Does Green Accounting, Intellectual Capital, and Dividend Policy Affect Corporate Value?

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Abstract. Corporate value is a valuation conveyed by investors based on the performance of the company. In other words, corporate value reflects the overall market condition of the company. This assessment is important to understand the prospects and determine its reputation. Previous research has mainly focused on how profitability affects corporate value and is often used by the PROPER rating from the Ministry of Environment and Forestry (KLH) to measure environmental performance. Tobin's Q is used in this research to quantify the value of a company, as it has the advantage of taking market conditions into account. The objective of this study is to ascertain how corporate value is affected by dividend policy, intellectual capital, and green accounting. The sample is 18 companies of energy sector listed on the Indonesia Stock Exchange (IDX) from 2020 to 2022 and utilized panel data analysis. The results indicated that dividend policy, intellectual capital, and green accounting impact corporate value. More specifically, dividend policy has a negative impact while green accounting has a significant beneficial effect. However, there is no distinct connection between intellectual capital and company value.

Keywords: Corporate value, Dividend policy, Intellectual capital, green accounting, Signaling theory.

1 INTRODUCTION

Energy can be said to be the world's wheel for running the economy. This is because the activities that humans do every day require energy. Coal, petroleum and natural gas are the main energy sources widely used for industrial, transportation, and household purposes (cnc, 2022). This is why the Indonesian Stock Exchange (IDX) has an energy sector with companies dealing in fossil fuels and alternative energy sources, thereby enabling the authorities to ensure transparency and compliance for stakeholders.

However, companies in the energy sector will inevitably impact the environment and social surroundings in their operational areas. This is due to the necessity of mining and dredging to obtain raw materials such as coal, natural gas, and oil, which may have an

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adverse effect on the environment (CNN Indonesia, 2021). Based on Kahn et al. research in 2019, said the long-term effects of environmental change on the economy are expected to lower corporate productivity, investment, and profitability as well as lower the global gross domestic product (GDP) per capita by 7% by the end of the next century, if preventive measures are not adopted Due to this problem, the government of Indonesia joined the Paris Agreement on the National Action Plan to Reduce Greenhouse Gas by Presidential Decree No. 61 in 2011, along with 195 other nations from the United Nations. Thus, environmental factors are now taken into consideration by investors, corporations, the government, and other parties when making business decisions (Muhammad & Aryani, 2021).

Therefore, more investors rely on companies to provide annual and sustainability reports with both financial and non-financial information. If these reports show promising prospects, investors are likely to be attracted to the company, highlighting the importance of signaling theory (Ihsani et al., 2021). The signal is important data that demonstrates management's attempts to live up to owner expectations and suggests the business has superior prospects than its competitors (Lestari et al., 2021). The more complete the information disclosed, the more reasons investors will have to invest in the company, thereby increasing corporate value.

Corporate value is a valuation given by investors based on the success and performance of the company. It reflects the company's market condition and is important for understanding its prospects and reputation (Astari et al., 2023). In 2021-2022, Indonesia decided to reduce the use of coal-fired steam power plants (PLTU). The decision to euthanize the coal-fired power plant is a result of the Indonesian government's efforts for a fair and affordable energy transition, enabling businesses to develop sustainable energy and reduce carbon emissions. This resulted in investors pulling out their shares in non-renewable energy companies, as they were concerned about the finite nature of fossil resources (Meilanova, 2022; Purwanti, 2022).

Additionally, Indonesian consumers are beginning to see the value of living sustainably, with 86% of them making environmental changes to their daily routines, and 74% choosing socially conscious companies. This is proven by Kantar (2018) which shows that from 2019 to 2020, the number of Indonesian customers who care about green products increased by 112% (Handayani, 2021). According to signaling theory, companies that successfully disclose green accounting can increase their value (Anggita et al., 2022).

But reality isn't always as theory indicates. There are always unforeseen circumstances or inadequate preparation. One factor that either strengthens or weakens a nation's economic activity is political stability. Economic and regulatory changes are examples of policy shocks that can impact businesses and investors (Idris et al., 2020). A phenomenon requiring more study arose when the Indonesian government altered policies to achieve Net Zero

Emissions by 2060 by decommissioning PLTUs early. There are discrepancies between theory and empirical observation. Coal mining company PT Indika Energy has successfully reported green accounting and progressively raised its standards. However, its corporate value, which was determined using Tobin's Q as a proxy, has decreased every year. Sukmadilaga et al., (2023) stated that green accounting is a kind of accounting that, in a single report format, describes how a corporation integrates social and environmental advantages into financial or economic business decisions. Astari et al. (2023) and Anggita et al. (2022) found that green accounting positively impacting the value of corporation, whereas Gantino et al., (2023) found that green accounting negatively correlates with corporate value.

The second factor that can influence corporate value is intellectual capital. Intellectual capital (IC) is a value that a company has regarding the knowledge, skills, ideas and business training of its employees (Subaida & Mardiati, 2018). Intellectual capital is an asset that needs to be managed well because it has the potential to create competitive advantages (Gantino et al., 2023). Nguyen & Doan (2020) and Suzan & Ramadhani (2023) found that intellectual capital has a significant effect on corporate value in a positive direction. On the other hand, Putra & Ratnadi (2021) and Lestari & Suryani (2020) found that intellectual capital does not have a significant influence on corporate value.

Since the company's primary objective is to expand and thrive in a highly competitive market, it is imperative that it manages its profits well. Failure to do so may adversely affect the company's retained earnings, making it more challenging for the company to make future investments (Husna & Satria, 2019). Previous research, like Ovami & Nasution, (2020) suggested that dividend policy, measured by dividend payout ratio positively influences corporate value. Conversely, Kumshe et al., (2021) found that dividend policy negatively affects corporate value.

