t + \beta_7 COVIDID_t + e \tag{1}$$

The independent variable in this research is Integrated Reporting. Integrated Reporting is a categorical variable, with a score of 1 if the company implements it and 0 for otherwise (Karaman et al., 2020; Ching & Gerab, 2017). Second, the market response is a dependent variable. Measuring the market response is a crucial aspect of understanding the impact of specific events, decisions, or external factors on a company's financial performance and market value. This process involves analyzing changes in the stock prices, investors' behavior, and overall market sentiment to determine how the market perceives and reacts to new information. One widely used method in finance to measure the market response is through Cumulative Abnormal Return (CAR) (MacKinlay, 1997; Kothari & Warner, 2007; Sun & Wen, 2023)

One of CAR's significant strengths is its ability to account for value-relevant information since it measures how new information affects investors' behavior (Kothari & Warner, 2007). Additionally, it captures immediate reactions and any delayed adjustments over a specified event window. Its adaptability to various industries and events makes it a versatile tool for evaluating market efficiency and investors' sentiment (Brown & Warner, 1985; Al-Shattarat & Al-Shattarat, 2017).

In this study, the publication date of Integrated Reporting is regarded as the date of the event. To ensure the accuracy of the measurements, it is crucial to specify the event period and event window (MacKinlay, 1997; Brown & Warner, 1985). This study

conducts the estimating phase from 120 to 6 days before the event date, whereas the event period encompasses five days before and after the event (Campbell et al., 1998). The subsequent steps in calculating the Cumulative Abnormal Return (CAR) are executed according to MacKinlay (1997) and Campbell et al. (1998).

Initially, the abnormal return (AR) is derived from the difference between the actual return and the expected return, using the following Equation 2:

$$AR_t = R_t - E(R_t) \tag{2}$$

AR is the abnormal return in period t. It is calculated by subtracting the expected return at time t ($E(R_t)$) from the actual return at time t (R_t). The actual return is the return on stock investments made during a specific period. The calculation for the Rt value is as follows: The share price after a period is divided by the share price at the beginning of the term or can be expressed as follows (Equation 3):

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \tag{3}$$

The next step is calculating the expected return, which is the return that investors expect from an investment they make. The expected return can be calculated by Equation 4:

$$E(R_t) = [\alpha + (\beta \; x \; R_m) + \in_t] \tag{4}$$

The results of the calculations above will be accumulated by calculating Cumulative Abnormal Return (CAR) with the event period (-5,0,+5). CAR is calculated with the Formula 5:

$$CAR = \sum_{t-1}^{n} AR_{it} \tag{5}$$

A company's reputation, which is a moderating variable in the research, is measured by the Corporate Image Index (CII) contained in the Corporate Image Award. CII measures a company's reputation based on public assessments. A company is said to have a good reputation if it has a CII value above 1. A company's CII is measured through four dimensions, namely quality, performance, responsibility, and interests of stakeholders, including the public, management, market, and journalists. This score is generated by the assessment of management (40%), shareholders and the market (30%), journalists (20%), and the public or society (10%).

The control variables in this research consist of company size (SIZE), leverage (LEV), sales growth (GROWTH), and COVID-19. Company size is measured by using the natural logarithm of the total company's assets (Juniarti et al., 2023). Leverage (LEV) is the ratio of the total debt to the total assets (Ruan & Liu, 2021). Next, the sales growth (GROWTH) is obtained from the difference between the current year's sales and the previous year's sales, divided by the previous year's sales (Juniarti et al., 2023; AlHares, 2020; Wahl et al., 2020). Lastly, it is COVID-19, which is a dummy variable that is marked 0 before the COVID-19 pandemic and 1 for the year when COVID-19 occurred.

4 Results and discussion

4.1 Descriptive analysis

Tables 2 to 5 present sample profiles based on the industry sector, adoption and non-adoption of IR, and profiles based on the period before and after the COVID. Nine industry sectors are examined in Table 2 according to the distribution. The dataset exhibits a sector distribution where the Finance sector is predominant, accounting at 32% of the sample, followed by Non-Primary Consumer Goods at 21% and Primary Consumer Goods at 15%. In contrast, sectors like Raw Materials, Industry, and Transportation and Logistics account for merely 3% of the sample, indicating their limited representation in the data. The Corporate Image Index (CII) indicates the perceived reputation and image of the companies across various sectors. Infrastructure achieves the highest CII score of 1.782, indicating that companies within this sector uphold a robust corporate reputation. Primary Consumer Goods (1.756) and Non-Primary Consumer Goods (1.596) exhibit a comparably strong reputation. The industry sector exhibits the lowest Corporate Image Index (CII) at 0.291, indicating significant challenges in its corporate image. The Finance industry leads in size and leverage, while Infrastructure and Primary Consumer Goods the highest in corporate reputation. CAR helps Transportation and Logistics have the best market perception, while Energy has huge growth potential. This report highlights the sector's financial and reputational diversity.

