FINANCIAL PERFORMANCE DETERMINANTS MODERATED BY COMPANY SIZE: THE CASE OF PALM OIL PLANTATION SUB-SECTOR IN INDONESIA

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Abstract - *This study aims to analyze the effects of Crude Palm Oil Price (CPOP), Corporate Social Responsibility (CSR), Leverage (DER), and Enterprise Risk Management Disclosure (ERMD) on corporate financial performance (ROA), with Firm Size as a moderating variable. Employing a quantitative approach, the study utilized data from a population of 28 palm oil plantation companies listed on the Indonesia Stock Exchange (IDX) in 2024. Using a purposive sampling technique, the research sample consisted of 15 companies that met the criteria of publishing a sustainability report during the 2019-2023 period. The regression results indicate that CPOP, CSR, and ERMD have no significant effect on ROA. However, DER was found to have a significant negative effect on financial performance. Furthermore, the moderation analysis reveals that Firm Size significantly and positively moderates the effect of DER on ROA. These findings suggest that while high debt can generally be a burden, larger firms possess the ability to manage leverage effectively, turning it into a driver of financial performance.*

Keywords: *financial performance, CPO price, corporate social responsibility, leverage, enterprise risk management disclosure, firm size.*

I.   INTRODUCTION

Financial performance serves as a key indicator reflecting a company's ability to effectively manage its resources to generate profit and ensure business sustainability. Information regarding financial performance is not only relevant for management as a tool to evaluate the effectiveness of strategic and operational policies, but it also forms the basis for decision-making for investors, creditors, and other stakeholders in assessing the company's future prospects and competitiveness (Brigham & Houston, 2019). Thus, understanding the determinants of financial performance is a crucial aspect, especially in strategic sectors that play a significant role in the national economy.

The palm oil plantation industry is one such sub-sector with a significant role. Indonesia is known as the world's largest producer and exporter of Crude Palm Oil (CPOP), contributing over 50% to global trade (Budiman & Hidayat, 2020). This industry is not only the largest foreign exchange contributor in the agricultural sector but also plays a vital role in creating employment for millions of workers (Budiman & Hidayat, 2020). In 2023, the palm oil sub-sector contributed more than USD 31 billion in foreign exchange, far surpassing the contributions of migrant workers, tourism, and textile industries, thereby positioning it as one of the main pillars in maintaining Indonesia's trade balance stability (Putri, 2024). This fact underscores the strategic importance of the palm oil plantation sub-sector in both an agricultural context and as a pillar of national economic resilience.

PROBLEM AND RESEARCH GAP

Empirical evidence, however, indicates that the financial performance of companies in the Indonesian palm oil plantation sub-sector has experienced fluctuations in recent years. Profitability, measured by ROA, was at a low level of around 2–3 percent in 2019 due to weakening global CPOP prices (Syamsudin & Lubis, 2021). This condition was further exacerbated by the COVID-19 pandemic in 2020, which suppressed export demand, leading some companies to record negative ROA (Syamsudin & Lubis, 2021). A significant increase occurred in 2021 along with the rise in international CPOP prices, with an average ROA reaching 8.53 percent; however, the trend weakened again in 2022–2023, with the average ROA declining to around 4–5 percent (Mutasowifin et al. 2022). This fact suggests that there is a problem with the financial performance of the palm oil sub-sector.

Various factors influence a company's financial performance. Commodity prices, in this study CPOP (HCPO), are believed to affect financial performance (Wahyuni et al. 2021). Corporate Social Responsibility (CSR) is an important aspect, given the scrutiny the palm oil industry often faces regarding environmental and social issues. The implementation of CSR is seen as a way to enhance legitimacy, strengthen reputation, and maintain relationships with stakeholders, although research findings on the effect of CSR on profitability show mixed results. Endri (2021) found that CSR had a positive but insignificant effect on ROA. However, firm size was proven to significantly and positively moderate the relationship between CSR and financial performance. This means that CSR itself is not always a direct driver of profitability, but its impact is more pronounced in larger companies due to factors such as reputation, public exposure, and capital strength.

On the other hand, leverage, generally measured by the Debt to Equity Ratio (DER), is another factor that can potentially influence performance. From an Agency Theory perspective, debt can function as a disciplinary mechanism, but an excessively high level of leverage can suppress profitability. The same applies to Enterprise Risk Management Disclosure (ERMD), which plays a role in sending a positive signal to investors about a company's ability to manage risk. A high level of ERMD is believed to increase market trust, as evidenced by a study by Oktaviani & Kurniasih (2025) which found that ERMD had a significant positive effect on a company's financial performance. Nevertheless, the effectiveness of ERMD on profitability has not shown consistency, making it a topic of academic debate.

