



A comparative study before and during COVID-19 for sustainability report disclosure and firm value

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Abstract

This study investigates the comparative impact of sustainability report disclosure on financial performance and firm value before and during the COVID-19 pandemic, focusing on Indonesian companies recognized as recipients of the Asia Sustainability Reporting Rating (ASRRAT) awards for the period 2018–2021. The analysis reveals that during the COVID-19 period, financial performance had a positive and statistically significant influence on firm value, a relationship that was not observed in the pre-pandemic period. Furthermore, the disclosure of economic, environmental, and social aspects—as well as the overall sustainability report disclosure—did not demonstrate a significant effect on either financial performance or firm value in both periods. These findings underscore the limited financial and market response to sustainability disclosures and highlight the need for greater stakeholder engagement with corporate sustainability practices to support the realization of sustainable development goals.

Keywords: sustainability report disclosure, financial performance, COVID-19 pandemic, Asia Sustainability Reporting Rating

Introduction

According to the Global Reporting Initiative (GRI), sustainability reporting refers to the public disclosure of an organization's economic, environmental, and social impacts. This form of reporting is not only intended to communicate organizational performance but also reflects the entity's contribution—positive or negative—to the achievement of sustainable development goals (GRI, 2021). In the Indonesian context, the implementation of sustainability reporting is supported by the Financial Services Authority Regulation (Peraturan Otoritas Jasa Keuangan/POJK) No. 51/POJK.03/2017 concerning Sustainable Finance, which mandates financial institutions, issuers, and public companies to submit sustainability reports to the Financial Services Authority (OJK). Moreover, the National Center for Corporate Reporting (NCCR), an independent institution in Indonesia, further promotes this initiative through the organization of the Asia Sustainability Reporting Rating (ASRRAT), which evaluates and recognizes the quality of sustainability disclosures.

Sustainability reporting serves not only as a documentation of data but also as a strategic communication tool for companies to demonstrate their commitment to sustainable development. According to legitimacy theory, the disclosure of sustainability information allows organizations to maintain their social contract by aligning their operations with prevailing societal norms and expectations (Ghozali, 2020)^[8]. By doing so, firms can enhance their reputation, legitimacy, and competitive advantage, while also achieving operational efficiencies that may reduce costs (Ching, Gerab, & Toste, 2017)^[3]. Stakeholder theory further supports this notion, positing that sustainability reporting is a mechanism through which companies demonstrate accountability to a broad range of stakeholders beyond shareholders, thereby strengthening stakeholder trust and potentially increasing investment (Ghozali, 2020)^[8].

Previous studies have indicated that the disclosure of sustainability reports may influence firm value through its

impact on financial performance (Ilmi, Kustono, & Sayekti, 2017)^[11]. Financial performance, often used as a measure of a firm's internal operational efficiency, reflects the company's ability to manage its resources effectively within a specific period (Rudianto, 2013)^[20]. This performance is widely regarded as a determinant of firm value, which is commonly understood as the present value of future economic benefits expected to be received by the company (Mardiyanto, 2009)^[14]. Therefore, both financial performance and firm value are key indicators of corporate success and are closely associated with sustainability practices.

Despite the growing interest in sustainability disclosure, empirical findings regarding its relationship with financial performance and firm value remain inconclusive. These inconsistencies may stem from variations in the research periods, suggesting that the timing of a study could significantly influence its outcomes. In particular, the COVID-19 pandemic has introduced new variables affecting financial markets, economic stability, and stakeholder priorities, including heightened attention to non-financial disclosures. According to a report by Ernst & Young (2020)^[5], the proportion of investors who consider non-financial information critical for investment decision-making rose significantly—from 27% in 2016 and 34% in 2018 to 43% in 2020.

Given this background, the present study aims to compare the influence of sustainability report disclosure on financial performance and firm value during two distinct periods before and during the COVID-19 pandemic. Specifically, the research will analyse the individual and collective effects of economic, environmental, and social disclosures on financial performance and firm value. Additionally, the study will explore the mediating role of financial performance in the relationship between sustainability disclosure and firm value, thereby contributing to the broader discourse on corporate accountability and stakeholder engagement in times of crisis.

Theory, Literature Review and Hypotheses Development

Stakeholder Theory

Stakeholder theory posits that a company must not only serve its own interests but also consider the interests of its stakeholders (Ghozali, 2020) ^[8]. Freeman (1984) ^[7] defines stakeholders as any individual or group that can affect or is affected by the achievement of a company's objectives. In this context, organizations are encouraged to maintain positive relationships with stakeholders they deem strategically significant (Ullman, 1985) ^[23]. Each stakeholder holds potential influence over critical resources, prompting firms to align their operations with stakeholder expectations. Corporate social disclosure is one of the key mechanisms by which firms can communicate and engage in dialogue with their stakeholders. Thus, stakeholder theory serves as a foundational lens through which corporate social responsibility (CSR) and sustainability disclosures can be analyzed, particularly in understanding how companies address the demands of various stakeholder groups.

