

The Effect of Capital Intensity, Thin Capitalization, and Environmental Disclosure on Tax Avoidance

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Abstract: *This study investigates whether capital intensity, thin capitalization, and environmental disclosure influence corporate tax avoidance in Indonesian listed financial sector firms during 2021 to 2024. Tax avoidance is proxied by the cash effective tax rate (CETR). Capital intensity is measured by the proportion of fixed assets, thin capitalization is proxied by the debt to equity ratio, and environmental disclosure is measured using an index based on GRI 300 indicators. Using purposive sampling, the study obtained 21 firms and applied multiple linear regression to firm year observations. The results indicate that thin capitalization has a significant negative effect on CETR, implying that higher leverage is associated with lower cash tax payments and a greater tendency toward tax avoidance. In contrast, capital intensity and environmental disclosure do not show statistically significant effects on CETR. The model explains a limited proportion of CETR variation, suggesting that tax avoidance in the financial sector is shaped by additional firm-specific and regulatory factors beyond the variables examined. The findings contribute sector-specific evidence on the determinants of tax avoidance in a highly regulated industry and provide implications for policymakers regarding the monitoring of leverage-related tax planning.*

INTRODUCTION

Taxes are one of the main sources of revenue for the Indonesian government, which plays a strategic role in supporting national development and providing public services. Taxes not only serve as the main source of state revenue, but also as a regulatory instrument that can maintain economic stability through the provision of public facilities, distribution of financial assistance, and implementation of social protection programs (Kalila & Puspitaningrum, 2025). Business entities as taxpayers have an obligation to pay a portion of their income to the state in the form of tax payments (Tantika et al., 2023; Pangaribuan, 2022).

In tax planning, tax avoidance is carried out to minimize the tax burden by legally exploiting loopholes in regulations without violating tax provisions by optimizing certain

transaction regulations or financial policies to reduce the amount of tax payable (Wansu & Dura, 2024). The development of Indonesia's tax revenue in recent years has shown fluctuating dynamics in line with changes in economic conditions and fiscal policy. The report shows that tax revenue realization in a certain period does not always reach the target set by the government, resulting in a gap between the target and the actual state revenue. To assess the development of tax collection effectiveness, we can look at Indonesia's tax revenue realization in recent years in the table below:

Table 1. Tax Revenue in Indonesia

Year	Target (Rp Billion)	Actual (Rp Billion)	Difference (Rp Billion)	Realization Growth (%)
2021	1,229.58	1,278.60	+49.02	19.30
2022	1,484.96	1,716.76	+231.80	34.30
2023	1,818.24	1,869.23	+50.99	8.90
2024	1,988.88	1,932.40	-56.48	3.38

Source : Kementerian Keuangan Republik Indonesia. (2024). APBN Kita.

The development of Indonesia's tax revenue for the 2021-2024 period shows fluctuations. Revenue realization in 2021, 2022, and 2023 was able to exceed the target in line with economic recovery, but in 2024 it began to experience pressure so that it did not fully reach the target. This condition shows that tax revenue optimization still faces challenges and requires further study of the factors that influence corporate tax behavior, including tax avoidance practices. In addition to structural challenges in tax revenue, social dynamics also influence public perception of the taxation system. An online campaign that caught the public's attention called on citizens to stop paying taxes, which gained significant momentum at the end of August 2025, triggered by public dissatisfaction with policies considered unfair, including proposed legislative allowances and poor fiscal management, reflecting a form of collective protest against injustice in Indonesia's fiscal policy and public fund management. Although such calls do not change the legal obligation to comply with tax laws, this phenomenon reflects a significant erosion of public trust in the tax system and increasing social pressure regarding accountability and fair resource allocation.

From a corporate perspective, tax avoidance practices do not occur randomly, but are influenced by corporate financial characteristics and policies. Several factors that are often examined in the literature are capital intensity, thin capitalization, and corporate social and environmental responsibility (environmental disclosure).

