

The role of stock price in the linkage within integrated reporting and firm value: A comparative study in Indonesia

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Abstract. This study investigates the relationship between integrated reporting scores (IRs), firm value (FV), and stock price (SP) among IR and Non-IR Adopters. IRs are measured using content elements, SP is the closing stock price at year-end, and FV is calculated using the Tobin's Q. The sample consists of 76 companies (38 IR Adopters and 38 Non-IR Adopters) listed on the Indonesia Stock Exchange from 2017 to 2021. Data are gathered through purposive sampling from accessible annual and sustainability reports. The analysis reveals significant differences in firm value between the two groups, with IR Adopters showing higher variability despite lower average values. The findings indicate that IRs negatively impact firm value among IR Adopters, while the effect is insignificant for non-IR adopters. SP significantly moderates this relationship, weakening the link between IRs and FV for IR Adopters while not serving as a moderator for Non-IR Adopters. These insights encourage firms to adopt integrated reporting and enhance IRs quality to improve investor confidence and firm value.

Keywords: firm value, stock price, integrated reporting, IR adopters, non-IR adopters

Received:
March, 2024
1st Revision:
October, 2024
Accepted:
December, 2024

DOI:
10.14254/2071-
8330.2024/17-4/13

JEL Classification: G32, M40

1. INTRODUCTION

Integrated reporting merges critical insight into a strategy of corporation, corporate governance, and the future potential of the company which indicate a significant evolution in corporate reporting since the emergence of IIRC framework in 2010 and formal adoption in 2013 (Kılıç & Kuzey, 2018). This evolution, attracting global scrutiny from scholars such as De Villiers et al. (2020) and noted increases in adoption in developing regions by Navarrete-Oyarce et al. (2022), signifies a shift towards a more inclusive reporting mechanism. By amalgamating diverse data streams, financial, social, and environmental, IR addresses the informational gap identified by Adams et al. (2011), Eccles and Krzus (2010), and further critiques the traditional reporting model's inadequacies in capturing the full spectrum of corporate performance as argued by Haji and Ghazali (2013) and Silvestri et al. (2017). As a strategic tool for overcoming these reporting challenges, IR has been advocated by Camodeca et al. (2018), demonstrating its superiority over conventional methods by effectively consolidating financial with non-financial data, an aspect further emphasized by Lok and Phua (2021) for its enhanced communicative value.

The IIRC framework aims to unify the financial as well as the non-financial data, offering a detailed view of a firm's capabilities (Lee & Yeo, 2016). (2010) also reveal that the IIRC framework is not just a reporting mechanism but a strategic asset, enhancing stakeholder relationships, reducing information gaps, and building trust. Additionally, (2014); Adams et al. (2016) stated that the IIRC framework promotes transparency and risk management by providing a thorough insight into organisational performance. It also streamlines communication of vital information (Vitolla et al., 2019a; Nwachukwu, 2021). Furthermore, it ties the quality of reporting to internal value generation, offering a more accurate performance representation by integrating financial and non-financial disclosure (Minutiello & Tettamanzi, 2022).

Integrated reporting and firm value, a crucial indicator of a company's value, are closely related. Investor expectations regarding future performance, risk, growth, and other aspects of the company are reflected in firm value. It is possible to view increasing corporate value as the primary objective for shareholders. The idea that investors and other stakeholders' perceptions of a company can be influenced by more comprehensive and transparent information about its performance is reflected in firm value and integrated reporting. Businesses may foster greater trust and encourage wiser investing choices by offering more thorough information. Furthermore, a reporting model is helpful if it successfully delivers the thorough information that stakeholders require (García-Sánchez et al., 2020). Research done by Lee and Yeo (2016); Barth et al, (2017) particularly in mandatory reporting contexts like South Africa, indicates a positive relationship in the midst of integrated reporting upon firm value. However, gaps in understanding remain in voluntary settings like Indonesia, underscoring the need for further investigation (García-Sánchez et al., 2020).

Most currently available literature focuses on countries where integrated reporting is mandatory. Hence, more information should be given regarding its effects in voluntary reporting environments (Rinaldi et al., 2018). In the context of Indonesia, a developing nation with voluntary integrated reporting adoption, this research seeks to advance our understanding of how integrated reporting impacts firm value. Additionally, it explores the interplay between integrated reporting, firm value, and stock prices, contributing valuable insights to this field of study. A vital indicator of a company's success and worth that investors, financial experts, and the market extensively use is its stock price (Malkiel, 2003). A low stock price may indicate internal problems or uncertainty that could reduce the company's value. Contrarily, a high stock price can represent the assessment of the market's optimism toward a company's

prospect (Malkiel, 2003). Based on Copeland et al. (2014), there is a positive correlation between stock price and firm value, with rising stock price frequently reflecting on rising firm value and vice versa. Integrated reporting can increase a company's value by giving the market access to more pertinent information (Eccles & Krzus, 2010).

Enhancing trust and enhancing the market's perception of a company's value can lead to an uptick in its stock price when the integrated reporting effectively convinces investors of the company's resilient and sustainable strategy, along with its commendable performance in environmental, social, and governance domains (Adams et al., 2016). However, the company's value may be improved if the market comprehends and evaluates the data supplied through integrated reporting (Simnett & Huggins, 2015). The stock price may only fairly reflect the company's genuine value if the market recognises and comprehends the added value of integrated reporting (O'Dwyer & Unerman, 2016). Therefore, this study adds value to the current literature by introducing credible measurement criteria for assessing the level of integrated reporting disclosure within a voluntary reporting framework. Notably, it holds significance as it marks the inaugural exploration in Indonesia to scrutinize the moderating role of stock prices in the link within integrated reporting over firm value. The planned comparative analysis between Indonesian companies embracing IR practices and those that do not is anticipated to offer fresh insights, contributing to the ongoing discourse regarding the merits of integrated reporting across diverse organisational contexts (Lee & Yeo, 2016; Rinaldi et al., 2018). This study is anticipated to present significant awareness of the effectiveness of integrated reporting in a voluntary reporting scenario. Furthermore, the study aims to clarify the moderating function of stock prices by comprehensively comprehending the intricate interactions between these variables in the Indonesian setting. Ultimately, these findings have the potential to make a notable contribution to the more considerable discussion on how integrated reporting affects firm value, especially when it comes to developing nations like Indonesia.

Conceptual and Theoretical Framework

Despite continuous efforts by corporations to offer more comprehensive information about their achievement, a significant information gap remains between shareholders and management. This gap poses a substantial difficulty encountered during the reporting process, as highlighted by Briem and Wald (2018). This asymmetry of information commonly exists within management or agents and shareholders or principals, where management possesses more knowledge than shareholders. Hence, Jensen and Berg (2012) reveal that the primary objective is to reduce this information divide, thus enhancing transparency and enabling shareholders to conduct a thorough assessment of the behaviour of the company. According to Grimmelikhuijsen et al. (2013), Transparency in the reporting process pertains to the degree to which accessible information enables external parties to oversee internal activities and assess performance. As stated by (2016), agency theory highlights the crucial role of transparency in promoting public accountability.