Legitimacy Theory

Legitimacy theory asserts that organizations continuously seek to ensure that their activities are perceived as legitimate, operating within the norms, values, and expectations of the broader society (Ghozali, 2020) ^[8]. The theory is rooted in the concept of a social contract between the organization and the community in which it operates (Dowling & Pfeffer, 1975) ^[4]. Legitimacy, in this regard, is a vital intangible asset that organizations strive to maintain to secure societal support and operational continuity. A misalignment between organizational practices and societal expectations—referred to as the "legitimacy gap"—can undermine an organization's reputation and threaten its sustainability. While the legitimacy gap is often difficult to measure directly, organizations must identify and resolve inconsistencies between their values and those of society. As O'Donovan (2002) ^[16] notes, firms are compelled to adjust their operations and disclosures to align with evolving social values in order to preserve or restore legitimacy.

Sustainability Report Disclosure

In Indonesia, sustainability reporting has been formalized through the Financial Services Authority Regulation (POJK No. 51/POJK.03/2017), which mandates financial institutions, issuers, and public companies to disclose their economic, environmental, and social performance in conducting sustainable business practices. These disclosures aim to provide stakeholders with comprehensive insights into an organization's operations and impacts, whether positive or negative, on sustainable development. The regulation allows for sustainability reports to be published either as standalone reports or integrated within annual reports.

Support for sustainability reporting is also provided by the National Centre for Corporate Reporting (NCCR), which organizes the Asia Sustainability Reporting Rating (ASRRAT). This initiative recognizes companies for the transparency and quality of their sustainability disclosures, particularly those aligned with the Global Reporting Initiative (GRI) standards. According to the GRI framework, sustainability disclosures are categorized into one general disclosure component and three specific topic areas: economic, environmental, and social. Economic

topics relate to the organization's influence on the broader economy, environmental topics pertain to the company's ecological footprint, and social topics address the company's impact on stakeholders and communities.

Together, these theories and regulatory frameworks provide a comprehensive foundation for analysing how sustainability report disclosures influence key organizational outcomes such as financial performance and firm value, particularly under varying contextual pressures such as the COVID-19 pandemic.

Financial Performance

Financial performance reflects the outcomes achieved by a company in managing its resources effectively over a specific period (Rudianto, 2013) ^[20]. Kasmir (2017) ^[12] asserts that the measurement of financial performance serves as a basis for assessing the effectiveness of management and evaluating a company's accomplishments during a particular timeframe. In line with this, Horne and Wachowicz (2008) ^[10] emphasize the importance of conducting a comprehensive analysis of various financial indicators to evaluate a company's financial health. Several empirical studies, including those by Fadillah and Suryawati (2020) ^[6], Anna and Dwi R.T. (2019) ^[2], Ilmi, Kustono, and Sayekti (2017) ^[11], Ching, Gerab, and Toste (2017) ^[3], Wijayanti (2016) ^[24], and Sejati and Prastiwi (2015) ^[21], utilize profitability indicators such as net profit margin (NPM), return on assets (ROA), and return on equity (ROE) as primary metrics to assess financial performance.

Firm Value

Firm value refers to the present worth of the future cash flows expected to be generated by the firm (Mardiyanto, 2009) ^[14]. Rahardjo (2018) ^[19] further elaborates that firm value encompasses information conveyed to stakeholders concerning a firm's financial position, operational performance, and cash flow generation capabilities. Although stock prices are often perceived as a proxy for firm value, market conditions and speculative trading can cause misalignments between a company's actual value and its market valuation. Consequently, financial statements play a critical role in estimating firm value through informed financial analysis. Previous research by Fadillah and Suryawati (2020) ^[6], Puspita and Jasman (2020) ^[18], Anna and Dwi R.T. (2019) ^[2], Kusuma and Priantinah (2018) ^[13], Ilmi, Kustono, and Sayekti (2017) ^[11], as well as Sejati and Prastiwi (2015) ^[21], identify several key financial indicators—such as price to book value (PBV), price to earnings ratio (PER), and Tobin's Q—as common measures for evaluating firm value.

Hypotheses Development

Sustainability Report Disclosure and Financial Performance Before COVID-19

Sustainability report disclosure provides insights into a company's performance in economic, environmental, and social domains. The disclosure of economic topics reflects the impact of corporate operations on the local, national, and global economy (Anna & DWI R. T., 2019) ^[2]. Environmental disclosure highlights the firm's responsibility and initiatives in mitigating environmental degradation (Adhima & Hariadi, 2012) ^[1]. Meanwhile, social disclosure demonstrates the company's engagement with and influence on the surrounding communities (Natalia

& Tarigan, 2014) ^[15]. Under the legitimacy theory, companies disclose sustainability reports to gain societal approval and ensure continued operational legitimacy (Ghozali, 2020) ^[8]. This public confidence, fostered through transparency, has the potential to enhance corporate reputation and financial performance. Empirical studies have shown that sustainability disclosure, both by individual topics (Wijayanti, 2016) ^[24] and in aggregate (Fadillah & Suryawati, 2020) ^[6], positively affects financial performance. Accordingly, the following hypotheses are proposed

H1a: Economic topic disclosure affects financial performance before COVID-19.

H1b: Environmental topic disclosure affects financial performance before COVID-19.

H1c: Social topic disclosure affects financial performance before COVID-19.

H1d: Overall sustainability report disclosure affects financial performance before COVID-19.