Table 2. Sample Profile by Industry Sector.

No	Industry Sector	Industry Composition (%)	CII	FirmSize	Leverage	Growth	CAR
1	Raw Materials	3%	1.509	13.440	0.176	-0.005	-0.019
2	Non-Primary Consumer Goods	21%	1.596	12.497	0.397	-0.044	-0.009
3	Primary Consumer Goods	15%	1.756	13.160	0.448	0.086	-0.022
4	Energy	9%	0.822	13.665	0.529	4.541	-0.037
5	Infrastructure	9%	1.782	13.539	0.589	0.078	-0.019
6	Health	6%	0.976	12.373	0.256	0.097	0.004
7	Finance	32%	1.211	14.271	0.816	0.092	-0.001
8	Industry	3%	0.291	12.236	0.750	0.392	-0.002
9	Transportation and Logistics	3%	1.026	12.662	0.715	0.282	0.023
		100%					

Table 3 presents that the average CII for companies that adopt IR is not much different from the average for companies that do not adopt IR. There is no significant difference in the reputation formed in companies, both those that adopt and those that do not adopt. Likewise, for company size, the size of adopting and non-adopting companies is the same. Leverage for companies that adopt IR and those that do not appear to be different. However, a higher average leverage in companies that adopt IR indicates that they use capital loans or have a higher debt value compared to the companies that do not adopt it.

The average GROWTH variable in companies that adopt IR is 0.0501, better than those that do not adopt it. This shows that companies that adopt IR have higher annual revenues than those that do not adopt it. The growth of companies that adopt IR is higher than that of those that do not. Meanwhile, the average CAR for companies that do not adopt IR is negative. This is inversely proportional to the average CAR in

companies that adopt IR. This indicates that the market response is more favorable for companies that implement Integrated Reporting than those that do not implement IR.

Meanwhile, in the sample group before and during the COVID-19 (Table 4), there were almost no differences in variable profiles except for the company growth. In the period before the COVID-19 pandemic, the average GROWTH was 0.0955. Meanwhile, during the COVID-19 pandemic, the growth was close to 0, which indicates that the company was not growing.

Table 3. Descriptive Statistics for the Sample Group that adopted IR vs non-adopters.

Variable	Adopters (N=115)				Non-adopters (N=55)			
	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max
CII	1.511	0.722	0.291	3.105	1.497	0.638	0.180	2.624
Firm Size	31.0	2.044	27.26	35.06	30.26	1.739	27.2	33.0
Leverage	0.541	0.263	0.093	0.945	0.452	0.224	0.141	0.880
Growth	0.055	0.196	-0.772	0.850	0.005	0.207	-0.872	0.358
CAR	0.006	0.055	-0.129	0.143	-0.015	0.047	-0.144	0.104

Table 4. Descriptive Statistics for Sample Group Before and During the COVID-19.

Variable	Before the COVID-19 (N=102)				During the COVID-19 (N=68)			
	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max
CII	1.578	0.738	0.206	3.105	1.399	0.614	0.180	2.867
Firm Size	30.81	2,011	27.20	35.06	30.69	1.936	27.36	34.80
Leverage	0.516	0.244	0.093	0.945	0.507	0.269	0.116	0.922
Growth	0.001	0.230	-0.872	0.850	0.096	0.127	-0.438	0.671
CAR	-0.0003	0.052	-0.133	0.123	-0.002	0.056	-0.144	0.143

Table 5. Descriptive Statistics for Full Sample.

Variable	Mean	Std Dev	Min	Max
CII	1.507	0.694	0.180	3.105
Firm Size	30.76	1.98	27.20	35.06
Leverage	0.512	0.254	0.093	0.945
Growth	0.039	0.200	-0.872	0.850
CAR	-0.001	0.053	-0.144	0.143

Before testing the hypothesis, the most suitable model for this research data is selected. First, a Chow test is carried out to determine whether the model is a Fixed Effect or a Common Effect. The results of the Chow test show that the resulting p-value is 0.81059, so H0 is accepted, or the best model is the Common Effect Model. Considering that the best model is the Common Effect, the next stage is to carry out the Breusch-Pagan test to decide whether the best model is the Common (?) Effect or Random effect. The results of the Breusch Pagan test show a p-value of more than 0.05, which means that H0 is accepted, or the best model is the Common Effect. Next, the Common Effect model will be used to test the hypothesis. A summary of tests to determine which model is the best is presented in Table 6.