Firm size (SIZE) is often seen as a variable that can moderate the effect of these factors on a company's financial performance. Larger companies with higher assets generally have broader access to funding, better business diversification capabilities, and greater operational efficiency, so they tend to be more stable in generating profit. However, previous research also shows conflicting findings, where not all large companies are able to optimize their assets to increase profitability.

The inconsistencies in the results of previous studies, as found by Misbach et al. (2021) and Pratiwi et al. (2021), indicate that the effects of HCPO, CSR, DER, and ERMD on financial performance still need to be re-examined. A study by Kusuma & Sari (2020) found that leverage (DER) had a significant negative effect on ROA, as a high interest burden suppressed net income. Conversely, firm size had a significant positive effect on ROA, indicating that large companies are better able to utilize resources and economies of scale to increase profitability. Additionally, Utami & Puspita (2022) showed that CSR had no significant effect on ROA, while ERMD and firm size had a significant positive effect on ROA. This indicates that risk management disclosure and firm size increase stakeholder trust and financial performance, whereas CSR has not had a direct impact on short-term profitability. Therefore, this study is focused on analyzing the effects of HCPO, CSR, DER, and ERMD on financial performance, as measured by Return on Assets (ROA), with firm size as a moderating variable. The research was conducted on companies in the palm oil plantation sub-sector listed on the Indonesia Stock Exchange.

LITERATURE REVIEW.

Agency Theory explains the relationship between a principal (the owner) and an agent (the manager) within an organization (Hardman, 2024). In modern corporations, the separation of ownership and control gives rise to a potential conflict of interest known as the agency problem. This conflict emerges when managers do not fully act in the owners' best interests due to differing personal preferences, goals, or incentives (Eisenhardt, 1989).

Stakeholder Theory posits that a firm's financial performance is significantly influenced by how it manages its relationships with its stakeholders (Freeman et al., 2021). Strong financial performance is considered a result of healthy relationships with all stakeholders, such as customers, employees, investors, and the community. Conversely, ignoring stakeholder interests can damage a company's reputation, trigger conflicts, and ultimately have a negative impact on its financial performance. Therefore, financial performance is a reflection of a company's ability to balance and meet the needs of all its stakeholders.

Financial Performance is understood as an analysis conducted to determine the extent to which a company has executed its financial practices correctly and in accordance with prevailing rules (Longdong et al., 2021). This definition emphasizes adherence to accounting principles and financial standards as the basis of measurement.

The Crude Palm Oil Price (CPOP) is a highly influential external variable affecting the financial performance of palm oil plantation sub-sector companies. Fluctuations in global palm oil prices determine the size of a company's revenue, thereby affecting its ability to generate profit. When CPOP increases, palm oil companies' revenues tend to rise, which improves their profitability ratios (often measured by ROA). A decline in CPOP can suppress profit margins, especially if accompanied by high operational costs (Wahyuni et al., 2021).

Corporate Social Responsibility (CSR) is a managerial concept that emphasizes the importance of balancing the achievement of economic performance with a concern for social and environmental aspects. CSR is viewed as a company's commitment to conducting business ethically, acting responsibly toward the environment and society, and contributing to sustainable development. Thus, CSR not only focuses on achieving economic profit but also considers long-term business sustainability through the triple bottom line approach: people, planet, and profit (UNIDO, n.d.; Elkington, 1998).

Leverage measures the extent to which a company uses external financing sources in the form of debt to fund its operational and investment activities. Leverage reflects a company's capital structure as well as the financial risk it faces if it is unable to meet its debt and interest payment obligations (Kasmir, 2018).

Enterprise Risk Management (ERM) is an integrated and systematic approach to identify, analyze, respond to, and monitor risks that may hinder the achievement of an organization's objectives. Enterprise Risk Management Disclosure (ERMD) is information conveyed by a company to its stakeholders regarding its risk management policies and strategies in its annual report or sustainability report.

Firm Size (SIZE) indicates the scale of a company and is measured by its total assets, sales, tax burden, net profit, and other factors (Brigham et al. 2019). Dewantari et al. (2020) use a company's total assets as a reflection of firm size. A larger company has a greater amount of assets and capital (Tunjung, 2019).

HYPOTHESIS DEVELOPMENT

The Effect of CPO Price (HCPO) on Financial Performance.

HCPO is an external factor that influences the revenue and profitability of palm oil plantation sub-sector companies. As an export commodity, HCPO is affected by price fluctuations in the global market, international demand, trade policies, and currency exchange rates. When HCPO rises, a company's revenue can increase, which has a positive implication for its overall financial performance. H1: HCPO has a positive effect on Financial Performance.