Sustainability Report Disclosure and Financial Performance During COVID-19

The enforcement of POJK No. 51/POJK/03/2017, which mandates sustainability report submission, coincided with the emergence of the COVID-19 pandemic. During this period, societal attention to environmental and social concerns increased significantly (Pusaka & Nisa, 2021) ^[17]. In response, sustainability reporting became a strategic tool for companies seeking to enhance public trust and organizational resilience. Several studies, including those by Wijayanti (2016) ^[24], Fadillah and Suryawati (2020) ^[6], and Ilmi, Kustono, and Sayekti (2017) ^[11], have demonstrated a positive relationship between sustainability disclosures and financial performance. Based on this evidence, the hypotheses for the COVID-19 period are as follows

H2a: Economic topic disclosure affects financial performance during COVID-19.

H2b: Environmental topic disclosure affects financial performance during COVID-19.

H2c: Social topic disclosure affects financial performance during COVID-19.

H2d: Overall sustainability report disclosure affects financial performance during COVID-19.

Sustainability Report Disclosure and Firm value Before COVID-19

Sustainability reporting provides stakeholders with comprehensive insights into a firm's economic achievements, environmental stewardship, and social responsibility initiatives. Economic disclosures reflect corporate efforts to fulfill stakeholder interests through performance outcomes (Anna & Dwi R. T., 2019) ^[2]. Environmental disclosures signal corporate accountability in addressing environmental challenges (Adhima & Hariadi, 2012) ^[1], while social disclosures communicate the firm's commitment to corporate social responsibility (Natalia & Tarigan, 2014) ^[15]. From the perspective of stakeholder theory, such disclosures are mechanisms of transparency and engagement, fostering investor confidence and enhancing firm value. Previous studies by Anna and Dwi R. T. (2019) ^[2] and Puspita and Jasman (2020) ^[18] have found a positive correlation between sustainability report disclosures and firm value. Based on this theoretical and empirical foundation, the following hypotheses are formulated

H3a: Economic topic disclosure affects firm value before COVID-19.

H3b: Environmental topic disclosure affects firm value before COVID-19.

H3c: Social topic disclosure affects firm value before COVID-19.

H3d: Overall sustainability report disclosure affects firm value before COVID-19.

Sustainability Report Disclosure and Firm value During COVID-19

The COVID-19 pandemic has heightened investor awareness of environmental and social dimensions of corporate behavior. According to a report by Ernst & Young (2020) ^[5], the proportion of investors considering non-financial disclosures as crucial for investment decision-making increased significantly during the pandemic. In this context, effective sustainability reporting is seen as essential in fulfilling stakeholders' informational needs, thereby influencing their investment decisions. The findings of Anna and Dwi R.T. (2019) ^[2] and Puspita and Jasman (2020) ^[18] reinforce this perspective by establishing a link between sustainability disclosure and firm value. Therefore, the following hypotheses are proposed

H4a: Economic topic disclosure affects firm value during COVID-19.

H4b: Environmental topic disclosure affects firm value during COVID-19.

H4c: Social topic disclosure affects firm value during COVID-19.

H4d: Overall sustainability report disclosure affects firm value during COVID-19.

Financial Performance and Firm value Before COVID-19

Firm value is closely linked to financial performance, as a firm with robust profitability is typically perceived more favorably by investors and other stakeholders. Financial performance, often assessed using profitability ratios, indicates the efficiency with which a company utilizes its resources to generate returns (Sihotang, Wibowo, & Angela, 2018) ^[22]. Stakeholder theory posits that improved financial performance enhances stakeholder trust, thereby contributing to a stronger corporate image and increased firm value. This relationship is supported by empirical findings from Fadillah and Suryawati (2020) ^[6] and Ilmi, Kustono, and Sayekti (2017) ^[11], who confirm that superior financial performance correlates with higher firm value. Based on these considerations, the final hypothesis is proposed as

H5: Financial performance affects firm value before COVID-19.

Financial Performance and Firm value During COVID-19

Despite the economic uncertainties brought about by the COVID-19 pandemic, investors continued to place considerable emphasis on financial performance when making investment decisions. A strong financial performance during times of crisis is viewed as an indicator of managerial competence and organizational resilience. Companies that are able to maintain or improve financial outcomes during such periods tend to be perceived as more credible and trustworthy by investors, thereby increasing

their attractiveness as investment options. This investor confidence, in turn, contributes to an increase in firm value. Empirical evidence from studies by Fadillah and Suryawati (2020)^[6] and Ilmi, Kustono, and Sayekti (2017)^[11] affirms the significant influence of financial performance on firm value. Based on these considerations, the following hypothesis is formulated

H6: Financial performance affects firm value during COVID-19.

The Mediating Role of Financial Performance in the Relationship Between Sustainability Report Disclosure and Firm value Before COVID-19

Sustainability reporting, which encompasses disclosures on economic, environmental, and social dimensions, serves as a strategic communication tool between companies and stakeholders. Effective sustainability disclosures can enhance stakeholders' trust, as they reflect a company's commitment to responsible business practices. This trust can translate into improved financial performance, as stakeholder support often leads to increased customer loyalty, operational efficiency, and access to capital. Moreover, enhanced financial performance serves as a signal of organizational strength, encouraging further investment and ultimately elevating firm value. Prior studies by Fadillah and Suryawati (2020)^[6], as well as Ilmi, Kustono, and Sayekti (2017)^[11], have provided empirical evidence that financial performance mediates the relationship between sustainability disclosures and firm value. Accordingly, the following hypotheses are proposed

H7a: Financial performance mediates the effect of economic topic disclosure on firm value before COVID-19.

H7b: Financial performance mediates the effect of environmental topic disclosure on firm value before COVID-19.

