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The Effect of Financial Distress, Capital Intensity, and Leverage on Tax Aggressiveness

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Abstract

This study aims to analyze the influence of Financial Distress, Capital Intensity, and Leverage on tax aggressiveness. The population consists of 91 energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. Using a purposive sampling method based on specific criteria, the final sample comprised 40 financial reports from 8 companies. Data analysis was conducted using panel data regression, incorporating classical assumption tests and hypothesis testing, with the aid of Eviews 14 software. The results indicate that Financial Distress, Capital Intensity, and Leverage simultaneously influence tax aggressiveness. However, regarding partial effects, Financial Distress and Leverage have a positive and significant impact on tax aggressiveness, whereas Capital Intensity has no effect.

Keywords: ***Financial Distress, Capital Intensity, Leverage, Tax Aggressiveness.***

INTRODUCTION

Taxes are one of the sources of state revenue that have an important role in supporting the implementation of national development. In Accounting, taxes act as a cost component that can significantly reduce the company's net profit (Malendes et al., 2024). The amount of tax that a company must pay to the state is influenced by the amount of profit earned during one fiscal year. An increase in company profit will be followed by an increase in tax obligations that must be deposited into the state treasury in accordance with applicable tax provisions (Sjahril et al., 2020).

The optimization of tax revenue faces various obstacles, one of which is the non-compliance of taxpayers in making payments (Aprilia et al., 2022). On the other hand, as corporate taxpayers, companies often view taxes as a cost component that can reduce the level of income and net profit earned (Juliana et al., 2020). Tax Aggressiveness is an action taken by a company to reduce tax obligations through various tax planning strategies aimed at reducing taxable income. These strategies can be carried out legally

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through tax avoidance practices or illegally through tax evasion, with the main goal of minimizing the amount of tax that must be paid to the state (Amelia, 2021).

The level of a company's Tax Aggressiveness can be influenced by various factors, one of which is Financial Distress or the condition of financial difficulties experienced by the company. Companies experiencing financial difficulties often face various problems related to increased costs, decreased access to financing sources, and the inability to meet debt payment obligations at maturity (Ari & Sudjawoto, 2021). In these conditions, management tends to make various efforts to maintain the company's financial stability, one of which is through managing tax obligations with the aim of reducing the tax burden that must be paid (Aznira & Nustini, 2024).

The second factor suspected of influencing Tax Aggressiveness is Capital Intensity, which reflects the proportion of the company's investment in fixed assets. A high level of Capital Intensity indicates that the company has a large fixed asset investment, thereby generating a higher depreciation expense. This depreciation expense can be used as a deduction from taxable income, which ultimately has the potential to reduce the company's tax obligations (Nugroho & Muararah, 2021).

The third factor suspected of influencing Tax Aggressiveness is Leverage, which is a condition that reflects the level of debt utilization by the company as a source of funding in order to support operational and investment activities. A high level of Leverage can affect the company's tax policy through interest expenses arising from the use of debt (Sari & Rahayu, 2020).

Agency theory according to Alif Videya & Irawati (2022) is a concept that explains the interaction between principals and agents. The principal is the party who instructs the management, while the management is entrusted by the principal to manage funds with full responsibility (Zulfajrin et al., 2022). However, the existence of differences in interests between the two parties can lead to agency conflict caused by the tendency of each party to maximize its own interests (Agung Hermantono, 2023). According to Sari (2022), signal theory is an action by a company to provide clues to investors regarding the company's prospects. The information issued by the company is very important, because it influences investment decisions from external parties, as well as providing an overview of the company's past, present, and future conditions (Anisa et al., 2022).

METHOD

This research uses a quantitative method with an associative research type. The population used in this research is companies operating in the energy sector and have carried out an initial public offering (IPO) on the Indonesia Stock Exchange during the last five-year period, namely from 2020 to 2024. The sample selection technique in this research is purposive sampling, based on specific criteria: companies that have

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consistently published annual and financial reports, use the Rupiah currency in all financial transactions, and show positive financial performance by always earning profit before tax during the 2020–2024 period. The criteria above resulted in a sample of 8 companies from the energy sector with a research period of 5 (five) years, so the amount of observation data used in this research is 40 data.

The dependent variable in this research is Tax Aggressiveness, in which the Effective Tax Rate (ETR) ratio is used to assess the tax rate calculated based on the company's annual financial statements, by considering profit before tax and the tax expense borne. The independent variables in this research are Financial Distress, Capital Intensity, and Leverage. Financial Distress is measured using the Altman Z-Score method, which is a model developed by Altman to predict the company's financial health level based on a combination of several financial ratios. Capital Intensity is a ratio that shows the amount of company investment in fixed assets compared to total assets, while Leverage is measured using the Debt to Asset Ratio (DAR), which is a ratio that compares total debt with total assets of the company.

The data collected in this research includes documentation, namely secondary data in the form of financial statements and annual reports of energy sector companies obtained through the official website of the Indonesia Stock Exchange (IDX). The data analysis technique used in this research is panel data regression in Eviews 14. The estimation models used are Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), followed by regression model suitability tests consisting of the Chow Test, Hausman Test, and Lagrange Multiplier Test to determine the most appropriate model.