Thus, research on green accounting, intellectual capital, and dividend policy is crucial because these factors significantly influence corporate value. Discrepancies between theory and practice exist, particularly when signaling theory suggests that higher quality in these areas should lead to higher corporate value. Additionally, the Indonesian government's move to decommission coal-fired power stations will profoundly impact the energy sector, affecting not only corporations but also investors and creditors. Understanding these dynamics is urgent for making informed decisions in the evolving energy landscape.

Lastly, previous research has generally focused on how profitability can affect corporate value. Furthermore, most of the literature on green accounting has, as far as we know, used the Ministry of Environment and Forestry's (KLH) PROPER grade to assess how well businesses manage their environmental performance. However, research that used more a comprehensive assessment, such as the 82 green accounting disclosure items consisting of 6

categories about environmental management based on Global Reporting Initiative (GRI) 3 and 3.1 that developed by Braam et al. in his research at 2016, is still limited. By integrating intellectual capital and dividend policy in this literature, we aim to ascertain its impact on the value of energy sector firms on the Indonesian Stock Exchange (IDX) in between 2020 and 2022.

Therefore, the primary objective of this study is to investigate how intellectual capital, dividend policy, and green accounting affect corporate value in part and simultaneously. This research intends to advance knowledge in corporate finance and green accounting by offering empirical support and a thorough explanation that can be used as recommendations for investors and management of the company.

2 LITERATURE REVIEW

2.1 Signaling Theory

Signaling theory first appeared in 1973, put forward by Michael Spence in his research journal entitled 'Job Market Signaling'. In 2002, Spence provided an example of how job seekers may attempt to behave in a way that reduces information asymmetry, which can impede an organization's capacity to select applicants. By illustrating that high-quality prospective employees will try to differentiate themselves from low-quality prospects through signals in the form of higher education. The acts that firm management does to give investors instructions about how management presents the company's prospects are known as signals (Brigham & Houston, 2019).

The association between signaling theory and this research is that management aims to send information or signal to investors through the information in their annual and sustainability reports. When investors receive these positive signals, such as the value of green accounting disclosures. the value of intellectual capital, and the amount of dividends paid, they are more likely to respond favorably and make strategic investment decisions, thereby increasing the company's value. Companies today are not solely focused on seeking profits; they also aim to enhance their reputation and prioritize the welfare of all members and shareholders. Increasing corporate value is crucial because a higher corporate value directly correlates with improved welfare for these stakeholders. (Maharani & Handayani, 2021).

So, implementing green accounting can help businesses increase their value and reputation in a growing market because environmental cost disclosures pay attention to the company's environmental conditions that attract investors (Astari et al., 2023). And then, companies can enhance their value by leveraging intellectual capital. When a company integrates intellectual capital into its business processes, it creates opportunities to gain a competitive advantage, thereby improving overall performance (Suzan & Ramadhani, 2023).

Also, Brigham & Houston (2019) stated that investors perceive changes in dividends as a signal of management's outlook on future earnings. Management typically possesses superior information about the company's prospects compared to general shareholders, influencing investor perceptions.

2.2 Green accounting on corporate value

Green accounting is a contemporary concept in accounting that supports environmental initiatives by recognizing, calculating, measuring, and disclosing companies' environmental contributions. It also reports on environmental costs. In an era of growing environmental awareness, implementing eco-friendly accounting practices can attract consumers (Anggita et al., 2022; Gantino et al., 2023). Previous research by Anggita et al. (2022) stated that green accounting is crucial for assessing the costs and effectiveness of environmental protection. Businesses must maintain records and reports on their environmental activities to enhance corporate value and achieve sustainable development. And Astari et al., (2023) discovered that putting green accounting into practice greatly increases corporate value. This is because it ensures the long-term sustainability of the organization by fostering a positive image and trust with stakeholders, which in turn increases corporate value indirectly.

Furthermore, sustainable natural resources and favorable environmental conditions have a positive impact on company sustainability, which increases corporate value and profits. A higher environmental performance rating and complete disclosure of sustainability are interpreted favorably by investors and prospective purchasers. According to signaling theory, to improve their reputation and influence shareholder investment decisions, businesses typically provide thorough information and high environmental performance ratings, which eventually boosts corporate value or market performance (Ihsani et al., 2021).

H1 : Green accounting has an influence on corporate value

2.3 Intellectual capital on corporate value

Although John Kenneth Galbraith mentioned "intellectual capital" originally in 1969, Tom Stewart popularized it in 1991. Human capital, structural capital, and customer capital are the three primary parts of intellectual capital. Suzan & Aini (2022), concluded that intellectual capital, when properly managed, is an asset in the form of knowledge that adds value to the company, providing a competitive advantage in the global market. Human capital (HC), one element of intellectual capital, has a very favorable effect on business performance, including the company's market value. Companies can gain a competitive edge from HC, but it needs to be backed up by real assets. HC improves employee competencies (tacit

knowledge), which stimulates creativity and makes knowledge exchange easier when it's documented.

The support of structural capital and capital employed enhances the role of human capital (HC) in organizational success. Companies can enhance human capital by providing training in innovative marketing techniques, product creation, and consumer engagement tactics. Additionally, it is essential to maintain and update the skills of employees with nonstop producing knowledge and keeping up with the latest developments (Yadiati et al., 2022).

Previous study conducted by Suzan & Ramadhani (2023) and (Nguyen & Doan, (2020) stated that the use of intellectual capital creates added value because it supports operations and provides returns to shareholders. This leads investors to favor shares in companies with higher intellectual resources over others. In the current era, businesses can create economic value by managing their intangible assets, which include the knowledge, skills, ideas, and business training possessed by their employees. Based on the previous explanation, the better the company manages its intellectual capital, the higher the corporate value will be.