H7c: Financial performance mediates the effect of social topic disclosure on firm value before COVID-19.

H7d: Financial performance mediates the effect of overall sustainability report disclosure on firm value before COVID-19.

The Mediating Role of Financial Performance in the Relationship Between Sustainability Report Disclosure and Firm value During COVID-19

The onset of the COVID-19 pandemic has heightened investor attention to non-financial performance indicators, particularly those related to sustainability. In this context, the quality and comprehensiveness of sustainability disclosures became critical factors in investment decision-making. Companies that effectively communicate their environmental, social, and economic responsibilities are better positioned to meet investor expectations. However, despite the rising importance of non-financial information, financial performance remains a fundamental consideration due to the heightened uncertainty in the economic environment during the pandemic. As such, financial performance serves as a key mediating variable that translates sustainability efforts into enhanced firm value. The findings of Fadillah and Suryawati (2020)^[6] and Ilmi, Kustono, and Sayekti (2017)^[11] support this mediating role. Based on these insights, the following hypotheses are developed

H8a: Financial performance mediates the effect of economic topic disclosure on firm value during COVID-19.

H8b: Financial performance mediates the effect of environmental topic disclosure on firm value during COVID-19.

H8c: Financial performance mediates the effect of social topic disclosure on firm value during COVID-19.

H8d: Financial performance mediates the effect of overall sustainability report disclosure on firm value during COVID-19.

3. Data and Methods

Data and Sample

The population in this study consists of companies recognized as winners of the Asia Sustainability Reporting Rating (ASRRAT) during the period 2018–2021, comprising a total of 71 companies. The study relies on secondary data derived from both financial and sustainability reports published by these companies. To ensure data availability and comparability, the study excludes firms that are not listed on the Indonesia Stock Exchange (IDX) and those that experienced trading suspensions during the observation period. Following the application of these criteria, the final sample includes 23 companies for the pre-COVID-19 period (2018–2019) and 26 companies for the COVID-19 period (2020–2021). The pre-COVID-19 sample yielded 38 firm-year observations, as eight companies did not publish sustainability reports in the first year of the observation period. Meanwhile, the sample for the COVID-19 period resulted in 52 firm-year observations.

Operational Definitions of Variables

Endogenous latent variables are variables whose values are influenced by other variables within a structural model (Ghozali & Latan, 2015). In the context of this study, financial performance and firm value are identified as endogenous latent variables. Financial performance reflects the extent to which a company effectively utilizes its assets over a specific period to generate profit (Rudianto, 2013)^[20]. This variable is measured through three financial ratios: Net Profit Margin (NPM), Return on Assets (ROA), and Return on Equity (ROE). These three indicators collectively provide a comprehensive assessment of a company's financial performance and are crucial in analyzing the influence of sustainability report disclosures on firm value in this study.

Net Profit Margin (NPM) represents a company's ability to generate net profit from its total sales, indicating how much net income is earned for every dollar of sales revenue (Sherman, 2015). NPM has been widely utilized as a proxy for financial performance in previous studies, including those by Fadillah and Suryawati (2020)^[6], and Ching *et al.* (2017)^[3]. NPM is calculated using the following formula

$$\text{NPM} = \frac{\text{Net Profit After Tax}}{\text{Net Sales}}$$

Return on Assets (ROA) measures how efficiently a firm utilizes its total assets to generate net income. A higher ROA indicates greater effectiveness and productivity in the utilization of assets (Horne & Wachowicz, 2008)^[10]. ROA has been employed in several prior studies as an indicator of financial performance, such as those conducted by Fadillah and Suryawati (2020)^[6], Anna and Dwi R. T. (2019)^[2], Ilmi *et al.* (2017)^[11], Ching *et al.* (2017)^[3], Wijayanti (2016)^[24], and Sejati and Prastiwi (2015)^[21]. The formula for ROA is as follows

$ROA = \text{Net Profit After Tax} / \text{Total Assets}$

Return on Equity (ROE) is another profitability ratio that evaluates the company's ability to generate profit from its shareholders' equity. It serves as a measure of how well the company uses the capital invested by shareholders to produce earnings. ROE is calculated using the following formula

$ROE = \text{Net Profit After Tax} / \text{Shareholders' Equity}$

Exogenous latent variables, or independent variables, are defined as variables that are not influenced by other variables within the structural model (Ghozali & Latan, 2015). In this study, the disclosure of sustainability report topics specifically economic, environmental, social, and overall disclosures is categorized as exogenous latent variables. The sustainability report disclosures examined are based on the Global Reporting Initiative (GRI) Standards. The disclosure of economic topics (EcDI) includes a total of 17 reporting items, environmental topics (EnDI) consist of 32 items, and social topics (SoDI) comprise 40 items. Consequently, the overall sustainability report disclosure (SRDI) encompasses a total of 89 items. The scoring and measurement of EcDI, EnDI, SoDI, and SRDI follow the methodology employed in prior studies such as those by Puspita and Jasman (2020) ^[18], Kusuma and Priantinah (2018) ^[13], Ilmi *et al.* (2017) ^[11], Wijayanti (2016) ^[24], and Sejati and Prastiwi (2015) ^[21]. Each disclosure item receives a score of 1 if disclosed in the sustainability report and a score of 0 if not disclosed. The disclosure indices are then calculated using the following formula

$EcDI, EnDI, SoDI, SRDI = \frac{\text{Number of Items Disclosed}}{\text{Total Number of Items}}$

This measurement approach provides a quantitative assessment of the extent to which companies comply with sustainability disclosure guidelines and serves as a foundation for evaluating the relationship between sustainability reporting and financial or firm value outcomes in this study.