The Effect of Corporate Social Responsibility (CSR) on Financial Performance

CSR is a form of corporate social responsibility for the impacts of its business activities on both the environment and society. In the context of public companies, especially those in the palm oil plantation sector, CSR is an important instrument for maintaining social legitimacy, building a positive image, and strengthening relationships with stakeholders. The proper implementation of CSR will lead to community acceptance, ensuring smooth company operations and potentially improving a firm's financial standing H2: CSR has a positive effect on Financial Performance.

The Effect of Leverage (LEV) on Financial Performance.

Leverage is a measure of the extent to which a company uses debt as a source of funding in its capital structure. The appropriate use of leverage can provide benefits by increasing investment capacity without having to sacrifice equity ownership. However, a higher leverage ratio increases financial risk and interest burdens, which can ultimately lead to a decrease in the company's ability to generate profit. H3: LEV has a negative effect on Financial Performance.

The Effect of Enterprise Risk Management D\isclosure (ERMD) on Financial Performance

ERMD is a form of corporate transparency in informing the public about its risk management policies, strategies, and processes. ERMD not only reflects adherence to good corporate governance principles but also indicates the extent to which a company understands and anticipates various risks that can affect business performance. In an industry with high complexity and uncertainty like palm oil plantations, risk management is a

crucial aspect for a company to maintain financial stability and business sustainability. The better the ERMD implementation, the better the company's risk management, which can help achieve its performance targets. H4: ERMD has a positive effect on Financial Performance.

The Moderating Role of Firm Size (SIZE) on the Effect of HCPO on Financial Performance

SIZE reflects a company's resource capacity, operational scale, and resilience to market pressure. Larger companies generally have greater financial flexibility, broader access to financing, and better efficiency compared to smaller companies. Therefore, when HCPO declines, larger companies tend to be more capable of absorbing losses and stabilizing their performance, while smaller companies are more vulnerable to financial pressure. In other words, firm size can strengthen or weaken the effect of HCPO fluctuations on financial performance. H5: SIZE moderates the effect of HCPO on Financial Performance.

The Moderating Role of SIZE on the Effect of CSR on Financial Performance

Larger companies generally have stronger resources, a more structured management system,and higher external pressure to implement and disclose CSR activities comprehensively. Thus, the effect of CSR on financial performance is expected to be stronger in larger companies compared to smaller ones. H6: SIZE moderates the effect of CSR on Financial Performance.

The Moderating Role of SIZE on the Effect of Leverage on Financial Performance

Larger companies generally have a greater capacity to manage financial risk, obtain loans at more competitive interest rates, and maintain a stable cash flow. In conditions of high leverage, larger companies are better able to handle the debt burden due to their broad access to funding and flexible capital structure. Therefore, firm size can influence the impact of leverage on financial performance. H7: SIZE moderates the effect of Leverage on Financial Performance.

The Moderating Role of SIZE on the Effect of ERMD on Financial Performance

The larger a company is, the more capable it is of managing the risks it faces and disclosing that risk management to demonstrate good governance. Better risk management prevents a company from facing adverse conditions, allowing performance to be maintained or even improved. H8: SIZE is able to moderate the effect of ERMD on Financial Performance.

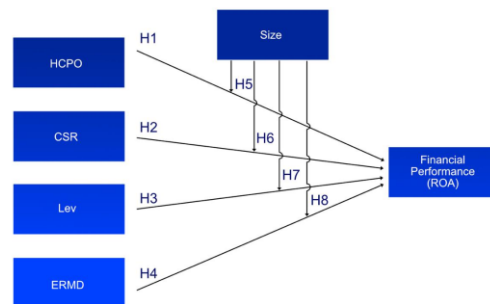The research model developed in this study is presented in Figure 1 below.

Figure 1. Research Model

II. METHOD Research Design

This study is a quantitative research with a causality design. The data for this study are secondary, consisting of annual cross-sectional and time-series data. The research population consists of palm oil plantation companies listed on the Indonesia Stock Exchange (IDX), totaling 28 companies in 2024. Using a purposive sampling technique, the research sample comprised companies that met the following criteria: 1) having audited financial statements and 2) submitting sustainability reports for the 2019–2023 period. Based on these criteria, 15 companies were selected as the research sample.

Table 1 presents the operational definitions, measurements, and references for each variable used in this study.