Furthermore, classical assumption tests are carried out to ensure that the data used in the research is free from normality, heteroskedasticity, multicollinearity, and autocorrelation problems. Multiple linear regression analysis is used to evaluate the effect of independent variables on the dependent variable. Hypothesis testing is conducted using a partial test (t-test) to determine the effect of each independent variable partially, a simultaneous test (F-test) to determine whether all independent variables simultaneously affect the dependent variable, and the coefficient of determination test (R^2) to measure the ability of the regression model in explaining the variation of the dependent variable.

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RESULTS AND DISCUSSIONS

Descriptive Statistics

Table 1. Descriptive Statistics Results

Variable	Maximum	Minimum	Mean	Standard Deviation
Tax Aggressiveness (Y)	1.529124	0.002690	0.269505	0.275654
Financial Distress (X1)	7.707471	0.619573	3.118833	1.549609
Capital Intensity (X2)	0.748200	0.005800	0.214630	0.212920
Leverage (X3)	1.074700	0.100300	0.538535	0.195441

The standard deviation value that is greater than the average value indicates that the Tax Aggressiveness data has a relatively high level of dispersion, thus showing a fairly large data variation among companies in the research sample. The average value that is greater than the standard deviation value indicates that the Financial Distress, Capital Intensity, and Leverage data have a relatively low level of dispersion, so the data tend to be more homogeneous.

Panel Data Regression Model Selection

After a series of panel data regression model tests were carried out, namely the Chow test, Hausman test, and Lagrange Multiplier (LM) test, the next step is to compare the results of each test that has been carried out. Based on the data processing results from the three tests, the following results are obtained:

Table 2. Model Test Conclusion Results

No	Test Model	Testing	Result
1	Chow Test	CEM vs FEM	FEM
2	Hausman Test	REM vs FEM	REM
3	Lagrange Multiplier Test	CEM vs REM	CEM

The Common Effect Model (CEM) is the panel data regression model that will be used in hypothesis testing and regression equations, according to table 4.10 which presents the findings from the three tests that have been previously carried out.

Classical Assumption Test

Based on the normality test results, the estimated chi-square (Jarque-Bera) value is 2.672325, which shows a probability value of 0.262852 > 0.05. This indicates that the probability value is more than the significant value, which is 0.05, meaning the normality

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assumption has been met by the regression model used. The multicollinearity test results show the Centered VIF between Financial Distress (X1) of 1.536558, Capital Intensity (X2) of 1.631963, and Leverage (X3) of 1.127299 is below 10, which indicates the absence of multicollinearity symptoms. The heteroskedasticity test results show that the probability value for all variables is above the 0.05 significance level (probability > 0.05), so it can be concluded that the three variables do not experience heteroskedasticity problems. Based on the Durbin-Watson autocorrelation test, the statistical value obtained is 1.780665, which is between the lower and upper limits, concluding that the model does not experience autocorrelation symptoms.

Multiple Linear Regression Analysis

Based on the data processing results using panel data regression analysis, the regression coefficient values for each research variable are obtained.

Table 3. Multiple Linear Regression Analysis Results

Variable	Coefficient
Constant (C)	-0.380220
Financial Distress (X1)	0.053723
Capital Intensity (X2)	0.041220
Leverage (X3)	0.878910

The constant value indicates that when the independent variables consisting of the Financial Distress (X1), Capital Intensity (X2), and Leverage (X3) variables are zero or do not experience changes, the dependent variable, namely the Tax Aggressiveness variable, will remain at a constant value of -0.380220. The positive coefficient value of 0.053723 indicates that every increase in Financial Distress by one unit will be followed by an increase in the company's Tax Aggressiveness by 0.053723 units. The positive coefficient value of 0.041220 indicates that every increase in Capital Intensity by one unit will be followed by an increase in Tax Aggressiveness by 0.041220 units, assuming other independent variables remain constant. The positive coefficient value of 0.878910 indicates that every increase in Leverage by one unit will cause an increase in Tax Aggressiveness by 0.878910 units, assuming other independent variables remain constant.

Hypothesis Testing

To test the effect of each independent variable, namely Financial Distress, Capital Intensity, and Leverage, the t-test (partial test) is used.

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Table 4. T-Test Results

Variable	t-Statistic	Prob.
Financial Distress (X1)	2.608092	0.0370
Capital Intensity (X2)	0.221587	0.8259
Leverage (X3)	5.218094	0.0000

The t-test results for the Financial Distress variable (X1) have a t-statistic value of 2.608092 with a prob. (Significant) value of 0.0370 (<0.05), so the conclusion is that the Financial Distress variable (X1) has a significant positive effect on Tax Aggressiveness (Y). The t-test results for the Capital Intensity variable (X2) have a t-statistic value of 0.221587 with a Prob. (Significant) value of 0.8259 (>0.05), so the conclusion is that the Capital Intensity variable (X2) has no effect on Tax Aggressiveness (Y). The t-test results for the Leverage variable (X3) have a t-statistic value of 5.218094 with a Prob. (Significant) value of 0.0000 (<0.05), so the conclusion is that the Leverage variable (X3) has a significant positive effect on Tax Aggressiveness (Y).