In addition to examining the direct effects, this study also investigates the indirect effect of sustainability report disclosures—both by individual topic (economic, environmental, and social) and overall—on firm value through the mediating role of financial performance. Accordingly, financial performance, previously discussed as an endogenous latent variable, is also employed as a mediating variable in this research. The mediating analysis allows for the assessment of whether financial performance serves as a pathway through which sustainability disclosures influence firm value.

Control variables are incorporated into the model to account for potential confounding factors, thereby ensuring that the relationship between the exogenous and endogenous variables remains unbiased by extraneous influences. By controlling for these variables, the study aims to isolate the specific effects of sustainability report disclosures and financial performance on firm value. In this study, firm size and listed age are utilized as control variables. Firm size is measured using the natural logarithm of total assets, as shown in the following formula: $\text{Firm Size} = \ln(\text{Total Assets})$. Listed age, on the other hand, refers to the number of years a firm has been publicly listed. It is calculated from the year of the company's initial public offering (IPO) to the year in

which the data is sampled, using the formula $\text{Listed Age} = \text{Research Year} - \text{Year of IPO}$

Analytical Methods

This study employs regression analysis with Partial Least Squares Structural Equation Modelling (PLS-SEM) to examine the relationships between sustainability report disclosure, financial performance, and firm value. Descriptive statistics are utilized to summarize the indicators of sustainability report disclosure, financial performance, and firm value. To scrutinize the structural relationships between the variables, the study applies PLS-SEM using SmartPLS version 3 software. The PLS-SEM technique involves two key stages

This study employs both descriptive statistical analysis and Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the research data. Descriptive statistics are utilized to summarize and interpret the indicators of sustainability report disclosure, financial performance, and firm value. To examine the relationships among variables, PLS-SEM is applied using SmartPLS 3 software. This analytical technique enables the assessment of complex relationships between latent constructs, making it suitable for models involving multiple mediating and moderating variables. As part of the PLS-SEM procedure, both the measurement model (to assess the validity and reliability of constructs) and the structural model (to evaluate the hypothesized relationships among variables) are systematically evaluated.

Results

Descriptive Statistics

This section explains the descriptive statistics for the variables examined in this study across the periods before and during the COVID-19 pandemic. The Environmental Disclosure Index (EnDI) recorded a minimum value of 0 in both periods, indicating that some companies in the sample did not disclose environmental-related information. Specifically, companies that omitted environmental disclosures include PT Bank Negara Indonesia (Persero) Tbk and PT Bank Rakyat Indonesia (Persero) Tbk in 2017, PT Elnusa Tbk and PT Wijaya Karya (Persero) Tbk in 2018, and PT Elnusa Tbk again in 2019.

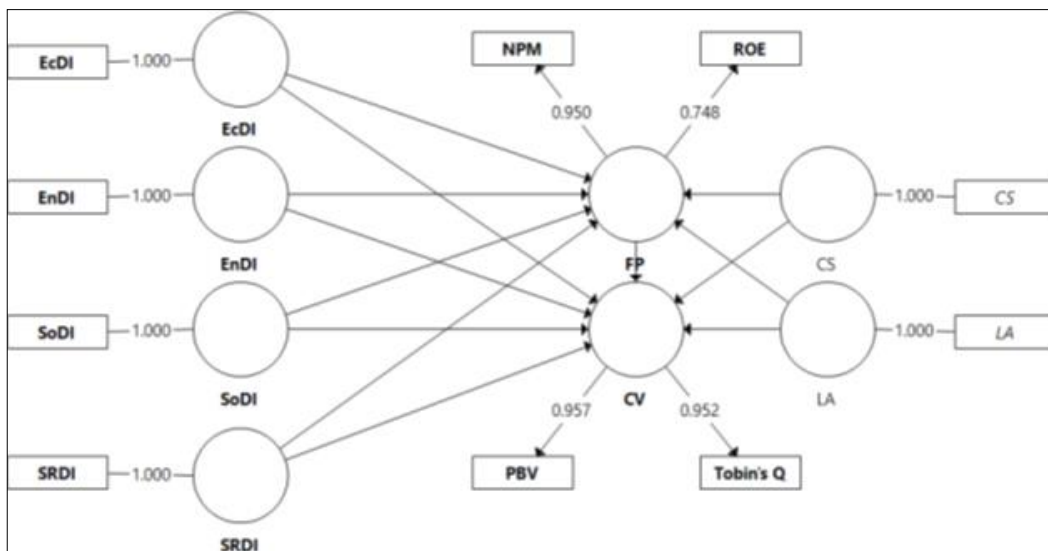
In terms of financial performance, the highest Net Profit Margin (NPM) was achieved by PT Bank Negara Indonesia (Persero) Tbk in 2017, with a value of 0.431. Conversely, the lowest NPM was recorded by PT Bank Bukopin Tbk in 2020 at -0.614. Regarding Return on Assets (ROA), PT Bukit Asam Tbk recorded the highest value of 0.208 in 2018, while the lowest value of -0.099 was observed for PT Bumi Resources Tbk in 2020. Return on Equity (ROE) followed a similar trend, with PT Bumi Resources Tbk achieving the highest ROE of 0.438 in 2018 and recording the lowest ROE of -2.548 in 2020.