Table 1. Operational Definitions of Variables

No.	Variable	Measurement
1.	*Return on Assets* (ROA) (Brigham & Houston, 2019)	$ROA = \dfrac{\text{Earning After Tax}}{\text{Total Asset}}$
2.	Harga CPO (HCPO) (Misbach et al. 2021)	$HCPO_t = Ln\,(CPO\_Price)$
3.	Corporate Social Responsibility (CSR) (Li et al. 2023)	$\text{CSR Index} = \dfrac{\sum \text{Score of Disclosed Items}}{\text{Total Disclosable Items}}$
4.	*Leverage (DER)* (Kasmir, 2018)	$DER = \dfrac{\text{Total Equity}}{\text{Total Liability}}$
5.	Enterprise Risk Management Disclosure (ERMD) (Khoerunnisa et al. 2024)	$\text{ERMD Score} = \dfrac{\sum \text{Disclosed Aspects of ERM}}{\text{Total ERM Aspects Used}}$
6.	*Company Size* (SIZE) (Hartono, 2017)	$SIZE = Ln\,(\text{Total Asset})$

III. FINDINGS AND DISCUSSION

The research problem was addressed by employing a Moderated Regression Analysis (MRA) approach on panel data. Three panel data regression models were utilized to determine the effects of the independent variables and the moderating role of the moderator variable. The initial step of the analysis was to select the most appropriate panel model.

Tabel 2. Panel Data Model Selection for Equation 1

Test	Criteria	Result	Decision
Chow	Cross-section Chi-square	0.2064 > 0.05	CEM
Hausman	Cross-section random	0.6701 > 0.05	REM
LM	Breusch-Pagan	0.9950 > 0.05	CEM

Table 2 presents the results of the best model selection, indicating that the Common Effect Model (CEM) is the most appropriate for Equation 1. Furthermore, the goodness-of-fit test results confirm that Equation 1 is a good fit (Table 3).

Table 3. Results of Panel Data **Model 1**

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Keterangan
C	-26.2428	10.6625	-2.4612	0.0163	
HCPO	7.0911	4.3416	1.6333	0.1069	
CSR	0.1307	0.0683	1.9139	0.0597	*
DER	-1.4943	0.7379	-2.0249	0.0467	**
ERMD	0.1185	0.0990	1.1969	0.2354	
R-squared	0.2265				
Adj R-squared	0.1823				
F-statistic	5.1239				
Prob(F-statistic)	0.0011				

Note: * significant in 10%
       ** significant in 5%

Table 3 shows that **Equation 1** is a suitable regression equation. The **F-statistic** value is **5.1239** with a **p-value** of **0.0011** (<0.01). The **R-squared** value of **0.2265** and the **Adjusted R-squared** value of **0.1823** indicates that the explanatory power of Equation 1 for the effects of HCPO, CSR, DER, and ERMD is **0.2265 (22.65%)**. This suggests that many other factors still influence the financial performance of palm oil companies. Based on the results in Table 3, the regression equation for Model 1 can be written as follows:

ROA = 7.0911(HCPO) + 0.0597(CSR) - 1.4943(DER) + 0.1185(ERMD)

The variables that have an effect on the financial performance of palm oil plantation companies are CSR and DER. An increase in CSR implementation leads to an increase in the company's financial performance. Conversely, an increase in corporate debt leads to a decrease in the company's financial performance.

Table 4. Panel Data Model Selection for Equation 2

Test	Criteria	Result	Decision
Chow	Cross-section Chi-square	0.2180 > 0.05	CEM
Hausman	Cross-section random	0.7985 > 0.05	REM
LM	Breusch-Pagan	0.9417 > 0.05	CEM

Consistent with the results for Equation 1, the best panel data model selection for Equation 2 also yielded the **Common Effect Model (CEM)** as the optimal model. With the inclusion of **SIZE** as an independent variable, the model's explanatory power increased to 22.9%

Table 5. Panel Data Model 2 Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Ket.
C	-19.3338	18.0899	-1.0688	0.2889	
HCPO	6.9767	4.3725	1.5956	0.1151	
CSR	0.1349	0.0693	1.9482	0.0555	*
DER	-1.4933	0.7421	-2.0123	0.0481	**
ERMD	0.1238	0.1002	1.2357	0.2208	
SIZE	-0.4323	0.9116	-0.4742	0.6369	
R-squared	0.228997				
Adj R-squared	0.173127				
F-statistic	4.098764				
Prob(F-statistic)	0.002568				

Based on the results presented in Table 5, Equation 2 is an appropriate regression equation. The **F-statistic** is 4.0987 with a **p-value** of 0.0025 (<0.01). The **R-squared** value is 0.2289 and the **Adjusted R-squared** is 0.1731, which the regression equation for Model 2 is as follows:

$$ROA = 6.9767(HCPO) + 0.1349(CSR) - 1.4933(DER) + 0.1238(ERMD) - 0.4323(SIZE)$$

Consistent with Equation 1, the variables with a significant effect on the financial performance of palm oil companies are CSR and DER, with the same direction of effect as in the previous equation. SIZE was found to have no significant effect.

The selection of the best panel model for Equation 3 was ambiguous (see Table 6), as each model appeared to be the best. Therefore, by referring to the results of Equations 1 and 2, it was concluded that the most appropriate model for Equation 3 is the Common Effect Model (CEM).