Consistent with Jensen and Meckling (1976), agency theory is a contract in the midst of principals and agents. In contrast, Garcia-Sanchez et al. (2020) define it as an economic theory related to principals' attitudes as company owners and their agents, namely managers. Differences in objectives may result in information gaps, leading to agency conflicts due to diverging interests between the two parties and resulting in agency costs. Moreover, managers' tendency to prioritise personal benefits and gain informational advantages over investors exacerbates agency conflicts (Sanchez, 2020). Integrated reporting is suggested as a means to elevate the calibre of information and impact an entity's capacity to bolster accountability and value generation over various timeframes, thereby mitigating conflicts (Bananuka et al., 2019). Integrated reporting serves as a means to augment the flow of information, aimed at mitigating the information disparity that commonly exists between organizational management and investors. The

voluntary dissemination of reports, with a particular focus on environmental and social dimensions, is expected to yield a reduction in agency costs, given that these dimensions are also encompassed within the integrated reporting framework (Loh et al., 2017). Prior empirical investigations, as exemplified by the studies conducted by García-Sánchez and Noguera-Gámez (2017b), Zhou et al. (2017), and Vitolla et al. (2020c), have consistently demonstrated the capacity of integrated reporting to alleviate information asymmetries, ultimately contributing to the enhancement of corporate value.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Integrated reporting and firm value

A novel reporting framework known as integrated reporting (Iredele, 2019) was introduced in 2013, coinciding with the initiation of the International Integrated Reporting Council (IIRC) in 2010. Based on Kusuma and Aprilia (2020), integrated reporting evolved in reaction to criticisms aimed at previous corporate reports, including those focused on sustainability and Corporate Social Responsibility (CSR). Moreover, integrated reporting combines social and economic firm actions cohesively inside a single report, unlike sustainability reporting, which addresses these topics independently from the annual report (Songini et al., 2022). Presenting integrated reports is still optional in Indonesia, a developing nation. Nonetheless, investors will find getting the information they need much easier thanks to this voluntary disclosure (Hoque, 2017).

Enhancing the efficiency of information presented to financial capital providers constitutes one of the objectives of corporate reporting, as it enhances the efficiency of resource allocation (Vitolla et al., 2020). In addition, integrated reporting strives to improve openness and empower receivers to make knowledgeable choices (Gerwanski et al., 2019). To improve decision-making, integrated reporting (IR) compiles financial and non-financial data into a unified document. Nevertheless, IR captures the interrelationships between company performance's non-financial and financial determinants, going beyond the simple combination of sustainability and financial reporting (Cooray et al., 2020). According to Bananuka et al. (2019), integrated reporting has the potential to improve information quality and address several reporting-related issues that affect the ability of the organization to increase accountability and create value across short, medium, and long-term horizons. Research by Obeng, Ahmed, and Miglani (2020) further supports this conclusion, showing that organizations that voluntarily use IR are linked to higher-quality earnings. Additionally, businesses can enhance the quality of their profits per share by incorporating IR into their reporting (Cortesi & Vena, 2019).

By providing investors with a more comprehensive and accurate insight into the performance of the company, integrated reporting is anticipated to enhance the company's total valuation. Studies carried out in South Africa by Barth et al. (2017) and Lee and Yeo (2016) indicate that the disclosure of integrated reporting could potentially impact a company's valuation. Integrated reporting provides investors with the chance to make better-informed investment choices by presenting a more thorough perspective on a company's creation of value narrative in contrast to traditional financial reporting. Additionally, studies indicate that organizations adopting integrated reporting tend to command higher valuations than those that do not. For instance, Eccles and Serafeim (2013) found that companies implementing integrated reporting had valuations that were 4.2% higher than those that did not adopt it. Similarly, KPMG's 2017 research revealed that companies embracing integrated reporting tended to have higher average market capitalization. Consequently, the authors propose the following hypothesis:

H1: The effect of integrated reporting scores (IRs) on firm value differs significantly between IR adapters and non-IR adopters.

2.2. Integrated reporting, stock price, and firm value

The company's stock price is one crucial factor impacting corporate value (Fernando et al. (2023). Increasing stock prices shows a good sentiment of investors and confidence in the company in the future, leading to increased demand for stocks and market capitalisation (Ritter, 2003). Hence, the companies may benefit from the increased access to capital markets and the ability to issue new stocks at premium prices because of positive market sentiment (Pettit et al., 2007; González et al. (2015). On the other hand, as Kim and Wu (2018) and Lang and Stulz (1994) have shown, a drop in the stock price can have negative consequences on the value of the company by communicating difficulties or poorer growth prospects, which may result in decreased demand for the stock and a loss in market capitalization. A company's access to financial markets may be further limited by such stock price reductions as prospective investors may be reluctant to invest at lower stock prices.

Conversely, integrated reporting presents a comprehensive methodology for reporting that amalgamates both financial and non-financial data, encompassing aspects like corporate governance and environmental, social, and financial considerations. Research results show a strong correlation between integrated reporting and stock prices and corporate values, as demonstrated by Eccles et al. (2014) findings. Businesses that use integrated reporting tend to see lower stock risk and higher stock returns than those that do not, which gives investors a good signal and eventually raises firm worth. Additionally, because integrated reporting improves corporate transparency and gives investors insight into how companies manage ESG risks, it usually results in improved stock performance and higher firm value. According to Kolk et al. (2019), this increases investor confidence and favours stock prices and overall business values. The increasing corporate values and rising stock prices help shareholders, who contribute to greater prosperity. Thus, the stock price is crucial in bolstering the association between firm value and integrated reporting since organizations implementing integrated reporting may stabilize their stock prices, increasing their total value. Hence, the following hypothesis was developed:

H2: The moderating effects of stock price on the relationship between integrated reporting scores (IRs) and firm value differs significantly between IR adopters and non-IR adopters.

3. METHODOLOGY

3.1. Sample

The population of this study includes companies listed on the Indonesia Stock Exchange from 2017 to 2021. This study utilised a data panel of 76 companies observed over 5 years, resulting in 380 observations, which were analysed using STATA 17.0. Within the sample, 14 publicly listed companies implicitly state they have adopted integrated reporting (IR), although 5 of them did not conduct an IPO during the research period. Furthermore, the corporate register identifies a total of 44 IR adopters, comprising 38 publicly listed companies, 13 non-public companies, and 2 inactive companies. Considering these factors, a total of 38 companies are recognized as IR adopters in this study. Non-IR adopters were matched to the number of IR adopters based on market capitalization, ensuring equal opportunities to influence firm value for both groups. This methodology is further supported by findings from Meiryani and Lorenzo (2023), which can provide a fairer basis for analysis (Osamwonyi et al., 2023). Data were gathered through purposive sampling from accessible annual and sustainability reports available on www.corporateregister.com and www.idx.co.id during the monitoring period.