H2 : Intellectual capital has an influence on corporate value.

2.4 Dividend policy on corporate value

A dividend policy is a corporate's decision on whether to distribute profits to shareholders or retain them for reinvestment. Dividends can indicate the company's stability and prospects (Ovami & Nasution, 2020). Distributing dividends is a way to increase share prices; when a company pays dividends, its value and share price typically rise. A dividend policy also involves determining the portion of income that can be paid as dividends and what can be retained. When a business distributes high dividends, shareholders view the company's performance more favorably. As an outcome, the company's value increases (Selvy & Esra, 2022). Since surviving and thriving in a fiercely competitive commercial world is the primary objective. Businesses need to be able to control their profits, whether they are kept in the company or given out as dividends (Husna & Satria, 2019).

According to this explanation, academics believe that a dividend policy may contribute to a company's worth. The management's growing confidence in the company's potential for future profits led to the dividend rise. Consequently, raising dividends will inform investors about the company's profitability and enhance the company's perceived success because of rising value. As a result, investors will make financial investments that may increase the value of the company. Research by Selvy & Esra (2022) and Ovami & Nasution (2020) supports this. By paying dividends, companies can indicate to the market that their earnings are steady and predictable, thus the firm may be seen as more reliable and have a reduced cost of financing (Kuswanto, 2023). As a result, experts believe that implementing

a dividend policy will increase corporate value. The better companies control their dividend policy, the bigger the value of the corporation.

H3 : Dividend policy has an influence on corporate value.

Figure 1 shows the research's conceptual framework as follows

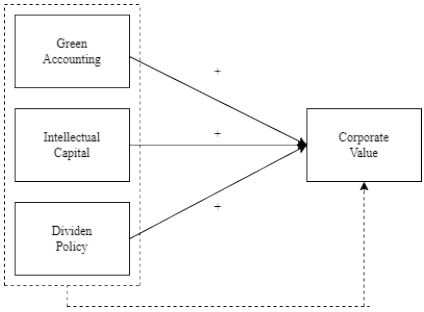

Figure 1. Conceptual framework of the research

3 RESEARCH METHODOLOGY

3.1 Data and samples

A method of quantitative research is utilized in this work. Secondary data is the source for finding the information for this research that will be taken from Indonesian Stock Exchange webpage and related companies' official website. The 76 energy industry companies that were registered on the Indonesia Stock Exchange amid 2020 and 2022 constituting the population for research.

The sample method for this study will be purposive sampling. With this method, samples are selected according to predetermined standards, guaranteeing that the selected businesses fulfill these prerequisites. The following standards were used to choose the sample for this research: (a) Companies in the energy industry that are listed for the 2020–2022 period on the Indonesia Stock Exchange (IDX); and (b) Companies in the energy sector that make their 2020–2022 comprehensive annual reports and sustainability reports available. Just 18 of the 76 companies that were considered for this research met the requirements, yielding a total of 54 observations.

3.2 Variable measurement

Corporate Value

The price a potential buyer would pay for the company's current performance and prospects is another way to define corporate value. Tobin's Q Ratio will be used to calculate the corporate value variable in this study. A market-based metric known as Tobin's Q is a ratio that expresses a company's worth in relation to the value of its material and intangible assets. This ratio also indicates how effective and efficient the company utilizes all its resources (Dzahabiyya et al., 2020).

Green Accounting

Green accounting, also known as environmental management accounting, is the process of determining, quantifying, evaluating, and reporting expenses related to business operations that impact the environment. Its main goals are to decrease the negative effects of corporate operations on the environment and to generate thorough data on these expenses (Sebastian, 2022).

In this study, green accounting will be assessed using an environmental disclosure index based on the Global Reporting Initiative (GRI), developed by Braam et al. (2016) and derived from Clarkson et al. (2008). This index incorporates GRI 3 and GRI 3.1 standards and includes 82 disclosure items categorized into six main groups (A1 to A6). These categories cover aspects such as governance and management structures related to environmental protection (A1), credibility of environmental disclosure (A2), environmental performance indicators (A3), environmental costs (A4), vision and strategy statements related to environmental issues (A5), and environmental initiatives (A6). Specifically, category A3 contains 10 items with a maximum score of 60.

In this category, the environmental performance assessment scale for each item is given a score of 0 to 6 with a score of 1 if the item meets the following: (1) The company presents performance data; (2) Data presented against rivals/peers; (3) Data is presented in trend analysis or based on previous periods; (4) Data is presented against company targets; (5) Data is presented in absolute and normal form; (6) Data is presented at various levels, such as business units, plants, and geographic segments. For all items in the remaining categories, a score of 1 will be assigned if the information is disclosed, and 0 if it is not.

Intellectual Capital

Intellectual capital is an asset comprising intelligence and skill regarding the employees of the companies that requires to be managed effectively to make a competitive advantage. Knowledge-based companies typically employ individuals with high-quality skills, innovative capabilities, and expertise (Gantino et al., 2023). The Value-Added Intellectual Coefficient (VAIC) will be measured for intellectual capital. Public made the discovery of this measurement in 1998, and it was refined in 2004. Because the figures used in this measurement is derived from accounts reported in the company's financial reports and is based on the appraisal of performance and the creation of value for both tangible and intangible assets, it is a straightforward instrument to use when assessing intellectual capital (R. K. Astari & Darsono, 2020). VAIC is measured based on the sum of the resources owned,

using three elements: Value Added Capital Employed, Value Added Human Capital, and Structural Capital Value Added (Suzan & Ramadhani, 2023).