[Table 5. Simultaneous Test (F-Test) Results]

Indicator	Value
F-statistic	14.34809
Prob(F-statistic)	0.000003

The F-statistic test results show an F-statistic value of 14.34809 with a significance value of 0.000003 < 0.05. This shows that the independent variables, namely Financial Distress, Capital Intensity, and Leverage, have a significant simultaneous (joint) effect on the dependent variable (Y), namely Tax Aggressiveness.

Table 6. Coefficient of Determination Test Results

Indicator	Value
Adjusted R-squared	0.506606

The adjusted R-squared value obtained from the coefficient of determination testing is 0.506606. This means that 50.6% of the variation in Tax Aggressiveness can be explained by the effect of Financial Distress, Capital Intensity, and Leverage. Meanwhile, 49.4% of the variation is influenced by other factors not included in this research model.

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Table 7. Hypothesis Testing Results

No	Hypothesis	Statement	Result
1	H1	Financial Distress has a positive effect on Tax Aggressiveness.	Hypothesis accepted
2	H2	Capital Intensity has no effect on Tax Aggressiveness.	Hypothesis rejected
3	H3	Leverage has a positive effect on Tax Aggressiveness.	Hypothesis accepted
4	H4	Financial Distress, Capital Intensity, and Leverage have an effect on Tax Aggressiveness.	Hypothesis accepted

DISCUSSION

The Effect of Financial Distress on Tax Aggressiveness

The results of this research indicate that companies experiencing Financial Distress tend to carry out tax management more aggressively. The condition of financial difficulties pushes management to look for various alternatives in improving the company's financial efficiency, one of which is through efforts to minimize the tax burden. This is done so that the company can maintain cash flow, meet financial obligations, and maintain operational continuity amidst the financial pressure faced. Therefore, the higher the level of Financial Distress experienced by the company, the greater the company's tendency to carry out Tax Aggressiveness.

The Effect of Capital Intensity on Tax Aggressiveness

Based on the agency theory perspective, there is no significant relationship between Capital Intensity and Tax Aggressiveness. A high level of Capital Intensity does not always encourage management to carry out Tax Aggressiveness actions. In the context of a company, investment in fixed assets is generally carried out to support operational activities and increase company productivity, not solely as a strategy to reduce the tax burden. Although theoretically fixed asset ownership can generate depreciation expenses that have the potential to reduce taxable income, decisions related to fixed asset investment remain under principal supervision and are influenced by internal company policies and applicable regulations.

The Effect of Leverage on Tax Aggressiveness

Based on agency theory, management as an agent has an interest in improving company performance and maximizing company value for shareholders. One strategy that can be carried out is utilizing funding sources through debt, because the interest

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expense arising from the use of debt can be used as a deduction from taxable income. This condition provides an opportunity for the company to optimize the funding policy through debt as one of the efforts in suppressing the tax burden that must be paid. Thus, the higher the level of Leverage owned by the company, the greater the company's tendency to carry out Tax Aggressiveness.

The Effect of Financial Distress, Capital Intensity, and Leverage on Tax Aggressiveness

These results indicate that the company's Tax Aggressiveness is not only influenced by one variable individually, but is also influenced by a combination of various factors related to the company's financial condition and policies. Although the partial testing results show that only the Leverage variable has an effect on Tax Aggressiveness, the simultaneous testing proves that Financial Distress, Capital Intensity, and Leverage jointly have a role in explaining the variation of Tax Aggressiveness. This indicates that the company's decisions in managing assets, determining the funding structure, and facing certain financial conditions can be interrelated in influencing the applied tax policies.

CONCLUSION

This research aims to analyze the effect of Financial Distress, Capital Intensity, and Leverage on Tax Aggressiveness in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. Based on the data analysis and hypothesis testing that have been carried out, Financial Distress has an effect on Tax Aggressiveness in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period, so H1 is accepted. Capital Intensity does not have a significant effect on Tax Aggressiveness in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period, therefore H2 is rejected. Leverage has an effect on Tax Aggressiveness in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period, so H3 is accepted. Financial Distress, Capital Intensity, and Leverage simultaneously or jointly have an effect on Tax Aggressiveness in energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period, so H4 is accepted.

This research is not free from a number of limitations, namely the reduction in the number of sample companies because most energy sector companies present financial reports in United States Dollars (USD), the limited number of samples used which is 8 companies, and the difficulty in obtaining complete company financial reports consistently for each research period. For future researchers, it is recommended to develop this research by adding other independent variables that potentially affect Tax

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Aggressiveness, using a larger sample size, expanding the research object, and extending the observation period so that the research results obtained are more representative. For companies, it is expected to increase transparency in the presentation and publication of financial reports completely and consistently every year, and to implement tax policies wisely while maintaining compliance with applicable tax regulations, so that the tax management practices carried out do not pose a risk to the continuity of the company.

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