3.2. Operational variables

This study employs firm value as the dependent variable, integrated reporting as an independent variable, and stock price as a moderating variable. This analysis includes control variables leverage, firm size, and return on asset. The firm value variable is measured using Tobin's q, the most widely utilized metric to assess firm value (Sheikh, 2018). A firm value is calculated by combining the market value of equity and total debts, and then dividing that total by the book value of total assets (Alawi, 2024; Alodat et al., 2022). Companies with higher Tobin's Q values are typically associated with better investment and growth prospects. According to IIRC (2013) and IIRC (2021), an index score is employed to assess integrated reporting, considering eight content elements. To evaluate the presence or absence of each element, a score of 1 is designated if the company discloses integrated reporting elements derived from the IIRC framework and 0 otherwise. As outlined in Appendix A, a total of fifty-five data points relevant to the analysis of IR content elements are disclosed to calculate the IR score (IRs). Consequently, a company can attain a score varying between 0 and 55 based on the number of disclosed items. The calculation of the IRs involves dividing the reported elements by the highest possible potential items that a firm could reveal. The IRs formula follows the methodology used by Kilic and Kuzey (2018); Haji and Anifowose (2017):

$$IRs = \frac{\sum_{i=1}^t IR_i}{t}$$

Where:

IRs = Integrated reporting score

IR_i = 0 if the reported element is absent

IR_i = 1 if the reported element is present, and

t = total number of IRs reported elements that a company might potentially reveal, (i.e., 55 elements).

This study also considers stock price (SP) as a moderating variable. The stock prices in the study were derived from year-end closing stocks (Aini, Minanurohman and Fitriani, 2023). In addition, the study employs the size of the company (SIZE), institutional ownership (OI), also return on assets (ROA) as control variables. Return on Assets (ROA) is used to measure how profitable the company can render from its assets and correlate with firm value. The valuation of a company depends on its ability to utilize its assets to gain value for both shareholders and other stakeholders effectively.

Meanwhile, institutional ownership might provide a favourable indication to the market and other investors that the company is expected to develop and perform well, thereby boosting investor confidence and increasing stock prices, ultimately increasing the company's value. Furthermore, company size is the other control variable. Because larger businesses can attain more significant economies of scale, company size and firm value are frequently positively associated. Economies of scale can boost profitability and operational efficiency, increasing a company's values. The following are the details for measuring the operational variables, as stated in Table 1.

Table 1

The Summary of Measurement of Operational Variables

Variables	Proxy	Measurement	Reference
IRs (X)	Content elements of the IIRC framework using a dummy variable	The sum of reported elements divided by total potential elements	Kilic and Kuzey (2018); Haji and Anifowose (2017)
Moderating variable (M)	Stock price (SP)	The closing stock price at year's end	Aini, Minanurohman and Fitriani (2023)
Firm value (Y)	Tobin's Q	Market value of equity plus total debts over book value of total assets	Alawi (2024); Alodat et al. (2022)
Control variables	ROA	Net income divided by total assets	Mehmood et al. (2019); Uddin et al. (2019); Alawi (2024)
	Institutional ownership (IO)	The total institutional shares divided by the total outstanding shares	Mappadang (2021) ; Handayani et al. (2020); Uddin et al. (2019)
	SIZE	Ln (Total Assets)	Alawi (2024); Chancharat and Kumpamool (2022)

Source: Authors' compilation

3.3. Research model

To investigate the relationships, the following is the research model proposed to test the hypothesis:

$$FV = \alpha + \beta_1 IRs + \beta_2 SP + \beta_3 IRs * SP + \beta_4 ROA + \beta_5 IO + \beta_6 SIZE + \varepsilon$$

Where:

- FV = Firm value
- IRs = Integrated reporting score
- SP = Stock price (moderator variable)
- IRs*SP = The interaction between the moderator variable and predictor variable
- ROA = Return on assets
- IO = Institutional ownership
- SIZE = Company size

The variables in this equation retain the same definitions as previously explained. This hypothesis seeks to forecast how integrated reporting impacts firm value, taking into account stock price as a moderating variable. The objective is to assess how the moderator variable interacts with the predictor variable and whether it amplifies the implication of integrated reporting over the firm value of IR adopters while potentially diminishing the relationship within integrated reporting upon the firm value of non-IR adopters. The examination of β_1 with a positive outcome indicates that firm value is expected to rise in tandem with the degree of integration in integrated reporting. The significance of the moderating variable's influence on the link between integrated reporting and firm value can be evaluated by comparing the p-values in regression equation 1. A p-value less than 0.05 suggests that there is sufficient evidence to refute the null hypothesis, indicating that integrated reporting indeed has a substantial impact on firm value. To gain deeper insight into the moderating effect, it is essential to analyse the p-value in equation 2, which indicates the extent of alteration in the moderating influence as a result of the interaction between the dependent and moderator variables. Additionally, equation 3 (Table 6) illustrated whether the moderating variable has the potential to enhance or attenuate the correlation between integrated reporting and firm value. Moderated Regression Analysis (MRA) was employed to investigate these three equations.

MRA is a statistical technique utilised to investigate the link among dependent variables (Y), independent variables (X), and the influence of the moderator variable (M) on this relationship (Hayes, 2018). According to Muller et al. (2005), MRA demonstrates how moderator variables affect how strongly and in which direction the independent and dependent variables are related. As a result, Hayes (2018) and Solimun et al. (2017) propose the following regression equation:

$$FV = \alpha + \beta 1IRs + \beta 2ROA + \beta 3IO + \beta 4SIZE + \varepsilon \quad (1)$$

$$FV = \alpha + \beta 1IRs + \beta 2SP + \beta 3ROA + \beta 4IO + \beta 5SIZE + \varepsilon \quad (2)$$

$$FV = \alpha + \beta 1IRs + \beta 2SP + \beta 3IRs*SP + \beta 4ROA + \beta 5IO + \beta 6SIZE + \varepsilon \quad (3)$$

4. EMPIRICAL RESULTS AND DISCUSSION

Table 2 shows the descriptive statistical analysis for IR Adopters (Criteria = 1, N=190), Non-IR Adopters (Criteria = 0, N=190), and all companies (IR and Non-Adopters, N=380). IR Adopters have an average FV of approximately 1.522 with a high standard deviation of around 3.136; the range of FV values varies from 0.053 to 22.560. In contrast, non-IR adopters have a slightly higher average FV, around 1.759, but with a lower standard deviation of approximately 2.981. Furthermore, the range of FV values for non-IR adopters ranges from 0.002 to 21.415. The value indicates that non-IR adopters have lower variability in their FV, even though their average is slightly higher than IR Adopters.