For firm value indicators, PT Bank BTPN Syariah Tbk achieved the highest Price-to-Book Value (PBV) ratio of 4.914 in 2020, while PT Bank Bukopin Tbk recorded the lowest value of 0.290 in 2019. The highest Price-to-Earnings Ratio (PER) was 170.180, attained by PT PP Properti Tbk in 2021, whereas the lowest PER, -867.309, was reported by PT Austindo Nusantara Jaya Tbk in 2018. The Tobin's Q indicator showed that PT Indocement Tunggul Prakarsa Tbk had the highest value of 2.695 in 2019, while PT Austindo Nusantara Jaya Tbk recorded the lowest value of 0.653 in 2020.

Evaluation of the Measurement Model

In the initial model evaluation for the pre-COVID-19 period, certain indicators exhibited very low factor loadings, specifically ROA with a loading of -0.062 and PER with a loading of 0.314. Similarly, during the COVID-19 period, the PER indicator showed a low factor loading of 0.066. In accordance with the indicator reliability criteria, these indicators were excluded from the measurement model to improve its reliability. Following the removal of the low-loading indicators, revised models for both periods—before and during COVID-19—are presented in Figures 1 and 2 (Only the improved version is shown here). The revised

models meet the established criteria for internal consistency reliability, convergent validity, and discriminant validity. This is demonstrated by the composite reliability (CR) values exceeding 0.70 for all constructs, indicating satisfactory internal consistency. Additionally, the Average Variance Extracted (AVE) values are above the 0.50 threshold, confirming adequate convergent validity. Furthermore, the cross-loading analysis shows that each indicator loads more strongly on its designated construct than on any other construct, thereby supporting discriminant validity, as suggested by Hair *et al.* (2011)^[9].



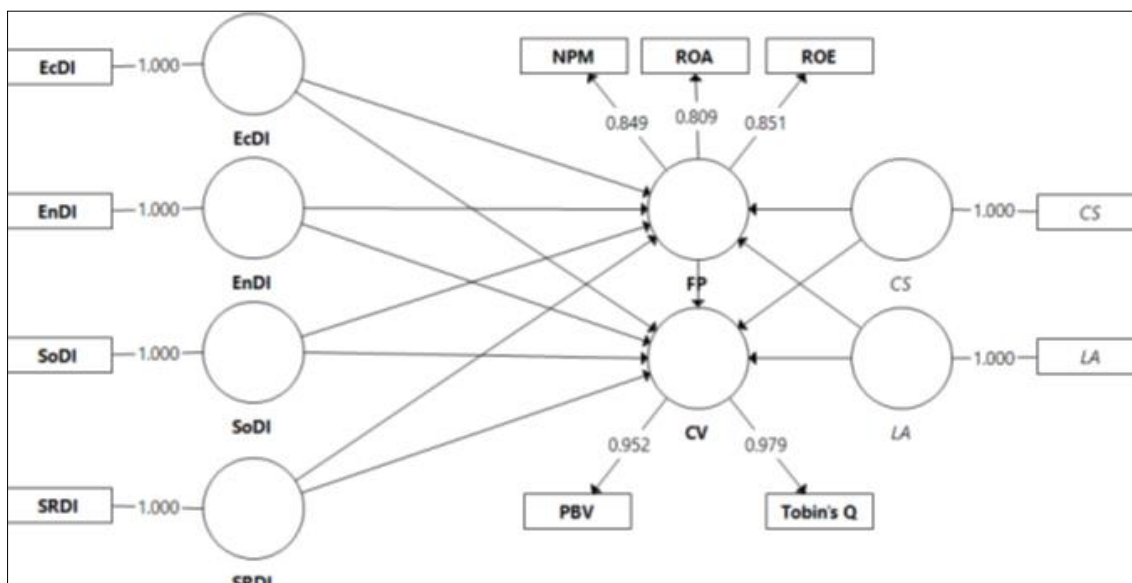
Source: SmartPLS 3, secondary data processed (2023)

Fig 1: Final Research Model: Before COVID-19

Evaluation of the Structural Model

Table 6 presents the results of the structural model evaluation conducted for the periods before and during the COVID-19 pandemic. The coefficient of determination (R^2) indicates that, prior to the pandemic, the exogenous variables accounted for 31.9% of the variance in financial performance and 12.5% of the variance in firm value. In contrast, during the pandemic, the same variables explained 11.5% of the variance in financial performance and 19.9% of the variance in firm value.

in firm value. These results suggest that the explanatory power of the model varied between the two periods, with a notably reduced influence on financial performance during the pandemic. Furthermore, the predictive relevance of the models, as indicated by the Q^2 values, was confirmed by values greater than zero in both periods. This finding implies that the structural models possess acceptable predictive capability, both before and during the COVID-19 pandemic.



Source: SmartPLS 3, secondary data processed (2023)

Fig 2: Final Research Model: During COVID-19

Table 1: Structural Model Evaluation Results: Before and During COVID-19

	R Square	Q ²	R Square	Q ²
Financial Performance (FP)	0.319	0.059	0.115	0.019
Firm value (CV)	0.125	0.026	0.199	0.106

Source: SmartPLS 3, secondary data processed (2023)

Hypotheses Test

The results of the hypothesis testing and a summary of hypothesis acceptance are presented in Table 7. Among the tested relationships, the direct effect of financial performance on firm value during the COVID-19 period (H6) yielded a *t*-statistic exceeding the critical value of 1.96 and a *p*-value below the significance threshold of 0.05. Furthermore, the path coefficient associated with this relationship was found to be positive. These findings indicate that, during the COVID-19 pandemic, financial performance had a statistically significant and positive influence on firm value.