Table 6. Selection of the Best Model for Equation 3

Test	Criteria	Result	Decition
Chow	Cross-section Chi-square	$0.0198 < 0.05$	FEM
Hausman	Cross-section random	$0.8476 > 0.05$	REM
LM	Breusch-Pagan	$0.6919 > 0.05$	CEM

The inclusion of the interaction variable in equation 3 improved the model's ability to explain the factors influencing the financial performance of palm oil companies. The coefficient of determination increased to 33.73%.

Table 7. Results of the Test for Equation 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Ket.
C	153.8375	172.5320	0.8917	0.3759	
HCPO	42.1875	49.2084	0.8573	0.3944	
CSR	0.0986	0.9239	0.1067	0.9153	
DER	-69.6493	27.8057	-2.5049	0.0148	
ERMD	0.6837	1.7887	0.3822	0.7035	
SIZE	-12.1537	10.7546	-1.1301	0.2626	
HCPO_SIZE	-1.9124	2.9608	-0.6459	0.5206	
CSR_SIZE	0.0101	0.0533	0.1887	0.8509	
DER_SIZE	4.3351	1.7670	2.4534	0.0168	**
ERMD_SIZE	-0.0454	0.1062	-0.4274	0.6705	
R-squared	0.337324				
Adj R-squared	0.245569				
F-statistic	3.676348				
Prob(F-statistic)	0.000912				

Based on the results presented in Table 7, Equation 3 is a suitable regression model. **The F-statistic** value is 3.6763 with a **p-value** of 0.0009 (<0.01). The **R-squared** value of 0.3373 and the **Adjusted R-squared** value of 0.2455 indicate that the model explains the regression equation for Model 3 can be written as follows:

$$ROA=42.1875(HCPO)+0.0986(CSR)−69.6493(DER)+0.6836(ERMD)−12.1537(SIZE)$$

It can be observed that **SIZE**, as a moderating variable, was only able to moderate the effect of **DER** on ROA (financial performance).

DISCUSSION.

The Effect of HCPO on ROA

It was found that HCPO has no significant effect on the ROA of palm oil sub-sector companies. This indicates that fluctuations in HCPO in the international market do not necessarily affect the companies' financial performance. Therefore, although a rise in HCPO could theoretically increase a company's revenue, its impact is still reduced by factors outside a company's control, such as export-import policies, high production costs, currency volatility, and environmental regulations. These findings support the research by Nurcahyani (2021), who studied the financial performance of Indonesian palm oil companies in the 2016-2019 period. Lubis et al. (2020) also showed in their research on the plantation sub-sector from 2011–2019 that the Rupiah exchange rate had a significant negative effect on stock returns, while the BI rate had a significant positive effect. However, CPOP's role did not directly boost performance; instead, it weakened the effect of the exchange rate and the BI rate on the plantation sub-sector's stock returns. This suggests that while international CPOP prices fluctuate, their impact on the performance of Indonesian palm oil companies is often mitigated by external factors such as downstreaming policies, export duties, and global market dynamics.

The Effect of CSR on Financial Performance

The hypothesis testing results show that CSR has a positive and insignificant effect on the ROA of palm oil plantation sub-sector companies. These findings indicate that CSR implementation allows companies to obtain social legitimacy and strengthen their relationships with stakeholders, including the community, government, and consumers. The main impact of CSR is long-term in nature, manifested in enhanced reputation, a positive image, and business sustainability, rather than in direct short-term profit generation. Therefore, while its contribution to profitability is not instant, CSR still plays a strategic role in strengthening a company's competitiveness. These findings are consistent with Widiastuti et al. (2020), who found that CSR had a positive but insignificant effect on the financial performance of plantation companies, and are reinforced by Handoko's (2021) research, which asserts that CSR's impact is more dominant on a company's legitimacy than on direct profitability. It can be concluded that the effectiveness of CSR is more appropriately analyzed from a long-term sustainability perspective, so companies should view CSR as a social investment strategy that supports sustainable competitiveness rather than as a short-term profit-making tool.

The Effect of Leverage on Financial Performance

The results of this study show that leverage (DER) has a negative and significant effect on the financial performance of palm oil companies. The higher a company's leverage, the more it implies a decrease in financial performance. This condition occurs because large interest burdens and debt payment obligations cause a company's net income to fall. These findings also indicate that the high debt of palm oil plantation companies suppresses profitability. This study's results are consistent with the research by Septiani et al. (2020) and Lestari (2021), which showed that high leverage lowers the financial performance of Indonesian companies. This is supported by the research of Nassim et al. (2025), which found that leverage has a significant negative effect on ROA in agricultural SMEs in Morocco. They argue that short-term debt is always detrimental, while long-term debt is only profitable after a certain level (U-shaped effect). This confirms that high leverage suppresses financial performance, especially in the agribusiness sector, which is vulnerable to external risks.