The average score of IR Adopters is approximately 0.709, with a low standard deviation of around 0.077. Whereas the non-IR adopters have a lower average IRs, around 0.631, with a higher standard deviation of precisely 0.112. Moreover, the range of Non-IR Adopters' IRs is narrower, ranging from 0.360 to 0.873. The score suggests that IR Adopters have higher average IRs and greater consistency than non-IR adopters. Meanwhile, IR Adopters have an average moderating variable SP of approximately 0.006 with a high standard deviation of around 0.012. The range of SP values ranges from 0.000 to 0.084. On the other hand, non-IR adopters have a slightly lower average moderating variable SP, around 0.004, with a lower standard deviation of approximately 0.006. Additionally, the range of Non-IR Adopters' SP values is narrower, ranging from 0.000 to 0.037. The score indicates that IR Adopters have a slightly higher average for the moderating variable SP but also have more significant variation than non-IR adopters. Return on Assets (ROA) of IR Adopters has a higher average as compared to Non-IR Adopters; the numbers are 0.064 and -0.108, respectively. Similarly, the average of institutional ownership (IO) has reached 0.824; it's also represents a higher average than Non-IR Adopters, with only a reach of 0.705. Furthermore, the size of the company (SIZE) has a higher average in IR Adopters (around 3.200) compared to Non-IR Adopters (around 2.392). In the context of the set of control variables, IR Adopters have higher averages for ROA, IO, and SIZE, indicating that IR Adopters tend to have better financial performance and larger company sizes than non-IR adopters.

Table 2

Summary Statistics of IR Adopters and Non-IR Adopters

Variables	Mean	Std. dev.	Min	Max
->Criteria = 1				
Panel A: Dependent Variable (FV)	1.522	3.136	0.053	22.560
Panel B: Independent Variable (IRs)	0.709	0.077	0.527	0.900
Panel C: Moderating Variable (SP)	0.006	0.012	0.000	0.084
Panel D: Control Variables				
ROA	0.064	0.214	-0.687	1.979
IO	0.824	0.343	0.358	4.802
SIZE	3.200	1.776	-3.652	6.310
-> Criteria = 0				
Panel A: Dependent Variable (FV)	1.759	2.981	0.002	21.415
Panel B: Independent Variable (IRs)	0.631	0.112	0.360	0.873
Panel C: Moderating Variable (SP)	0.004	0.006	0.000	0.037
Panel D: Control Variables				
ROA	-0.108	1.562	-15.954	0.520
IO	0.705	0.279	0.000	1.325
SIZE	2.392	1.516	-2.515	5.847

Source: Authors' results

Table 3 depicts that firm value has a significant positive correlation with IRs*SP and organisation size but negatively correlates with ROA. IRs also have a significant positive correlation with IRs*SP and organisation size. Moreover, the correlation matrix result shows that the moderating variable (IRs*SP) correlates significantly positively with organisation size. Overall, Hinkle et al. (2003) interpret that all factors have a modest correlation. The correlation results for independent variables show that the model has no multicollinearity problems.

Table 3

Correlation Matrix

	FV	IR	IR*SP	ROA	IO	SIZE
FV	1					
IRs	-0.046	1				
IRs*SP	0.279*	0.190*	1			
ROA	-0.205*	-0.056	0.068	1		
IO	0.060	-0.027	-0.023	-0.067	1	
SIZE	0.234*	0.246*	0.413*	0.134*	0.063	1

Source: Authors' results

Furthermore, an assessment of the Variance Inflation Factor (VIF) and tolerance was carried out. Following Field (2013), the analysis indicates the absence of multicollinearity concerns, as all VIF values for the variables are below 10, and the tolerance (1/VIF) exceeds 0.1. Thus, we assumed that there is no multicollinearity sign and that FV, IR, and IRs*SP may all predict each other. As a result, regression analysis can be performed without the risk of biased results.

This research hypothesis posits that firms categorised as IR Adopters are likely to exert a more substantial influence on enhancing firm value compared to non-IR adopters. Table 4 presents the equation that estimates the link within IRs over firm value. The results suggest that for IR Adopters, there is a notably adverse influence within the IRs variable and FV. A low P-value (0.005) suggests that this relationship is statistically significant, and the negative coefficient (-4.905) indicates that as the IRs rise, the FV tends to decline. Conversely, for non-IR adopters, the IR variable has a negative influence on FV, but in this specific instance, the effect is not significant statistically. The higher P-value (0.095) is above the

0.05 significance level, indicating insufficient evidence to assert a significant relationship between IRs and FV in the Non-IR Adopters group. Therefore, hypothesis 1 can be accepted, indicating that the effect of integrated reporting scores (IRs) on firm value (FV) differs significantly between IR adopters and non-IR adopters. This implies that I have a distinct impact on the firm value within the group of IR adopters compared to non-IR adopters, highlighting the differing dynamics of integrated reporting practices across these groups.

Table 4

Moderated Regression Analysis (MRA) test results, equation 1

FV	Coefficient	Robust std. Err.	t	P>t	[95% conf.	interval]
-> Criteria = 1						
IRs	-4.905	1.706	-2.87	0.005	-8.271	-1.538
ROA	6.655	2.366	2.81	0.005	1.988	11.322
IO	0.367	0.690	0.53	0.596	-0.995	1.729
SIZE	0.366	0.171	2.14	0.033	0.029	0.703
_cons	3.100	1.230	2.52	0.013	0.674	5.526
-> Criteria = 0						
IRs	-1.538	0.915	-1.68	0.095	-3.343	0.268
ROA	-0.786	0.085	-9.27	0.000	-0.954	-0.619
IO	0.644	0.622	1.03	0.302	-0.584	1.871
SIZE	0.559	0.152	3.67	0.000	0.258	0.859
_cons	0.854	0.845	1.01	0.313	-0.813	2.521

Source: Authors' results

Meanwhile, to address whether stock price as a moderator variable plays an essential role in the relationship between IR and FV, an analysis is required to determine the relationship between stock price, which serves as an independent variable, and firm value, which functions as the dependent variable. The analysis results will be used to support the findings about the role of moderating variables, as shown in Table 5.

Table 5

Moderated Regression Analysis (MRA) test results, equation 2

FV	Coefficient	Robust std. Err.	t	P>t	[95% conf.	interval]
-> Criteria = 1						
IRs	-5.616	1.914	-2.93	0.004	-9.393	-1.840
SP	80.581	42.541	1.89	0.060	-3.350	164.511
ROA	6.085	2.112	2.88	0.004	1.919	10.251
IO	0.349	0.639	0.55	0.585	-0.911	1.609
SIZE	0.184	0.137	1.35	0.179	-0.085	0.454
_cons	3.761	1.373	2.74	0.007	1.052	6.471
-> Criteria = 0						
IRs	-1.567	0.881	-1.78	0.077	-3.305	0.170
SP	46.105	27.058	1.70	0.090	-7.279	99.490
ROA	-0.786	0.086	-9.18	0.000	-0.954	-0.617
IO	0.786	0.627	1.25	0.211	-0.450	2.022
SIZE	0.452	0.156	2.90	0.004	0.144	0.760
_cons	0.842	0.823	1.02	0.308	-0.781	2.466

Source: Authors' results

Based on Table 5, the probability value of the SP variable is 0.060 for IR Adopters and 0.090 for Non-IR Adopters. Both p-values associated with the SP variable are more significant than 0.05, indicating no statistically significant effect of the SP variable on FV. This suggests that stock price does not have a

meaningful impact on firm value in either group, reinforcing the idea that other factors may be influencing firm valuation.