Discussion

The Effect of Sustainability Report Disclosure on Financial Performance Before COVID-19

The findings indicate that, prior to the COVID-19 pandemic, disclosures of economic, environmental, social, and overall sustainability reporting did not have a significant effect on financial performance, as measured by Net Profit Margin (NPM) and Return on Equity (ROE). As a result, hypotheses H1a, H1b, H1c, and H1d are rejected. These results suggest that sustainability report disclosure, in this context, does not inherently contribute to improved financial outcomes. Although legitimacy theory posits that such disclosures enhance public trust and, consequently,

financial performance, the present findings do not support this theoretical assumption.

The descriptive statistics reveal relatively low levels of sustainability disclosure across the sampled firms, which may explain the absence of a measurable financial impact. These results contrast with prior studies by Wijayanti (2016)^[24], Fadillah and Suryawati (2020)^[6], and Ilmi, Kustono, and Sayekti (2017)^[11], but are aligned with the findings of Sejati and Prastiwi (2015)^[21] who also reported no significant relationship between sustainability disclosure and financial performance.

The Effect of Sustainability Report Disclosure on Financial Performance During COVID-19

Similar to the pre-pandemic period, during COVID-19, the disclosure of economic, environmental, social, and overall sustainability information was not found to significantly influence financial performance as measured by NPM, Return on Assets (ROA), and ROE. Thus, hypotheses H2a, H2b, H2c, and H2d are also rejected. These findings suggest that increased disclosure does not necessarily lead to better financial performance, particularly during periods of economic instability.

While the descriptive statistics show an increase in sustainability disclosures during the pandemic, financial performance declined. This discrepancy further implies that external factors, such as macroeconomic uncertainty and pandemic-related disruptions, may play a more substantial role in influencing financial outcomes than sustainability disclosures. These results, therefore, do not support the legitimacy theory and are inconsistent with previous findings from Wijayanti (2016)^[21], Fadillah and Suryawati (2020)^[6], and Ilmi *et al.* (2017)^[11], but are in accordance with Sejati and Prastiwi (2015)^[21].

Table 2: Hypotheses Test

Hipotesis	Original Sample	P Values	Accepted/Rejected	
H1a	EcDI -> FP	6.471	0.709	Rejected
H1b	EnDI -> FP	10.954	0.700	Rejected
H1c	SoDI -> FP	14.506	0.681	Rejected
H1d	SRDI -> FP	-27.159	0.692	Rejected
H2a	EcDI -> FP	-26.941	0.154	Rejected
H2b	EnDI -> FP	-60.325	0.162	Rejected
H2c	SoDI -> FP	-56.908	0.161	Rejected
H2d	SRDI -> FP	125.341	0.161	Rejected
H3a	EcDI -> FV	13.733	0.457	Rejected
H3b	EnDI -> FV	23.494	0.447	Rejected
H3c	SoDI -> FV	28.432	0.454	Rejected
H3d	SRDI -> FV	-55.511	0.452	Rejected
H4a	EcDI -> FV	1.661	0.921	Rejected
H4b	EnDI -> FV	4.096	0.914	Rejected
H4c	SoDI -> FV	3.975	0.912	Rejected
H4d	SRDI -> FV	-82.792	0.198	Rejected
H5	FP -> FV	0.016	0.935	Rejected
H6	FP -> FV	0.312	0.017	Accepted
H7a	EcDI -> FP -> FV	0.106	0.975	Rejected
H7b	EnDI -> FP -> FV	0.179	0.975	Rejected
H7c	SoDI -> FP -> FV	0.237	0.973	Rejected
H7d	SRDI -> FP -> FV	-0.443	0.974	Rejected
H8a	EcDI -> FP -> FV	-8.401	0.217	Rejected
H8b	EnDI -> FP -> FV	-18.811	0.228	Rejected
H8c	SoDI -> FP -> FV	-17.745	0.223	Rejected
H8d	SRDI -> FP -> FV	39.084	0.223	Rejected

Source: SmartPLS 3, secondary data processed (2023)

The Effect of Sustainability Report Disclosure on Firm value Before COVID-19

Prior to the COVID-19 pandemic, sustainability report disclosures—across economic, environmental, social, and aggregated dimensions—did not significantly affect firm value, as measured by Price-to-Book Value (PBV) and Tobin's Q. Therefore, hypotheses H3a, H3b, H3c, and H3d are rejected. These findings imply that enhanced non-financial disclosures did not translate into increased firm valuation by investors. Despite stakeholder theory suggesting that sustainability disclosures cater to the information needs of various stakeholders and thereby influence firm value, the empirical evidence here does not corroborate this. Low average disclosure levels may again be a contributing factor. These results diverge from those of Puspita and Jasman (2020)^[18] and Anna and Dwi R.T. (2019)^[2] but align with Sejati and Prastiwi (2015)^[21], Fadillah and Suryawati (2020)^[6], Kusuma and Priantinah (2018)^[13], and Ilmi *et al.* (2017)^[11].