Dividend Policy

The decision made at the General Meeting of Shareholders (GMS) regarding whether the profits of the year will be allocated wholly or partially to shareholders or to be retained for future investment, is known as dividend policy (Laksmi & Budiartha, 2020). In this research, the dividend payout ratio (DPR) will be used to measure dividend policy. This ratio is the percentage of dividends per share to earnings per share. The scope for this ratio value holds great relevance to the company, serving as an indicator of the company's commitment to allocating net income towards dividend distribution (Kuswanto, 2023; Soewignyo, 2020).

Operationalization of variables

Table 1. Variable Measurement

Variables	Measurements	a-priori Expectation
Dependent Variable Corporate Value	$Tobin's\ Q = \frac{Market\ Capitalization. + Total\ Liabilites}{Total\ Assets}$ (Dzahabiyya et al., 2020)	
Independent Variables Green Accounting (GA)	$Green\ Accounting = \frac{The\ total\ score\ is\ obtained}{Maximum\ score\ (82)}$ (Braam et al., 2016)	Positive
Intellectual Capital (IC)	$VAIC = VACA + VAHU + STVA$ Notes: 1. VAIC (*Value Added Intellectual Coefficient*) 2. VACA (*Value Added Capital Employed*) 3. VAHU (*Value Added Human Capital*) 4. STVA (*Structural Capital Value Added* (Suzan & Ramadhani, 2023)	Positive

Variables	Measurements	a-priori Expectation
Dividend Policy (DPR)	$Dividend\ Payout\ Ratio = \frac{Dividend\ per\ share}{Earning\ per\ share}$ (Soewignyo, 2020)	Positive

Regression model

Panel data regression will be employed to establish the direction of influence between the independent variables and the dependent variable. This approach is appropriate because the data combines both time series and cross-sectional elements. The following is the panel data regression analysis model that will be used in this research:

$$Y = \alpha + \beta 1GA + \beta 2IC + \beta 3DPR + \varepsilon. \quad (1)$$

4 RESULT

4.1 Descriptive Analysis

This research utilized a dataset of 54 observations collected from 18 energy companies that met the sampling criteria on the Indonesia Stock Exchange over a 3-year period. A ratio measurement scale was employed in the study. The following table presents the results of the descriptive statistical analysis, which will be used to describe the conditions of all variables.

Table 2. Descriptive Statistic Results

Variable	Min.	Max.	Mean	Std. Dev.	Obs.
Tobin's Q	0.496	2.425	1.045	0.397	54
GA	0.122	0.878	0.507	0.179	54
VAIC	0.330	49.966	6.767	8.199	54
DPR	0.010	1.857	0.281	0.373	54

Source: processed by the researchers' (2024)

According to Tobin's Q, the companies' values have an average of 1.045 and a standard deviation of 0.397, as indicated by the above table. PT Pelayaran Tamarin Samudra Tbk. recorded the highest value of 2,245 in 2023, while PT Mitrabahtera Segara Sejati had the lowest value of 0.496 in 2020. Green accounting, measured, using disclosure items based on GRI 300, had an average score of 0.507 with a standard deviation of 0.179. PT Adaro

Energy Indonesia Tbk. recorded the highest score, disclosing 87.8% of items in 2023, and PT Pelayaran Tamarin Samudra had the lowest score, disclosing only 12.2% in 2020. This indicates that the little energy sector companies in this study exhibit variation in corporate value and green accounting disclosure scores.

Conversely, intellectual capital, proxied by the Value-Added Intellectual Coefficient (VAIC) had an average of 6.767 with a standard deviation of 8.199. PT Adaro Energy Indonesia Tbk. recorded the highest total added value of intellectual capital at 49,966 in 2023. The dividend policy, measured by the dividend payout ratio, had an average of 0.281, with a standard deviation of 0.373. PT Petrosea Tbk. recorded the highest dividend payout value at 185.7% in 2023. This suggests that the energy sector companies in this study show significant variations in intellectual capital and dividend payout ratio.

4.2 Regression results

Goodness of fit test

Table 3. Chow Test Result

	Chow Test		
Effect Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	19.593961	(17,33)	0.0000
Cross-section Chi-Square	129.945151	17	0.0000

Source: processed by the researchers' (2024)

To determine whether the model is ideally suited for assessing panel data, the fixed effect model or the common effect model. The probability value from the Chi-Square Cross-Section should be examined to evaluate the Chow test results. If the probability value exceeds 0.05, the common effect model is chosen. On the other hand, the fixed effect model is selected if the probability value is smaller than 0.05 (Pandoyo & Sofyan, 2018). According to table 4, the chi-square value is less than 0.05, indicating that the fixed effect model is selected for the panel data. Consequently, further testing, such as the Hausman test, needs to be conducted.

Table 4. Hausman Test Result

	Hausman Test		
Test Summary	**Chi-Sq Statistic**	**Chi-Sq d.f.**	**Prob.**
Cross-section random	16.096617	3	0.0011

Source: processed by the researchers' (2024)

The Hausman test establishes which model is better suited for panel data estimation: the random effect model or the fixed effect model. The cross-section random's probability value serves as the basis for the decision. The fixed effect model is chosen if the value is less than 0.05, while the random effect model is selected if it is more than 0.05 (Pandoyo & Sofyan, 2018). The results show a probability value of 0.0011, which is less than 0.05, indicating that the fixed effect model (FEM) is the chosen panel data regression model.

Table 5. Multicollinearity Test Result

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.016084	55.16372	NA
GA	0.018242	37.16348	1.236428
VAIC	0.001248	10.20942	1.127671
DPR	0.000329	9.335487	1.153832

Source: processed by the researchers' (2024)

The multicollinearity test evaluates the correlation between independent variables in a regression model. A healthy model must not show multicollinearity. This can be identified using the Variance Inflation Factor (VIF) value. If any independent variable has a value exceeding 10, it indicates multicollinearity. (Ghozali, 2018). In this study, the centered VIF values for all independent variables are less than 10, indicating no correlation between them.