Table 6

Moderated Regression Analysis (MRA) test results equation 3

FV	Coefficient	Robust std. Err.	t	P>t	[95% conf.	interval]
-> Criteria = 1						
IRs	1.056	1.836	0.57	0.566	-2.568	4.679
SP	786.695	320.902	2.45	0.015	153.551	1419.839
IRs*SP	-935.231	382.100	-2.44	0.016	-1.690.891	-179.572
ROA	5.693	1.891	3.01	0.003	1.962	9.424
IO	0.293	0.604	0.49	0.628	-0.899	1.486
SIZE	0.071	0.134	0.52	0.600	-0.195	0.336
_cons	-0.691	1.402	-0.49	0.623	-3.457	2.076
-> Criteria = 0						
IRs	-1.471	0.922	-1.59	0.112	-3.291	0.349
SP	64.373	57.316	1.12	0.263	-48.714	177.459
IRs*SP	-27.956	81.203	-0.34	0.731	-188.171	132.258
ROA	-0.785	0.086	-9.12	0.000	-0.955	-0.615
IO	0.782	0.635	1.23	0.220	-0.471	2.034
SIZE	0.451	0.156	2.89	0.004	0.143	0.760
_cons	0.786	0.806	0.98	0.331	-0.804	2.376

Source: Authors' results

In order to determine whether the stock price (SP) has a moderating impact on the relationship between IRs and FV for both IR adopters and non-IR adopters, table 6 presents the analysis findings associated with the hypothesis. The results show that the coefficient of IRs*SP is -27.956 with a p-value of 0.016, which means that the relationship is statistically significant for IR Adopters. The negative coefficient implies an increase in the SP value is connected with a decrease in FV, weakening the relationship between IRs and FV. Table 6 shows that the value of the coefficient (β_1) is positive and the coefficient (β_3) is negative, that is, 1.056 and -935.231, respectively. Hence, the opposite direction of the coefficient can be concluded that SP is a moderating variable that weakens the influence of IRs on firm value.

Conversely, under Non-IR Adopters, the variable IRs*SP does not have a statistically significant coefficient ($p = 0.731$). The finding implies that SP does not significantly moderate the relationship within IRs and FV for non-IR adopters. The lack of significance suggests that the moderating effect observed in IR Adopters is absent in the Non-IR Adopters group. This supports hypothesis 2, indicating that the moderating effect of the stock price on the relationship between integrated reporting score (IRs) and firm value differs significantly between IR adopters and non-IR adopters. This distinction highlights the unique role of the stock price in shaping the relationship for IR Adopters, which is not mirrored in Non-IR Adopters. The role of stock price as a moderating variable of the correlation between integrated reporting and firm value is also supported by the non-significance of the interaction between stock price and firm value. The insignificant influence of SP on FV makes SP play a pure moderating role in the relationship between IRs and FV in IR Adopters, as seen in Table 5. According to Soliman, the existence of a pure moderation variable is only a moderating variable and does not act as a predictor variable. Furthermore, based on the results of the multiple regression analysis (MRA) for equations 1, 2, and 3, the following is a summary of the hypothesis results in this study, as presented in Table 7 below.

Table 7

Test of hypotheses

Hypotheses	P-Value (IR Adopters)	P-Value (Non-IR Adopters)	Conclusion
H1: The effect of integrated reporting scores (IRs) on firm value differs significantly between IR adopters and non-IR adopters.	0.005	0.095	Accepted
H2: The moderating effects of the stock price on the relationship between integrated reporting scores (IRs) and firm value differs significantly between IR adopters and non-IR adopters.	0.016	0.731	Accepted

Source: Authors' results

Table 7 highlights the findings that stock price significantly moderates the connection between integrated reporting and firm value for IR adopters, enhancing investor confidence and contributing to a greater firm valuation. In contrast, the study also reveals that for non-IR adopters, the stock price does not serve as an effective moderator, suggesting a nuanced understanding of how integrated reporting practices influence firm value across different companies. These insights underscore the importance of adopting integrated reporting to leverage its benefits fully, particularly in enhancing firm value through effective stock price management. These findings clearly emphasise a significant difference between IR adopters and non-IR adopters. IR adopters can leverage stock price moderation to enhance firm value, whereas non-IR adopters do not experience a similar moderating effect. This highlights the critical role of integrated reporting in optimising firm value management.

Moreover, the comprehensive discovery of this study generates significant support for our comprehension of the complex relationships among IRs, firm value, and the moderating impact of stock prices. The establishment of IIRC in 2010 represented an essential moment in the development of integrated reporting, transcending traditional reporting approaches by presenting financial and non-financial information in a unified framework (Iredele, 2019; Gerwanski et al., 2019). This evolution enhances transparency and supports informed decision-making, aligning with the theoretical expectations that integrated reporting positively influences the value of the company (Lee & Yeo, 2016; Barth et al., 2017).

This study recognises potential variability in the effect of IRs over firm value, differentiating between IR adopters and non-IR adopters. The potential variability aligns with research indicating higher valuations and market capitalisations for companies embracing integrated reporting (Eccles & Serafeim, 2013; KPMG, 2017). Additionally, the study advances the field that considers the moderating role of stock prices in this relationship, supported by the recognised significance of stock prices in influencing investor sentiment, market capitalisation, and access to capital markets (Fernando et al., 2023; Pettit et al., 2007). While the present study emphasises the potential positive effect of integrated reporting over firm value, it is essential to consider contrasting perspectives in the literature. Adams et al. (2016) argue that an increase in integrated reporting may not necessarily lead to a positive impact on firm value, a scepticism supported by Dumay et al. (2016), who highlight the potential influence of a lack of understanding or incorrect interpretation of non-financial data in a unified report. In contrast, Eccles and Krzus (2015) propose a generally positive relationship, asserting that an increase in integrated reporting should, in theory, enhance a company's value. This aligns with arguments by Adams et al. (2017), emphasising the advantages of implementing integrated reports, including increased trust, transparency, and the capacity to recognise and handle risks associated with non-financial elements.

By reconciling these perspectives, this study's results make a precious contribution to the ongoing discussion regarding the effect of integrated reporting upon firm value. They offer valuable insights into the specific dynamics observed within the Indonesian context. The study acknowledges the complexity of this relationship. It introduces the moderating role of stock prices, offering a nuanced understanding of the varying impacts on firm value for IR adopters and non-IR adopters. This nuanced perspective enhances our apprehension of the broader implications of integrated reporting on corporate practices and valuation dynamics.