The Effect of Sustainability Report Disclosure on Firm value During COVID-19

During the pandemic, sustainability report disclosures remained statistically insignificant in influencing firm value, as measured by PBV and Tobin's Q. Accordingly, hypotheses H4a, H4b, H4c, and H4d are rejected. These findings suggest that increased transparency in sustainability reporting does not necessarily translate into higher firm value, even during crisis periods. Although the descriptive statistics reflect increased disclosure and firm value during COVID-19, hypothesis testing shows no significant relationship between the two. This suggests that investors' decisions may have been influenced more by external economic uncertainties and speculative market behavior than by sustainability disclosures. The findings align with those of Sejati and Prastiwi (2015)^[21], Fadillah and Suryawati (2020)^[6], Kusuma and Priantinah (2018)^[18], and Ilmi *et al.* (2017)^[11], while contradicting Anna and Dwi R.T. (2019)^[2] and Puspita and Jasman (2020)^[18].

The Effect of Financial Performance on Firm value Before COVID-19

This study finds that financial performance, as measured by NPM and ROE, did not significantly affect firm value before COVID-19, leading to the rejection of hypothesis H5. These results suggest that even strong financial performance does not automatically translate into higher firm valuation. While financial metrics are typically considered vital by investors, the findings indicate that other factors may also significantly influence investment decisions. The insignificant relationship may also be attributed to the limited sample size. These findings are in contrast with Fadillah and Suryawati (2020)^[6] and Ilmi *et al.* (2017)^[11], but are consistent with Anna and Dwi R.T. (2019)^[2], who also reported no significant relationship between financial performance and firm value.

The Effect of Financial Performance on Firm value During COVID-19

During the COVID-19 period, financial performance (measured via NPM, ROA, and ROE) demonstrated a positive and statistically significant impact on firm value (measured via PBV and Tobin's Q), resulting in the acceptance of hypothesis H6. These findings support

stakeholder theory, indicating that firms with superior financial performance are more likely to be valued highly by investors, particularly during times of economic uncertainty. This result confirms the findings of Ilmi *et al.* (2017)^[11] and Fadillah and Suryawati (2020)^[6], which also identified financial performance as a critical determinant of firm value during crisis conditions.

Mediating Role of Financial Performance Before COVID-19

The analysis reveals that financial performance did not mediate the relationship between sustainability report disclosures (economic, environmental, social, and overall) and firm value before COVID-19. Consequently, hypotheses H7a, H7b, H7c, and H7d are rejected. Given that neither the direct effect of sustainability disclosures on financial performance nor the effect of financial performance on firm value was statistically significant, the mediating role of financial performance is unsupported. This finding does not align with the assumptions of legitimacy or stakeholder theory and is inconsistent with Ilmi *et al.* (2017)^[11], but supports the conclusions of Anna and Dwi R.T. (2019)^[2].

Mediating Role of Financial Performance During COVID-19

Similar to the pre-pandemic period, the study finds that financial performance did not mediate the impact of sustainability report disclosure on firm value during COVID-19, resulting in the rejection of hypotheses H8a, H8b, H8c, and H8d. Although financial performance positively influenced firm value during this period, the absence of a significant relationship between sustainability disclosures and financial performance negated any potential mediating effect. These findings do not support legitimacy or stakeholder theory and align with Anna and Dwi R.T. (2019)^[2]. However, they differ from Ilmi *et al.* (2017)^[11], who identified financial performance as a significant mediator.

Conclusion, Limitations and Future Research

This study concludes that financial performance significantly influences firm value during the COVID-19 period; however, such a relationship was not observed in the pre-COVID-19 period. Furthermore, the analysis indicates that economic, environmental, social, and overall sustainability report disclosures do not have a significant effect on either financial performance or firm value, both before and during the COVID-19 pandemic. Additionally, financial performance was found to be an ineffective mediating variable in the relationship between sustainability report disclosures (across all dimensions) and firm value in both time periods.

These findings suggest that, despite regulatory mandates, sustainability report disclosure has yet to serve as a decisive factor in stakeholder decision-making. Over the years, the increasing trend of sustainability reporting—aligned with the requirements of the Financial Services Authority Regulation (POJK No. 51/POJK.03/2017)—indicates enhanced regulatory compliance. This is also reflected in the growing number of companies recognized as winners of the Asia Sustainability Reporting Rating (ASRRAT) from 2018 to 2021, signifying improved alignment with the Global Reporting Initiative (GRI) Standards. Nonetheless,

stakeholder responsiveness to these disclosures appears to remain limited.

It is essential to recognize that sustainability reporting should extend beyond regulatory compliance. It should function as a strategic communication tool that reflects a company's commitment to sustainable development and the broader environmental, social, and governance (ESG) agenda. In the future, increased stakeholder awareness and engagement with sustainability reporting are anticipated to play a more substantial role in driving investment decisions and supporting the achievement of the Sustainable Development Goals (SDGs).

This study is subject to certain limitations. The sample is restricted to companies recognized as ASRRAT winners from 2018 to 2021, which may constrain the generalizability of the findings due to the relatively small sample size. Furthermore, the analytical method employed does not require testing for normality, and as such, the distributional characteristics of the data remain unverified. Future research could address these limitations by extending the observation period to capture long-term trends and causal relationships. Additionally, comparative studies involving companies that are both ASRRAT awardees and non-awardees would provide further insights into the influence of sustainability reporting practices across different corporate segments.

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