Table 6. Heteroscedasticity Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.066317	0.050807	1.305281	0.2008
GA	-0.040709	0.054109	-0.752365	0.4572
VAIC	-0.004798	0.014151	-0.339031	0.7367
DPR	0.002985	0.007262	0.411024	0.6837

Source: processed by the researchers' (2024)

In a regression model, the heteroscedasticity test determines if the variance of residuals varies between data. The Glejser test is used in this study to identify

heteroscedasticity. In the event that the probability value exceeds 0.05, heteroscedasticity is not present in the data (Basuki & Prawoto, 2017). Table 7 shows that the independent variables have probability values more than 0.05, indicating that the data is did not have a heteroscedasticity problems.

Panel Data Regression Result

Table 7. The Result of Panel Data Regression (Fixed Effect Model)

Variable	Coefficient	Std. Error	t-statistic	Prob.
C	1.069745	0.126821	8.435081	0.0000
GA	0.294101	0.135063	2.177506	0.0367*
VAIC	0.068001	0.035324	1.925091	0.0629
DPR	-0.036915	0.018127	-2.036470	0.0498*
Effects Specification				
Cross-section fixed (dummy variables)				
R^2	0.937710	**Mean dependent var**		1.045407
Adjusted R^2	0.899959	**S.D. dependent var**		0.396708
S.E of regression	0.125476	**Akaike info criterion**		-1.028101
Sum squared resid	0.519650	**Schwarz criterion**		-0.254608
Log likelihood	48.75874	**Hannan-Quinn criter.**		-0.729795
F-Statistic	24.83905	**Durbin-Watson Stat**		3.125881
Prob(F-statistic)	0.000000*			

Source: processed by the researchers' (2024)

4.3 Hypotheses testing

Partial Testing (T-Test)

The T test, or partial test, evaluates the impact of each independent variable on the dependent variable individually. Decisions are based on each variable's probability value: if the probability value is greater than 0.05, the variable does not affect the dependent variable; if it is less than 0.05, the variable does have an effect. In addition, the direction of the effect is indicated by the coefficient: a positive coefficient indicates a positive effect, while a negative coefficient indicates a negative effect.

Simultaneous Testing (F-Test)

In this study, a significance level of 0.05 was used for decision-making. If the probability value of the F-statistic is less than 0.05, the independent variables collectively influence the dependent variable. The Prob (F-statistic) value from the results of this test is 0.000000, indicating a significant influence. These simultaneous testing results are aligned with earlier research done by Gantino et al. (2023), Nguyen et al. (2021), and Suzan & Ramadhani (2023).

Coefficient Determination (R^2) Testing

The coefficient of determination (R^2) calculates how well the model explains the dependent variable. In this study, the independent variables, green accounting, intellectual capital, and dividend policy, account for 90% of the variation in corporate value, with the residual 10% attributed to other factors not included in the study. An R^2 value closer to one indicates better explanatory power. The adjusted R-squared value of 0.899959, or 90%, demonstrates that these variables explain 90% of the variation in corporate value for energy sector companies listed on the Indonesian Stock Exchange between 2020 and 2022

5 DISCUSSION

5.1 Green accounting, intellectual capital, and dividend policy on corporate value

The results of the regression analysis, as shown in table 7, indicate that the Prob (F-statistic) value is 0.000000, which is smaller than 0.05. This implies that the independent variables in this research, green accounting, intellectual capital, and dividend policy, altogether influence the corporate value of energy sector companies on the Indonesia Stock Exchange (IDX) between 2020 and 2022. These findings align with the hypothesis based on signaling theory, suggesting that green accounting, intellectual capital, and dividend policy can serve as both positive and negative signals for investors, affecting corporate value. Furthermore, these results support Astari et al. (2023), Gantino et al. (2023), Nguyen & Doan (2020), and Nguyen et al., (2021) research, which also found that green accounting, intellectual capital, and dividend policy impact corporate value.

5.2 Green accounting on corporate value

Green accounting, or environmental management accounting, focuses on identifying, measuring, assessing, and disclosing the costs regarding environmental activities. The goal is to decrease the environmental effect on the company's operations and to transparently report these environmental costs (Gantino et al., 2023). The poor quality of green accounting or sustainability disclosures leads to vague information being implied to investors and potential investors (Ihsani et al., 2021).

According to the regression test results in table 7, green accounting positively affects corporate value, as shown by its coefficient value of 0.294101. The probability value of green accounting is 0.0367, which is less than 0.05. This demonstrates that, for the 2020–2022 timeframe, green accounting has a favourable effect on the valuation of energy sector companies on the Indonesia Stock Exchange (IDX).

Disclosure of green accounting by companies is very useful for decision-making. By disclosing all internal and external environmental costs through green accounting, businesses can enhance their value in developing markets. This is because environmental cost disclosure reflects the company's commitment to environmental sustainability, which attracts investor interest (Astari et al., 2023). This supports the signaling theory suggests.

The findings of this research align with those of Astari et al. (2023) and Anggita et al. (2022) which indicates that green accounting positively affects corporate value. Companies that implement green accounting are seen as having a strong sense of responsibility towards society and the environment. Proper implementation leads to detailed records and reports of environmental activities, aiming to increase corporate value and achieve sustainable development. Consequently, the disclosure of environmental costs can boost investor and consumer confidence in assessing companies.