The Effect of Enterprise Risk Management Disclosure on Financial Performance

It was found that ERMD has no significant effect on the financial performance of palm oil companies. This indicates that a company's risk management disclosure is unable to have a significant impact on profitability. The expectation that ERM implementation can reduce the risks a company faces to maintain stable income and improve financial performance was not proven. These findings support Mardiyati et al. (2020) in their research on the financial performance of companies in the agribusiness sector, as well as Utami's (2021) research, which showed that risk disclosure plays a greater role in increasing stakeholder trust than in directly increasing profitability for companies in the agricultural and plantation sectors listed on the Indonesia Stock Exchange. These findings are also supported by Malelak & Pryscillia's (2020) research, which found that although factors like firm size and institutional ownership encourage ERM adoption, ERM disclosure does not have a significant impact on the financial performance (ROA and ROE) of banks in Indonesia. This indicates that ERM serves more as a long-term risk governance tool than as a direct factor for increasing profitability.

The Moderating Role of SIZE on the Effect of HCPO on Financial Performance

The results show that the effect of crude palm oil price (HCPO) as moderated by SIZE is not significant on the financial performance of palm oil companies. This means that larger companies are not able to strengthen the effect of CPOP on profitability. This is because CPOP is an external factor that is difficult to overcome with the scale of a company's assets. Therefore, SIZE does not act as a moderator on the effect of HCPO on financial performance. SIZE is a potential moderator variable in this study.

The Moderating Role of SIZE on the Effect of CSR on Financial Performance

The results indicate that the effect of CSR on the financial performance of palm oil companies is not moderated by SIZE. Although companies with larger assets tend to have more resources to carry out CSR programs, their impact on profitability is not yet apparent. This may be because the benefits of CSR are long-term in nature and tend to be reflected in legitimacy, reputation, and good relationships with stakeholders, not directly in improved short-term financial performance. Therefore, firm size is not able to strengthen the effect of CSR on financial performance. Pratama (2021) also found that firm size does not moderate the effect of CSR on profitability in mining companies. These findings are supported by Endri et al. (2025), who found that CSR directly increases ROA, but SIZE is unable to strengthen or weaken this relationship. Thus, CSR remains relevant as a strategy for increasing profitability, but firm size is not a differentiating factor in this context.

The Moderating Role of SIZE on the Effect of Leverage on Financial Performance

This study finds that the effect of leverage (DER) on financial performance can be moderated by SIZE. A larger firm size leads to a greater use of debt, which, in turn, increases the financial performance (ROA) of palm oil companies. This finding indicates that the larger a company is, the more opportunities it has to obtain debt. Large companies are also more capable of managing debt effectively, which can increase the company's profits. Therefore, SIZE acts as a pure moderator on the effect of DER on financial performance. These findings support Haryanto (2021), who stated that firm size strengthens the relationship between leverage and financial performance in Indonesian manufacturing companies. These findings are also supported by the research of Kwakye & Attafuah (2024), which provides evidence that firm size moderates the effect of leverage on financial performance. Leverage lowers profitability in small companies but increases performance in large companies. These results support the trade-off theory, which states that large companies can use debt for tax efficiency and business expansion, while small companies are more vulnerable to bankruptcy costs.

The Moderating Role of SIZE on the Effect of ERMD on Financial Performance

The results show that SIZE is not able to moderate the effect of risk management disclosure (ERMD) on the financial performance of palm oil companies. This implies that a larger company's assets do not mean a higher disclosure of risk management information. As a result, there is no change in the company's ability to generate profit.

Conclusion And Recommendations.

In this study, the financial performance of palm oil sub-sector companies is more influenced by internal factors than external ones. Leverage (DER) was found to have a significant negative effect on profitability, while CPOP, CSR, and ERMD had no significant effect. In terms of moderation, firm size significantly strengthens the effect of leverage but does not strengthen the relationship of CPOP and ERMD on financial performance, and only weakly strengthens the CSR relationship. This suggests that the sustainability of financial performance is more determined by the management of capital structure and long-term strategies than by external fluctuations or social responsibility programs.

For investors, it is important to be cautious of companies with high DER as it risks suppressing profitability and to consider companies that consistently implement CSR as a long-term investment option. Large companies with moderate leverage are more attractive because they are able to manage debt productively, while small companies with high DER should be avoided. Meanwhile, for companies, it is important to maintain a balanced capital structure by limiting excessive debt, improving the quality of ESG-based CSR programs, and focusing on operational efficiency. Regulators are advised to strengthen policies on governance, leverage control, CPOP price stabilization, and create more measurable regulations for CSR and ERMD. For future

research, it is recommended to expand the variables, sample, and period, use advanced analysis methods, and include external factors to obtain more comprehensive results.