5. CONCLUSION

This study has evaluated the relationship between IRs, FV, and SP within the context of IR Adopters and Non-IR Adopters. The analysis results indicated significant differences in firm values between the two groups. IR Adopters exhibit higher variability than Non-IR Adopters despite having lower average firm values. This highlights the complexity of determining firm value and the impact of other factors beyond IRs. A surprising finding is that IRs have a negative effect on firm value within the IR Adopters group. The finding implies that even though companies implement IR practices, enhancement in IRs is associated with a decrease in firm value. This suggests that IRs may not always directly indicate better financial performance. Furthermore, the stock price (SP) significantly moderates the correlation between IRs and firm value within the IR Adopters group. The interaction variable (IRs*SP) weakens this relationship, indicating that stock price performance can influence how IRs affect firm value. Conversely, the impact of IRs on non-IR adopters is not significant, highlighting a distinct difference in the effects of IRs between the two groups.

These conclusions have important implications for companies considering the adoption of IR practices and investors evaluating the value of companies in the Indonesian market. They must be aware that IRs may not always positively impact firm value, and other factors, such as stock price performance, should also be considered. This research provides a valuable understanding of the sophistication of the relationship among IRs, firm value, and stock price within the Indonesian context. Hence, this study contributes significantly to understanding the relationship between IRs, firm value, and stock price in Indonesia's IR Adopters and Non-IR Adopters context.

ACKNOWLEDGEMENT

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

- Adams, C. A., Botschen, G., & Radcliffe, V. S. (2011). Corporate sustainability reporting in the context of national cultures and stakeholder expectations: A comparison of the UK and Germany. *Journal of International Accounting, Auditing and Taxation*, 20(2), 61–74.
- Adams, C. A., Muir, S., & Hoque, Z. (2016). Measurement of sustainability performance and reporting: A survey of recent literature. *Journal of Accounting Literature*, 37, 1–32.
- Adams, C. A., Potter, B., & Singh, P. J. (2016). Exploring the implications of integrated reporting for social investment (disclosures). *The British Accounting Review*, 48(3), 283–296.
- Ahmed Haji, A., & Anifowose, M. (2017). Initial trends in corporate disclosures following the introduction of integrated reporting practice in South Africa. *Journal of Intellectual Capital*, 18(2), 373–399. <https://doi.org/10.1108/JIC01-2016-0020>

- Aini, S. N., Minanurohman, A., & Fitriani, N. (2023). Fundamental analysis of financial ratios in stock price: Do loss and firm size matter? *Jurnal Dinamika Akuntansi*, 15(1), 35-51. <http://dx.doi.org/10.15294/jda.v15i1.40072>
- Alawi, S. M. (2024). The role of corporate social responsibility, ownership structure, and gender diversity in firm performance. *International Journal of Economics and Financial Issues*, 14(2), 97–110. <https://doi.org/10.32479/ijefi.15880>
- Alodat, A.Y., Salleh, Z., Hashim, H.A., & Sulong, F. (2022). Corporate governance and firm performance: Empirical evidence from Jordan. *Journal of Financial Reporting and Accounting*, 20(5), 866-896.
- Aras, G., Aybars, A., & Kutlu, O. (2017). Institutionalising integrated reporting: Evidence from Turkey. *Sustainability Accounting, Management and Policy Journal*, 8(1), 2-33.
- Baboukardos, D., & Rimmel, G. (2016). Integrated reporting: A review of the state of the art literature. *International Journal of Business and Management*, 11(8), 229.
- Bananuka, J., Kiprotich, S., & Nduhura, E. (2019). Integrated reporting, firm value, and agency costs of listed firms in Uganda. *Journal of Accounting and Management*, 9(2), 54-74.
- Barth, M. E., Cahan, S. F., Chen, L., & Venter, E. R. (2017). The economic consequences associated with integrated report quality: Capital market and real effects. *Journal of Accounting Research*, 55(5), 1–66.
- Briem, C. R., & Wald, A. (2018). Implementing third-party assurance in integrated reporting: Companies' motivation and auditors' role. *Accounting, Auditing and Accountability Journal*, 31(5), 1461–1485. <https://doi.org/10.1108/AAAJ-03-2016-2447>
- Bushman, R. M., Chen, Q., Engel, E., & Smith, A. J. (2004). Financial accounting information, organizational complexity, and corporate governance systems. *Journal of Accounting and Economics*, 37(2), 167–201.
- Camodeca, R., Almici, A., & Sagliaschi, U. (2018). Sustainability disclosure in integrated reporting: Does it matter to investors? A cheap talk approach. *Sustainability (Switzerland)*, 10(12), 1–34. <https://doi.org/10.3390/su10124393>
- Chancharat, N., & Kumpamool, C. (2022). Working capital management, board structure and Tobin's q ratio of Thai listed firms. *Managerial Finance*, 48(4), 541-556.
- Cheng, M., Green, W., Conradie, P., & Konishi, N. (2014). The international integrated reporting framework: Key issues and future research opportunities. *Journal of International Financial Management & Accounting*, 25(1), 90-119.
- Ching, C. S., & Gerab, F. (2017). The impact of integrated reporting on firm valuation. *Journal of Contemporary Accounting & Economics*, 13(3), 321-341.
- Cohen, L., & Lou, D. (2012). Complicated firms. *Journal of Accounting Research*, 50(3), 689–734.
- Cooray, N., Hossain, M., & Wickramasinghe, D. (2020). Inter-relationships between integrated reporting and corporate sustainability performance. *Meditari Accountancy Research*, 28(4), 677–705.
- Copeland, T. E., Weston, J. F., & Shastri, K. (2014). *Financial Theory and Corporate Policy*. Pearson Education.
- Cortesi, A., & Vena, L. (2019). Disclosure quality under integrated reporting: A value relevance approach. *Journal of Cleaner Production*, 220, 745–755. <https://doi.org/10.1016/j.jclepro.2019.02.155>
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary non-financial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59-100.
- De Villiers, C., Rinaldi, L., & Unerman, J. (2020). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal*, 33(1), 290-303.
- Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: Is it the last frontier for accounting researchers? *Accounting, Auditing & Accountability Journal*, 29(8), 1344–1373.
- Eccles, R. G., & Serafeim, G. (2013). The performance frontier: Innovating for a sustainable strategy. *Harvard Business Review*, 91(5), 50-60.
- Eccles, R. G., Krzus, M. P., & Ribot, S. (2014). *The integrated reporting movement: Meaning, momentum, motives, and materiality*. Wiley.
- Eccles, R. G., Krzus, M. P., & Ribot, S. (2015). Models of best practice in integrated reporting. *Journal of Applied Corporate Finance*, 27(2), 103-115.
- Eccles, R. G., & Krzus, M. P. (2010). *One report: Integrated reporting for a sustainable strategy*. John Wiley & Sons.
- Fernando, G., Lawrence, S., & Kassim, M. (2023). Determinants of firm value: Evidence from stock markets. *Journal of Financial Economics*, 129(2), 297–318.

- Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics: And Sex and Drugs and Rock "N" Roll*, 4th Edition, Sage, Los Angeles, London, New Delhi.
- González, M., Guzmán, A., & Pombo, C. (2015). Corporate reputation and stock market performance. *Corporate Reputation Review*, 18(3), 198-213.
- Garcia-Sanchez, I. M., & Noguera-Gámez, L. (2017). The association between integrated reporting quality and firm value. *Spanish Journal of Finance and Accounting*, 46(4), 389-411.
- Gerwanski, R., Kolk, A., & Pinkse, J. (2019). Understanding the relationship between corporate sustainable development, sustainability disclosure, and sustainability performance: A review and synthesis of the literature. *Journal of Cleaner Production*, 221, 224-240.
- Garcia-Sanchez, I. M., Cuadrado-Ballesteros, B., & Noguera-Gámez, L. (2020). Sustainability and financial information: A literature review. *Sustainability*, 12(16), 6370.
- Grimmelikhuijsen, S., Porumbescu, G., Hong, B., & Im, T. (2013). The effect of transparency on trust in government: A crossnational comparative experiment. *Public Administration Review*, 73(4), 575-586. <https://doi.org/10.1111/puar.12047>
- Haji, A. A., & Ghazali, N. A. M. (2013). The quality and determinants of voluntary disclosures in annual reports of Shari'ah compliant companies in Malaysia. *Humanomics*, 29(1), 24-42. <https://doi.org/10.1108/08288661311299303>
- Handayani, B. D., Rohman, A., Chariri, A., & Pamungkas, I. D. (2020). Corporate financial performance on corporate governance mechanism and corporate value: Evidence from Indonesia. *Montenegrin Journal of Economics*, 16(3), 161-171. <https://doi.org/10.14254/1800-5845/2020.16-3.13>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.
- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied Statistics for the Behavioral Sciences*. Boston, MA: Houghton Mifflin Company.
- Hoque, Z. (2017). 20 years of studies on the balanced scorecard: Trends, accomplishments, gaps and opportunities for future research. *The British Accounting Review*, 49(1), 76-92.
- Iredale, O. (2019). Integrated reporting practices and corporate financial performance: Evidence from Nigerian listed firms. *Journal of Accounting and Management*, 9(1), 18-34.
- Jensen, J. C., & Berg, N. (2012). Determinants of traditional sustainability reporting versus integrated reporting. An institutionalist approach. *Business Strategy and the Environment*, 21(5), 299-316. <https://doi.org/10.1002/bse.740>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kusuma, A., & Aprilia, K. (2020). The influence of integrated reporting on firm value with corporate governance as a moderating variable. *Journal of Accounting and Investment*, 21(2), 233-246.
- Kılıç, M., & Kuzey, C. (2018). Assessing current company reports according to the IIRC integrated reporting framework. *Meditari Accountancy Research*, 26(2), 305-333.
- Kim, D., & Wu, Y. (2018). Effects of stock price crash risk on firm value. *Journal of Financial Economics*, 128(1), 137-162.
- Kolk, A., Perego, P., & Bansal, P. (2019). From accountability responsibility: Linking ESG disclosure to organizational performance. *Journal of Business Ethics*, 165(2), 209-228.
- KPMG. (2017). *The KPMG Survey of Corporate Responsibility Reporting 2017*. KPMG International Cooperative.
- Lang, L. H., & Stulz, R. M. (1994). Tobin's q, corporate diversification, and firm performance. *Journal of Political Economy*, 102(6), 1248-1280.
- Lee, K. J., & Yeo, G. H. (2016). Impact of integrated reporting on market valuation: Evidence from South Africa. *Sustainability Accounting, Management, and Policy Journal*, 7(2), 170-195.
- Lee, K. W., & Yeo, G. H. H. (2016). The association between integrated reporting and firm valuation. *Review of Quantitative Finance and Accounting*, 47(1), 1221-1250.
- Loh, C. M., Koh, H. C., & Phua, Y. S. (2017). Determinants of integrated reporting quality in Malaysia. *Pacific Accounting Review*, 29(2), 187-213.

- Lok, Y. H., & Phua, L. K. (2021). Integrated Reporting and Firm Performance in Malaysia: Moderating Effects of Board Gender Diversity and Family Firms. *Estudios de Economia Aplicada*, 39(4). <https://doi.org/10.25115/eea.v39i4.4588>
- Navarrete-Oyarce, P., Larrinaga, C., & Bollas-Araya, M. (2022). The impact of integrated reporting on stock price synchronicity and crash risk: Evidence from South Africa. *Journal of Business Ethics*, 169(3), 567-589.
- Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of Economic Perspectives*, 17(1), 59-82.
- Mappadang, A. (2021). Corporate governance and corporate tax avoidance: An interactive effects (Evidence from Indonesia capital market). *Jurnal Kenangan dan Perbankan*, 25(1), 81-92. <https://doi.org/10.26905/jkdp.v25i1.5043>
- Mehmood, R., Hunjra, A.I., & Chani, M.I. (2019). The impact of corporate diversification and financial structure on firm performance: Evidence from South Asian countries. *Journal of Risk and Financial Management*, 12(1), 49.
- Muchtar, A. (2021). Integrated reporting and its effects on firm value: Empirical evidence from Indonesia. *International Journal of Economics, Commerce and Management*, 9(4), 147-157.
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated, and mediation is moderated. *Journal of Personality and Social Psychology*, 89(6), 852-863.
- Minutiello, M., & Tettamanzi, P. (2022). Integrated reporting quality and value creation. *Sustainability*, 14(4), 1200.
- Nurkumalasari, N., Brammer, S., & Hong, J. (2019). Integrated reporting and shareholder value: Evidence from Korea. *British Accounting Review*, 51(5), 1-23.
- Nurkumalasari, A., Wahid, N., & Kurniawan, T. (2019). Benefits and challenges of integrated reporting adoption: Evidence from Indonesia. *Jurnal Kenangan dan Perbankan*, 23(4), 576-589.
- Nwachukwu, S. C. (2021). Integrated reporting and financial performance of listed manufacturing companies in Nigeria. *Journal of International Studies*, 14(2), 168-186.
- Obeng, A. V., Ahmed, K., & Miglani, S. (2020). Integrated reporting and earnings quality: The moderating effect of agency costs. *Pacific-Basin Finance Journal*, 60, 101285. <https://doi.org/10.1016/j.pacfin.2020.101285>
- O'Dwyer, B., & Unerman, J. (2016). Fostering Rigour in Accounting for Social Sustainability. *Accounting, Auditing & Accountability Journal*, 29(6), 1046-1068.
- Osamwonyi, O., Mary, J., & Ekundayo, G. (2023, May). International financial reporting standards (ifrs) adoption and the value relevance of accounting information in selected african countries. In *DIEM: Dubrovnik International Economic Meeting* (Vol. 8, No. 1, pp. 113-127). Sveučilište u Dubrovniku. <https://doi.org/10.17818/diem/2023/1.12>
- Pettit, R. R., Singer, R. F., & Youn, M. H. (2007). The impact of reputation on stock market value. *Strategic Management Journal*, 28(9), 934-946.
- Rinaldi, L., Unerman, J., & de Villiers, C. (2018). Evaluating the integrated reporting journey: insights, gaps and agendas for future research. *Accounting, Auditing & Accountability Journal*, 31(5), 1294-1318.
- Rinaldi, L., Unerman, J., & De Villiers, C. (2020). On the legitimizing strengths of integrated reporting: Insights from institutional work and field-configuring events. *Accounting, Organizations and Society*, 62, 55-73.
- Ritter, J. R. (2003). Behavioral finance. *Pacific-Basin Finance Journal*, 11(4), 429-437.
- Sanchez, I. M. G. (2020). *Agency theory: Origins and progress*. Oxford Research Encyclopedia of Business and Management.
- Sekaran, U., & Bougie, R. (2017). *Research methods for business: A skill-building approach*. Wiley.
- Setia, N., Abhayawansa, S., Joshi, M., & Vu Huynh, A. (2015). Integrated Reporting in South Africa: Some Initial Evidence. *Sustainability Accounting, Management and Policy Journal*, 6(3), 397-424.
- Sheikh, N. A. (2018). Determinants of firm value: A literature review. *Journal of Management Sciences*, 5(2), 254-272.
- Silvestri, A., Veltri, S., Venturelli, A., & Petruzzelli, S. (2017). A research template to evaluate the degree of accountability of integrated reporting: A case study. *Meditari Accountancy Research*, 25(4), 675-704. <https://doi.org/10.1108/MEDAR11-2016-0098>
- Simnett, R., & Huggins, A. L. (2015). Integrated reporting and assurance: Where can research add value? *Sustainability Accounting, Management and Policy Journal*, 6(1), 29-53.
- Solimun, Achmad, Adji. R. F, Nurjannah. (2017). *Metode Statistika Multivariat Pemodelan Persamaan Struktural (SEM) Pendekatan WarpPLS*. Malang: UB Press.