Firms with adequate disclosures on ESG information, such as environmental management or green accounting, typically exhibit better governance, an eco-friendlier environment, and sustainability-based development. They benefit from lower earnings volatility and easier access to reasonably priced products as a result. The signaling theory contends that a company's high profitability because of enhanced disclosure adds value to the business, supports the impact of this disclosure on corporate value. A profitable company deliberately sends this signal to the market through information that is effective, well-perceived, and difficult for lower-quality companies to imitate (Igbinovia & Agbadua, 2023).

The outcome of this research does not align with Gantino et al. (2023) findings, which state that green accounting has a negative effect on corporate value. Instead, this research shows that green accounting positively affects corporate value.

5.3 Intellectual capital on corporate value

Intellectual capital represents the value of employee knowledge, abilities, ideas, and business training that are not recorded on the financial balance sheet. In the modern era,

companies can generate economic value through the intangible assets embedded in their products (Nguyen & Doan, 2020). Intellectual capital is an asset that needs to be managed well because it has the potential to create competitive advantages. In this research, intellectual capital is measured using the Value-Added Intellectual Coefficient (VAIC). This measurement method, introduced by Pulic in 1998 and revised in 2004, is relevant because it combines performance evaluation and value creation from both tangible and intangible assets (Astari & Darsono, 2020).

Table 7 shows that intellectual capital did not have a significant effect on corporate value, with a coefficient value of 0.068001. However, the probability value of intellectual capital is 0.0629, greater than 0.05. This implies that intellectual capital will not significantly affect the value of energy sector companies on the Indonesia Stock Exchange (IDX) during the 2020–2022 period.

The results of this research reject the hypothesis that intellectual capital, based on signaling theory, can positively affect corporate value. This finding contrasts with the research by Suzan & Ramadhani (2023) and Nguyen & Doan (2020). However, it aligns with the studies by Putra & Ratnadi (2021) and Lestari & Suryani (2020), which suggest that intellectual capital does not significantly influence corporate value. This is because companies may not effectively manage and optimize their intellectual capital to increase their value. Additionally, it indicates that investors do not consider the contribution of intellectual capital when assessing a company due to the lack of global regulations or standards for disclosing intellectual capital in financial or annual reports.

5.4 Dividend policy on corporate value

Dividend policy is the choice made by a business to either reinvest its profits or distribute them to shareholders. This decision will be made at the General Meeting of Shareholders (GMS), determines if the profits will be fully or partially distributed as dividends or kept as retained earnings for future investments (Laksmi & Budiartha, 2020). Since a company's main goal is to grow and survive in a competitive business environment, it must manage its profits well. Balancing retained earnings for investment and distributing dividends is crucial because it affects the company's ability to invest in the future (Husna & Satria, 2019).

According to Table 7, the dividend policy has a negative impact on company value, as indicated by its coefficient value of -0.036915. A dividend policy has a probability value of 0.0498, which is marginally less than

0.05. This shows that, for the 2020–2022 period, the value of energy sector companies on the Indonesia Stock Exchange (IDX) is negatively affected by dividend policy in a statistically significant way.

The results of this research align with the findings of Kumshe et al. (2021) and Nguyen et al. (2021), which states that dividend policy negatively affects corporate value. This is because distributing too many dividends can negatively impact company equity,

particularly retained earnings, which is essential for investment capital in subsequent years. Shareholders are generally more concerned with investing in the company's prospects to continually increase its value. Thus, this research rejects the hypothesis that a stable dividend payout ratio, based on signaling theory, provides a positive signal for investors, encouraging them to invest in the company and thereby increasing its value. Instead, the findings indicate that distributing too many dividends negatively impacts company equity and retained earnings, which are crucial for future investment.

6 CONCLUSION AND RECOMMENDATION

The main objective for this research is to ascertain how intellectual capital, dividend policy, and green accounting affect the value of energy sector companies that are on the Indonesian Stock Exchange in 2020-2022. Furthermore, this study found that dividend policy, intellectual capital, and green accounting all had simultaneous effects on corporate value based on panel data regression analysis. However, when considered separately, each variable has a distinct effect. Green accounting has a major positive impact on corporate value. Dividend policy, on the other hand, negatively impacts corporate value. In the meantime, corporate value is not significantly affected by intellectual capital.

Based on the results, green accounting can positively affect corporate value because companies that implement it are perceived as highly responsible towards society and the environment. Proper implementation results in comprehensive environmental records and reports, which aim to enhance corporate value and promote sustainable development. As a result, disclosing environmental costs boosts investor and consumer confidence. According to signaling theory, these disclosures send a positive signal to the market, highlighting the company's profitability and commitment to sustainability, thus adding value to the company.

Furthermore, intellectual capital does not affect corporate value because companies might not manage or optimize it effectively to enhance their value. Moreover, investors do not consider intellectual capital when evaluating a company, partly due to the absence of global regulations or standards for its disclosure in financial reports. Lastly, dividend policy negatively impacts corporate value because distributing excessive dividends depletes company equity, especially retained earnings vital for future investment capital. Shareholders typically prioritize investing in the company's prospects to consistently enhance its value. Consequently, this research challenges the hypothesis that a stable dividend payout ratio signals positively to investors, prompting them to invest and increase corporate value. Instead, it shows that excessive dividend distribution harms company equity and retained earnings, crucial for future growth.

This study is far from perfection and still has several limitations that need to be considered for further research. First, because companies were required to disclose both annual reports and sustainability reports during the research period, the sample for this study consisted of only 18 companies in the energy industry. This restriction can make the results less generalizable. To improve the results' robustness and generalizability, larger sample sizes should be considered in future research. For the second, it might be beneficial for future study to distinguish between the three elements of intellectual capital to determine which one is most important in terms of adding value to the company. Numerous factors remain to be investigated to determine which best influences corporate value.