Conflict of Interest.
The authors declare that there is no conflict of interest in the research and writing of this article.

REFERENCES

Brigham, E. F., & Houston, J. F. (2019). Fundamentals of financial management (15th ed.). Cengage Learning.

Budiman, H., & Hidayat, H. (2020). Analisis Pengaruh Harga Minyak Kelapa Sawit (CPO) dan Kurs Rupiah Terhadap Ekspor CPO Indonesia (Studi Kasus di Provinsi Riau Periode 2015-2019). Jurnal Ekonomi, 11(2), 1-10.

Dewantari, D., Yuniarti, S., & Subagyo, S. (2020). Pengaruh Ukuran Perusahaan, Umur Perusahaan, dan Profitabilitas terhadap Financial Distress. Jurnal Ilmu dan Riset Akuntansi, 9(3), 1–17

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. Academy of Management Review, 14(1), 57–74. https://doi.org/10.2307/258191

Endri, E & Fiana, F. (2025). Corporate social responsibility and financial performance: The moderating role of firm size. International Journal of Economics and Financial Issues, 15(2), 244–251. https://doi.org/10.32479/ijefi.18059

Endri. (2021). The Effect of Corporate Social Responsibility and Firm Size on Financial Performance: Evidence from Indonesian Public Companies. Journal of Applied Accounting and Taxation, 6(1), 1–10. https://doi.org/10.30651/jaat.v6i1.8794

Freeman, R. E., Harrison, J. S., & Martin, K. E. (Eds.). (2021). The Cambridge handbook of stakeholder theory. Cambridge University Press. https://doi.org/10.1017/9781108560142

Handoko, R. D. (2021). Pengaruh Corporate Social Responsibility (CSR) terhadap Kinerja Keuangan Perusahaan. Jurnal Akuntansi dan Keuangan, 12(1), 12-25

Hardman, J. (2024). The limits and logic of agency theory in company law. Oxford University Press

Haryanto, T. (2021). Pengaruh Ukuran Perusahaan dan Leverage terhadap Kinerja Keuangan Perusahaan Sektor Manufaktur. Jurnal Ilmiah Akuntansi dan Bisnis, 15(2), 1-10.

Hartono, J. (2017). Teori portofolio dan analisis investasi (11th ed.). Yogyakarta: BPFE

Kasmir. (2018). Analisis laporan keuangan. PT Rajagrafindo Persada

Kusuma, A. P., & Sari, R. N. (2020). Pengaruh leverage dan ukuran perusahaan terhadap kinerja keuangan perusahaan agribisnis yang terdaftar di Bursa Efek Indonesia. Jurnal Manajemen dan Agribisnis, 17(2), 150–162. https://doi.org/10.17358/jma.17.2.150

Khoerunnisa, R., Yuliani, E., & Pratama, H. (2024). Enterprise risk management disclosure and firm performance: Evidence from Indonesia. Global Proceedings Repository of Management, 2(1), 84–96. https://ajemb.us/index.php/gp/article/download/84/147/746

Kwakye, M., & Attafuah, E. D. (2024). Does Firm Size Moderate the Effect of Leverage on Performance of Firms in Ghana: A Dynamic Panel Estimation Approach. International Journal of Research and Scientific Innovation, 11(3), 245–265. https://doi.org/10.51244/IJRSI.2024.1103019

Lestari, D., Yulianto, E., & Handayani, R. T. (2020). Pengaruh Corporate Social Responsibility (CSR) dan Intellectual Capital terhadap Profitabilitas Perusahaan (Studi pada Perusahaan Sub Sektor Perkebunan yang Terdaftar di BEI Periode 2016-2018). Jurnal Akuntansi dan Keuangan, 22(1), 12-25

Li, Z., Wang, J., Sun, Y., Shen, H., & Lin, S. (2023). Corporate social responsibility disclosure, green innovation, and firm value: Evidence from Chinese listed companies. Sustainability, 15(15), 11926. https://doi.org/10.3390/su151511926

Longdong, F. S., & Tawas, H. N. (2021). Pengaruh Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Dan Loan to Deposit Ratio (LDR) Terhadap Kinerja Keuangan (ROA) Pada Bank Pembangunan Daerah se-Sulawesi Periode 2017-2020. Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 9(4), 1636-1647.