Table 6. A Summary of Tests.

Test Summary	Chi-square Statistic	p-value
Chow Test	2.98609	0.81059
Breusch-Pagan Test	7.74014	0.35607

To avoid data bias from year to year, an autocorrelation test was conducted before further analysis (Table 7), with the following results: The Durbin-Watson value is in the range of 1.5 to 2.5, indicating no significant autocorrelation. Specifically, a Durbin-Watson value of 2.298 indicates a weak or very slight negative autocorrelation, but still within the normal limits. Therefore, there is no indication of significant autocorrelation in this data. Thus, the analysis can proceed without concern for autocorrelation issues.

Table 7. Autocorrelation Test.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.240[a]	0.058	0.023	0.053	2.298

Predictors: (Constant), GROWTH, CII, IR, FS, COVID, LEV. Dependent Variable: CAR.

Table 8 compares the test results for each model (Common Effect, Fixed Effect, and Random Effect models).

Table 8. The Comparison of test results for each model.

Variable	Fixed Effect Model		Random Effect Model		Common Effect Model	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
const	-0.595	0.584	0.084	0.309	0.084	0.310
IR	-	-	-	-	0.004	0.087
CII	-0.006	0.840	-0.004	0.869	-0.003	0.790
IR*CII	0.005	0.892	0.012	0.393	0.012	0.394
Firm Size	0.019	0.609	-0.003	0.789	-0.003	0.251
Leverage	0.053	0.606	0.034	0.131	0.034	0.133
Growth	-0.019	0.484	-0.017	0.438	-0.017	0.439
COVID-19	-0.001	0.870	-0.000	0.996	-0.000	0.996

Hypothesis testing results can refer to panel regression results using the Common Effect model (Table 9), but to get an overview of the model before entering the moderating variable, testing is added without the moderating variable. The two test results are presented in Table 9.

The first hypothesis tests whether Integrated Reporting has a positive effect on the market response. Table 9 shows a positive and significant IR coefficient of 0.0208 with a p-value of 0.0203 (<0.05), meaning that H1 is accepted. Testing H1 by including the moderating variable still shows consistent results, where the positive IR coefficient is 0.0038, and the p-value is 0.0869 (<0.1). The second hypothesis tests the influence of CII on the market response. The test results show a positive CII coefficient of 0.0054, but the p-value is 0.0378 (>0.05), so H2 is rejected. The results of testing H2 after entering the moderating variable turns out to be no better, so H2 is rejected. The results of testing the moderating variable in the analysis model show that its influence is

positive, with a coefficient of 0.0116, but not significant, with a p-value of 0.3938, so H3 is rejected. The control variables in this model were also not proven to significantly influence changes in CAR.

Table 9. The results of Hypothesis Testing (Panel Data).

Variable	Model-exclude moderating variable			Model-include moderating variable		
	Coef	t-ratio	p-value	Coef	t-ratio	p-value
const	0.094	1,103	1.886	0.582	1.018	2.156
IR	0.021	2.344	0.020**	0.004	1.147	0.087*
CII	0.005	0.897	0.371	-0.003	-0.027	5.482
IR*CII				0.081	5.938	2.735
Firm Size	-0.003	-0.999	0.032	-0.003	-1.151	1.746
Leverage	0.034	1.483	0.140	0.238	1.509	0.924
Growth	-0.016	-0.744	0.458	-0.017	-0.775	3.051
COVID-19	-0.000	-0.045	0.964	-0.000	-0.006	6.914

This study tested hypothesis by using the average data per company over five years to validate the results. Table 10 shows that IR consistently affects the market response in the model both with and without moderation. CII has not been shown to moderate that influence. This is because the research sample shows high and similar CII values for both IR and non-IR enterprises. The results of this study confirm that the hypothesis testing results can rely on the collected samples since the testing results are consistent with the previous tests using panel data, which amounted to 170 observations.

Table 10. Additional Testing using the average data per company over 5 years.