Lastly, the findings of this study can help investors, especially those in the energy industry, make informed decisions when buying or selling stocks. In addition, this study illustrates the impact of green accounting, intellectual capital, and dividend policy on corporate value, and provides insights to management to improve these areas to create added value.

REFERENCES

1. Astari, R. K., & Darsono. (2020). Pengaruh Intellectual Capital Terhadap Kinerja Perusahaan. Diponegoro Journal of Accounting, 9, 1–10. http://ejournal-s1.undip.ac.id/index.php/accounting
2. Astari, T. A., Laurens, S., Wicaksono, A., & Sujarminto, A. (2023). Green Accounting and Disclosure of Sustainability Report on Firm Values in Indonesia. E3S Web of Conferences, 426. https://doi.org/10.1051/e3sconf/202342602024
3. Basuki, A. T., & Prawoto, N. (2017). Analisis Regresi Dalam Penelitian Ekonomi & Bisnis (Dilengkapi Aplikasi SPSS & Eviews). PT Rajagrafindo Persada.
4. Braam, G. J. M., Uit De Weerd, L., Hauck, M., & Huijbregts, M. A. J. (2016). Determinants of corporate environmental reporting: The importance of environmental performance and assurance. Journal of Cleaner Production, 129, 724–734. https://doi.org/10.1016/j.jclepro.2016.03.039
5. Brigham, E. F., & Houston, J. F. (2019). Fundamentals of Financial Management (15th ed.). Cengage.
6. CNN Indonesia. (2021, March 15). Efek Tambang Batu Bara yang Merusak Kesehatan dan Lingkungan . Cnnindonesia.Com. https://www.cnnindonesia.com/teknologi/20210315081452-199-617419/efek- tambang-batu-bara-yang-merusak-kesehatan-dan-lingkungan
7. Dzahabiyya, J., Jhoansyah, D., & Deni Muhammad Danial, R. (2020). Analisis Nilai Perusahaan Dengan Model Rasio Tobin's Q. In Jurnal Riset Akuntansi dan Keuangan Dewantara (Vol. 4, Issue 1). http://ejournal.stiedewantara.ac.id/index.php/JAD/issue/view/49
8. Gantino, R., Ruswanti, E., & Widodo, A. M. (2023). Green Accounting And Intellectual Capital Effect On Firm Value Moderated By Business Strategy. Jurnal Akuntansi, 27. https://doi.org/10.24912/jm.v27i1.1118
9. Ghozali, I. (2018). Aplikasi Analisis Multivariate dengan Program IBM SPSS 25. Badan Penerbit Universitas Diponegoro.

10. Gischa, S. (2022, November 14). Sumber Energi Minyak Bumi dan Gas. Kompas.Com. https://www.kompas.com/skola/read/2022/11/14/180044069/sumber-energi-minyak-bumi-dan-gas
11. Handayani, I. (2021, June 11). Kepedulian Masyarakat Produk Ramah Lingkungan Naik 112%. Investor.Id. https://investor.id/lifestyle/251356/kepedulian-masyarakat-produk-ramah-lingkungan-naik-112
12. Husna, A., & Satria, I. (2019). Effects of Return on Asset, Debt to Asset Ratio, Current Ratio, Firm Size, and Dividend Payout Ratio on Firm Value. International Journal of Economics and Financial Issues, 9(5), 50– 54. https://doi.org/10.32479/ijefi.8595
13. Idris, A. A., Bala, H., & Suleiman, N. (2020). Dividend policy and political uncertainty: Does firm maturity matter? Jurnal Dinamika Akuntansi Dan Bisnis, 7(2), 139–150. https://doi.org/10.24815/jdab.v7i2.16789
14. Igbinovia, I. M., & Agbadua, B. O. (2023). Environmental, Social, and Governance (ESG) Reporting and Firm Value in Nigeria Manufacturing Firms: The Moderating Role of Firm Advantage. Jurnal Dinamika Akuntansi Dan Bisnis, 10(2), 149–162. https://doi.org/10.24815/jdab.v10i2.30491
15. Ihsani, M. A., Firmansyah, A., & Estutik, R. S. (2021). Market Response to Companies Sustainability Disclosure and Environmental Performance in Indonesia. Jurnal Dinamika Akuntansi Dan Bisnis, 8(2), 197–214. https://doi.org/10.24815/jdab.v8i2.21630
16. Kahn, M. E., Mohaddes, K., Ng, R. N. C., Pesaran, M. H., Raissi, M., & Yang, J.-C. (2019). Long-Term Macroeconomic Effects of Climate Change: A Cross-Country Analysis.
17. Kantar. (2018). Purpose in Asia: Consumers in Asia want brands to stand up for local causes. Kantar.Com. Kuswanto, R. (2023). Tax Avoidance and Dividend Policy: Evidence from Indonesian State-Owned Enterprises. Jurnal Dinamika Akuntansi Dan Bisnis, 10(2), 199–212. https://doi.org/10.24815/jdab.v10i2.30037
18. Lestari, B. D., & Suryani, A. W. (2020). Firm's Value Exploration: The Impact Of Intellectual Capital and Net Working Capital. Jurnal Dinamika Akuntansi, 12(2), 152–164. https://doi.org/10.15294/jda.v12i2.25932
19. Lestari, T. U., Putri, K. P., & Devi, M. C. (2021). The Influence of XBRL Adoption on Financial Reporting Timeliness: Evidence from Indonesian Banking Industry. Jurnal Dinamika Akuntansi Dan Bisnis, 8(2), 181–196. https://doi.org/10.24815/jdab.v8i2.21335
20. Maharani, P., & Handayani, S. (2021). Pengaruh Green Accounting pada Nilai Perusahaan Sektor Pertambangan. Edumaspul: Jurnal Pendidikan, 5, 220–231.
21. Meilanova, D. R. (2022, December 21). Kaleidoskop 2022: Manuver Luhut Cs "Suntik Mati" PLTU. Bisnis.Com. https://ekonomi.bisnis.com/read/20221221/44/1610594/kaleidoskop-2022-manuver-luhut-cs-suntik-mati- pltu
22. Modu Kumshe, H., Abba, M., Umar Musa, A., & Musa Yakubu, K. (2021). Effect of Dividend Policy on Firm Value of Listed Deposit Money Banks in Nigeria. In Kashere Journal of Accounting and Finance (Vol. 1, Issue 1).
23. Muhammad, G. I., & Aryani, Y. A. (2021). The Impact of Carbon Disclosure on Firm Value with Foreign Ownership as A Moderating Variable. Jurnal Dinamika Akuntansi Dan Bisnis, 8(1), 1–14. https://doi.org/10.24815/jdab.v8i1.17011
24. guyen, A. H., & Doan, D. T. (2020). The impact of intellectual capital on firm value: Empirical evidence from Vietnam. International Journal of Financial Research, 11(4), 74–85. https://doi.org/10.5430/ijfr.v11n4p74