- Songini, L., & Pistoni, A. (2022). Exploring the determinants of integrated reporting: Insights from qualitative comparative analysis. *Sustainability Accounting, Management, and Policy Journal*, 13(2), 358-381.
- Stefanescu, C. A., Oprisor, T., & Sintejudeanu, M. A. (2016). An original assessment tool for transparency in the public sector based on the integrated reporting approach. *Proceedings of the 11th International Conference Accounting and Management Information Systems (Amis, 2016)*, 15(3), 503–520.
- Sriani, R., & Agustia, D. (2020). The factors affecting integrated reporting adoption in Indonesian listed companies. *Jurnal Riset Akuntansi dan Bisnis Airlangga (JRABA)*, 5(2), 81-94.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson.
- The International Integrated Reporting Council (IIRC). (2013). *The International Integrated Reporting Framework: Consultation draft*. IIRC.
- The International Integrated Reporting Council (IIRC). (2021). the International Integrated Reporting Framework. Retrieved from <https://integratedreporting.org/wp-content/uploads/2021/02/The-International-Integrated-Reporting-Framework.pdf>
- Tlili, I., Jarboui, A., & Zeghal, D. (2019). The impact of integrated reporting on firm value: The role of family firms. *Sustainability*, 11(12), 3386.
- Uddin, M.N., Khan, M.S.U., & Hosen, M. (2019). Does corporate governance influence leverage structure in Bangladesh? *International Journal of Financial Studies*, 7(3), 50.
- Vitolla, F., Rosati, F., Tiscini, R., & Bruni, R. (2019a). Integrated reporting and corporate governance: A literature review. *Business Strategy and the Environment*, 28(7), 1279-1291.
- Vitolla, F., De Luca, P., Di Pietra, R., & Lettieri, E. (2020). Integrated reporting and firm value: A comprehensive literature review, *Journal of Cleaner Production*, 245, 118763.
- Wahl, L., Waddock, S., & LeVisage, L. (2020). Barriers to integrated reporting: A stakeholder perspective. *Journal of Cleaner Production*, 267, 122086.
- Wahl, A., Kastantin, T., & Freundlich, F. (2020). Integrated reporting and investor clientele. *Journal of Applied Accounting Research*, 21(4), 527-548.
- Zhou, S., Chen, F., Zhou, D., & Ji, Y. (2017). Do firms with higher integrated reports exhibit greater value relevance? Evidence from an emerging market. *Sustainability*, 9(8), 1487.

APPENDIX

Appendix A: Integrated Reporting Index disclosure

No	Content Elements	Disclosure Items	No	Content Elements	Disclosure Items
1	Organizational overview and external environment	✓ Organizational Overview <ol style="list-style-type: none"> 1. Mission and vision statement 2. Ethics and integrity (culture, ethics and values) 3. Ownership structure or legal form 4. Code of conduct or code of conduct 5. The number of employees and demographics 6. Businesses segment ✓ External environment <ol style="list-style-type: none"> 7. Legal factors 8. Political factors 9. Social factors 10. Environmental factors 11. Key stakeholders 	5	Strategy and resource allocation	<ol style="list-style-type: none"> 37. Strategic goals 38. Goal-attainment strategies 39. Explanation of short, medium, and long-term strategic objective 40. The measurement of achievements and target outcomes 41. The link in the midst of strategies and key capitals
2	Governance	<ol style="list-style-type: none"> 12. General explanations about the governance structure 13. Board experience or skills 14. Compensation philosophy statement 15. Compensation policies 	6	Performance	<ol style="list-style-type: none"> 42. Financial KPIs (key performance indicators) 43. Non-Financial KPIs 44. Financial implications on other capitals 45. The linkages among past and current performance 46. Industry benchmarks
3	Business model	✓ Inputs <ol style="list-style-type: none"> 16. Key inputs 17. Product differentiation 18. Delivery channels and marketing 19. After-sale service 20. Innovation 21. Employee training ✓ Outputs <ol style="list-style-type: none"> 22. Main products and services or main business activities 23. Greenhouse Gas Emissions 24. Wastewater management ✓ Outcomes <ol style="list-style-type: none"> 25. Employee morale 26. Revenue 27. Customer satisfaction 	7	Outlook	<ol style="list-style-type: none"> 47. Expected future trends 48. Impact of trends 49. Readiness to face challenges and uncertainty 50. Organizational contingencies
4	Risks and opportunities	✓ Risks <ol style="list-style-type: none"> 28. Risk management philosophy 29. Identification of risks 30. Internal or external risks 31. Risk assessment 32. Risk mitigation 	8	Basis of preparation and presentation	<ol style="list-style-type: none"> 51. Boundaries for reporting 52. The organizational materiality determination process 53. Materiality rules 54. The method used to evaluate materiality 55. Preparers and internal

No	Content Elements	Disclosure Items	No	Content Elements	Disclosure Items
		✓ Opportunities 33. Identification of opportunities 34. Internal or external opportunities 35. Opportunities assessment 36. Opportunity actions			processes

Source: (Kılıç & Kuzey ,2018, modified