Variable	Model-exclude moderating variable			Model-include moderating variable		
	Coef	t-ratio	p-value	Coef	t-ratio	p-value
const	0.145	1.341	0.191	0.135	3.630	0.007
IR	0.016	1.732	**0.095**	0.022	1.987	**0.082**
CII	0.014	1.650	0.111	0.012	1.881	0.097
IR*CII				-0.004	-0.467	**0.653**
Firm Size	-0.006	-1.666	0.107	-0.006	-4.395	0.002
Leverage	0.045	1.552	0.132	0.052	3.500	0.008
Growth	-0.029	-0.666	0.511	-0.081	-4.566	0.002
COVID-19	-0.002	-0.263	0.795	0.001	0.486	0.640

This research aims to examine the market response to the implementation of Integrated Reporting by companies listed on the Indonesia Stock Exchange and the role of reputation in moderating the influence of IR adoption on the market response. The test results support the first hypothesis that the market responds to companies that implement Integrated Reporting in a more positive way than to those that do not. This result is in line with Signaling Theory, which states that companies can provide positive signals to the market by improving the quality of their reporting. This finding extends the previous research findings that the market responds positively to companies that implement IR (Nakajima & Inaba, 2022; Simona et al., 2018). Integrated Reporting,

which combines reports to provide additional information that is relevant to investment decisions, is appreciated by the market. Even though there are still a few companies that implement Integrated Reporting in Indonesia, the market in Indonesia responds well to them. This finding is different from Hsiao and Kelly (2018), who revealed that the Taiwanese market responded differently. They could be more enthusiastic about implementing Integrated Reporting because of transparency issues regarding social and environmental responsibility reporting.

Further analysis shows that reputation does not affect the market response. A company needs to maintain a consistent reputation in the market's view. The reputation variable profile (CII), which is not different among the sample groups that implement and do not implement IR, could be one of the triggers for not supporting Hypothesis 2. Several samples of companies with high reputations show a small increase in the market response around the publication date of the annual report and tend to be the same with companies with low reputations. Jao and Jimmiawan (2018) found similar results where the company's reputation, as shown through the CII value, did not have a significant influence on the abnormal returns.

The test results also show that reputation does not moderate the influence of Integrated Reporting on the market response, thus rejecting H3. The findings of this research are different from those of Afrin and Rahman (2023), who show that corporate reputation moderates the relationship between corporate sustainability reporting and investment decisions. Sample profiles that show similarities in reputation indices between companies that implement and do not implement IR can influence the test results. The small number of samples that has CII data can undoubtedly influence the similarity of data between sample groups and subsequently influence the results.

5 Conclusion, implication and future research

The findings of this study provide important insights into the implementation of Integrated Reporting (IR) and its impact on the market response across companies listed on the Indonesia Stock Exchange. The data shows that, while IR adoption has a favorable effect on the market response, business reputation, as measured by the Corporate Image Index (CII), has no significant influence on the market reaction to IR. Furthermore, reputation does not mitigate the impact of IR on the market response. These findings highlight the market emphasis on honest and complete reporting, regardless of a company's prior reputation.

This research has the following implications for companies, standard setters, and investors. Companies should consider adopting IR because it has a favorable impact on the market perception and response. This is consistent with the Signaling Theory, which highlights the necessity of transparent and thorough reporting. Firms must successfully convey their financial and non-financial performance through IR to garner positive market response, regardless of their existing reputation.

Investors can utilize IR to assess a company's commitment to transparency and comprehensive reporting, which can be a favorable signal when making investment decisions. They should consider the implementation of IR as a crucial consideration when evaluating possible investments rather than relying exclusively on business reputation. Policymakers should encourage more corporations to implement IR practices to improve openness and market efficiency. Establishing strict rules and standards for IR will help increase reporting quality and uniformity, benefiting the market even more.

The current study suggests various areas for future research. Increasing the sample size to include more companies, particularly those with rich CII data, can provide a complete picture of the relationship between reputation and market reaction to IR. Comparing the effects of IR adoption on the market response in different nations can show how cultural, regulatory, and market variables influence IR effectiveness. Future research could also look deeper into the components of corporate reputation to determine which may influence the market reaction when combined with IR. Furthermore, researching the adoption and impact of IR within specific industries or sectors can reveal sector-specific benefits and obstacles, resulting in more personalized recommendations for businesses and governments.

Statement on Data Availability

This research uses secondary data, therefore the data is freely accessible to anyone on the IDX, Yahoo Finance and Investing sites

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Authors contribution

Juniarti worked on the conceptualization and theoretical-methodological approach. The theoretical review was conducted by Cynthia Halim. Data collection was coordinated by Evelyn Wehantouw. Data analysis included Juniarti and Cynthia Halim. All authors worked together in the writing and final revision of the manuscript.