25. Nguyen, A. H., Pham, C. D., Doan, N. T., Ta, T. T., Nguyen, H. T., & Truong, T. Van. (2021). The Effect of Dividend Payment on Firm's Financial Performance: An Empirical Study of Vietnam. Journal of Risk and Financial Management, 14(8). https://doi.org/10.3390/jrfm14080353
26. Ovami, D. C., & Nasution, A. A. (2020). Owner: Riset dan Jurnal Akuntansi Pengaruh Kebijakan Dividen Terhadap Nilai Perusahaan yang Terdaftar dalam Indeks LQ 45. Owner: Riset Dan Jurnal Akuntansi, 4. https://doi.org/10.33395/owner.v4n2
27. Pandoyo, & Sofyan, M. (2018). Metodologi Penelitian Keuangan dan Bisnis. In Media.
28. Peraturan Presiden (Perpres) Nomor 61 Tahun 2011 Tentang Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca, Pub. L. No. 61, Peraturan Presiden (Perpres) (2011).
29. Purwanti, T. (2022, November 16). Kabar Emiten Terkini, Baca Dulu Kalau Mau Cuan. CNBC Indonesia. https://www.cnbcindonesia.com/market/20221116060244-17-388325/kabar-emiten-terkini-baca-dulu- kalau-mau-cuan
30. Putra, I. N. W. A., & Ratnadi, N. M. D. (2021). Intellectual Capital and Its Disclosure on Firm Value. International Journal of Finance & Banking Studies (2147-4486), 10(1), 86–95. https://doi.org/10.20525/ijfbs.v10i1.1108
31. Santi Dharmastri Laksmi, I. A., & Budiartha, I. K. (2020). Pengaruh Kebijakan Dividen terhadap Nilai Perusahaan dengan Kebijakan Hutang sebagai Variabel Moderasi. E-Jurnal Akuntansi, 30(12), 3041. https://doi.org/10.24843/eja.2020.v30.i12.p04
32. Sebastian, M. (2022). A Study On Green Accounting: Concept And Its Importance. 10, 2320–2882. www.ijcrt.org
33. Selvy, S., & Esra, M. A. (2022). Pengaruh Kebijakan Dividen Terhadap Nilai Perusahaan Dengan Kebijakan Hutang Sebagai Variabel Intervening Pada Perusahaan Yang Terdaftar Di Indeks LQ 45 Periode 2015 - 2019. Jesya: Jurnal Ekonomi & Ekonomi Syariah, 5(2), 1252–1263. https://doi.org/10.36778/jesya.v5i2.734
34. Soewignyo, T. I. (2020). Analysis of the Effect of Profitability, Solvability, and Dividend Policy on Banking Firm Value. In Human Behavior, Development and Society (Vol. 21, Issue 1).
35. Subaida, I., & Mardiati, N. E. (2018). Effect of Intellectual Capital and Intellectual Capital Disclosure on Firm Value. Journal of Applied Management (JAM), 16. https://doi.org/10.21776/ub.jam.2018.016
36. Sukmadilaga, C., Winarningsih, S., Yudianto, I., Lestari, T. U., & Ghani, E. K. (2023). Does Green Accounting Affect Firm Value? Evidence from ASEAN Countries. International Journal of Energy Economics and Policy, 13(2), 509–515. https://doi.org/10.32479/ijeep.14071
37. Suzan, L., & Aini, C. (2022). The Influence of Intellectual Capital and Company Size On Financial Performance (Study on Banking Subsector Companies Listed on the Indonesia Stock Exchange in 2017-2020). Proceedings of the 3rd Asia Pacific International Conference on Industrial Engineering and Operations Management.
38. Suzan, L., & Ramadhani, N. I. (2023). Firm Value Factors: The Effect Of Intellectual Capital, Managerial Ownership, And Profitability. Jurnal Akuntansi, 27(3), 401–420. https://doi.org/10.24912/ja.v27i3.1487
39. Wenni Anggita, Ari Agung Nugroho, & Suhaidar. (2022). Carbon Emission Disclosure And Green Accounting Practices On The Firm Value. Jurnal Akuntansi, 26(3), 464–481. https://doi.org/10.24912/ja.v26i3.1052
40. Yadiati, W., Prasojo, P., Listyorini, I., Rofiqah, I., & Putra, R. N. A. (2022). Human Capital, Quality of Sharia Supervisory Board and Maqasid Shariah Based Performance: Cross Country

Evidence. Jurnal Dinamika Akuntansi Dan Bisnis, 9(2), 261–280. https://doi.org/10.24815/jdab.v9i2.26740.