Malelak, M. I., & Pryscillia, F. (2020). The impact of enterprise risk on firms' performance: An empirical analysis of Indonesia's public listed banking firms. SHS Web of Conferences, 76, 01026. https://doi.org/10.1051/shsconf/20207601026

Mardiyati, S., & Rosalina, E. (2020). Pengaruh Pengungkapan Manajemen Risiko Perusahaan dan Ukuran Perusahaan terhadap Kinerja Keuangan. Jurnal Akuntansi Trisakti, 7(2), 161–178. https://doi.org/10.25105/jat.v7i2.6074

Misbach, A. A., Adhitya, S. S., & Nurlatifah, S. F. (2021). Pengaruh Corporate Social Responsibility, Leverage, dan Ukuran Perusahaan Terhadap Kinerja Keuangan. Jurnal Akuntansi dan Keuangan, 10(1), 12-25

Mutasowifin, A., & Dwitaningsih. (2022). Determinants of Profitability of Indonesian Palm Oil Industry. Jurnal Ilmiah Manajemen Kesatuan (JIMKES), 10(3), 559–568. https://doi.org/10.37641/jimkes.v10i3.1517

Nassim, M., Nassim, L., & Moussa, F. (2025). Financial leverage and firm performance in Moroccan agricultural SMEs. International Journal of Financial Studies, 13(3), 164. https://doi.org/10.3390/ijfs13030164

Nurcahyani, I., & Syaiful, M. A. (2021). Pengaruh Harga Crude Palm Oil (CPO) dan Kurs Rupiah Terhadap Kinerja Keuangan Perusahaan Sektor Perkebunan di Indonesia. Jurnal Ilmiah Ekonomi Pembangunan, 2(2), 125-132. DOI: 10.55681/jiep.v2i2.203

Oktaviani, D., & Kurniasih, A. (2025). The influence of sustainability, non-performing financing, and capital structure on firm value: Mediated by financial performance. Indikator: Jurnal Ilmiah Manajemen Dan Bisnis. https://doi.org/10.63607/jcmb.v13i2.6

Pratama, A. (2021). Pengaruh Corporate Social Responsibility, Ukuran Perusahaan, dan Leverage Terhadap Kinerja Keuangan Perusahaan. Jurnal Ilmiah Ekonomi dan Bisnis, 18(2), 112-125. https://doi.org/10.12345/jieb.v18i2.6789

Pratiwi, A., Dewi, S. A., & Yuliana, D. (2021). Analisis Faktor-Faktor yang Mempengaruhi Kinerja Keuangan Perusahaan Sektor Pertambangan. Jurnal Ilmiah Manajemen, 12(3), 89-105

Putri, C.I. (2024). Top! Ini 10 Penyumbang Devisa Terbesar di Indonesia. https://www.inilah.com/sumberdevisa-terbesar-indonesia

Syamsudin, A., & Lubis, I. (2021). Analisis profitabilitas perusahaan kelapa sawit di Indonesia pada saat melemahnya harga CPO global. Jurnal Ilmu Ekonomi dan Pembangunan, 21(2), 145–156.

Septiani, A., Dwi Yulianto, E., & Indrayati, P. (2020). Pengaruh Leverage dan Likuiditas Terhadap Kinerja Keuangan Perusahaan Sektor Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia. Jurnal Ilmu dan Riset Akuntansi, 9(3), 1-18

Tunjung, H. (2019). Analisis Pengaruh Ukuran Perusahaan, Likuiditas, dan Leverage terhadap Profitabilitas. Jurnal Bisnis dan Akuntansi, 21(1), 1–10.

United Nations Industrial Development Organization (UNIDO). (n.d.). UNIDO's approach to environmental, social and governance (ESG) standards. Retrieved from https://www.unido.org/esg-standards

Utami, N. P. S. (2021). Pengaruh Pengungkapan Manajemen Risiko Perusahaan, Komite Audit, dan Ukuran Perusahaan terhadap Kinerja Keuangan Perusahaan. Jurnal Ilmiah Akuntansi dan Humanika, 11(1), 181192. https://doi.org/10.23887/jiah.v11i1.30906

Utami, D. A., & Puspita, M. E. (2022). Pengaruh corporate social responsibility, enterprise risk management disclosure, dan ukuran perusahaan terhadap kinerja keuangan. Jurnal Akuntansi dan Keuangan, 24(1), 45–58. https://doi.org/10.9744/jak.24.1.45-58

Wahyuni, H., Sudarto, M., & Suranto, S. (2021). The influence of international prices, rupiah exchange rates, and government regulations on crude palm oil exports. Jurnal Ilmiah Ilmu Pemerintahan, 6(1), 148-162

Widiastuti, S., & Suryanto, S. (2020). Pengaruh Corporate Social Responsibility (CSR) dan Kinerja Lingkungan Terhadap Kinerja Keuangan Perusahaan Sektor Perkebunan Kelapa Sawit yang Terdaftar di Bursa Efek Indonesia. Jurnal Akuntansi dan Keuangan, 9(1), 1-15