Previous studies have shown inconsistent results regarding the factors that influence tax avoidance. Some studies indicate that capital intensity has a positive and significant effect on tax avoidance (Lestari et al., 2024); (Siti Maisa Zahara et al., 2025). Conversely, research by Wansu and Dura (2024) states that capital intensity has no effect on tax avoidance. Research conducted by Lestari et al. (2024) shows that tax avoidance is greatly influenced by thin capitalization. This finding is not in line with Diah Retna Sumekar et al. (2023), which shows that thin capitalization has a negative and significant effect on tax avoidance. Inconsistent research results were also found in the environmental disclosure variable. Cahyati et al. (2023) showed that environmental disclosure has no effect on tax avoidance, while Dul and Wicaksono (2024) showed that environmental disclosure has an effect on tax avoidance.

The differences in the results found in previous studies indicate a research gap that requires further study. This study focuses on financial sector companies listed on the Indonesia Stock Exchange for the period 2021-2024 by examining the effect of capital intensity, thin capitalization, and environmental disclosure on tax avoidance. It is hoped that this study can

provide empirical contributions to the development of taxation literature and serve as material for consideration by regulators in improving the effectiveness of the taxation system.

The novelty of this research lies in the development of an empirical model that simultaneously tests the effects of capital intensity, thin capitalization, and environmental disclosure on tax avoidance in financial sector companies listed on the Indonesia Stock Exchange from 2021 to 2024, with tax avoidance proxied using the cash effective tax rate and environmental disclosure measured using the GRI 300-based disclosure index. Another novelty is the focus on the financial sector, which has different regulatory characteristics, funding structures, and sustainability reporting practices compared to the non-financial sector. Therefore, the findings of this study are expected to enrich the contextual evidence regarding the determinants of tax avoidance in industries with stricter supervision and contribute to the literature on the relationship between capital structure policy and sustainability strategies on corporate tax behavior.

This study contributes to enriching the corporate taxation literature in Indonesia by presenting empirical evidence based on firm-year data from the banking sector for the period 2021–2024 regarding the determinants of tax avoidance from the perspective of asset structure (capital intensity), funding structure (thin capitalization), and sustainability accountability (environmental disclosure). By utilizing secondary data from annual reports and financial statements, this study provides a more measurable understanding of how operational characteristics and non-financial disclosures influence tax avoidance behavior in a highly regulated industry, while also providing practical implications for regulators and tax authorities in designing risk-based supervision and promoting tax transparency and compliance in line with governance and sustainability.

LITERATURE REVIEW

Agency Theory

The agency theory proposed by Jensen & Meckling (1976) explains the agency relationship that arises when company owners (principals) delegate management authority to managers (agents). In this relationship, managers are given the authority to make operational and financial decisions for the company, including tax policy, while shareholders have limited ability to directly observe these managerial actions. In the context of taxation, managers have discretion in determining the company's tax policy and may exploit loopholes in regulations to reduce the tax burden through tax avoidance. This practice has the potential to increase after-tax profits and short-term performance for managers, but it also increases the risks and costs that are ultimately borne by shareholders. Therefore, agency theory provides a strong theoretical basis for explaining corporate tax avoidance behavior, in which tax avoidance decisions are driven not only by tax efficiency, but also by managerial interests and agency conflicts inherent in the corporate structure.

Tax Avoidance

Tax avoidance is the practice of managing taxes to legally minimize tax burdens by exploiting loopholes, differences in rules across jurisdictions, and accounting policy and transaction choices that reduce taxable income without explicitly violating regulations (Pangaribuan et al., 2021). In a global context, this practice is often seen as a consequence of "globalization" because companies, especially multinationals, can manage cross-border activities so that the taxes paid are not proportional to the economic value created in the country of operation, which in turn erodes the tax base and raises issues of corporate ethics and legitimacy

(Evertsson, 2016). In practice, tax avoidance is carried out through strategies such as profit shifting, choosing low-tax jurisdictions for profit location, utilizing incentive regimes, and planning transactions and funding structures that optimize tax deductions. This dynamic is also influenced by the quality of governance and public policy, as better regulation and less complex bureaucracy tend to correlate with lower levels of tax avoidance, while weak governance can increase incentives to avoid taxes (Anggraini et al., 2025). In addition, sociocultural and institutional factors also shape the intensity of tax avoidance practices, so that tax avoidance behavior is not only a financial decision by companies, but also a response to the institutional environment that determines the level of compliance and enforcement (Kimea et al., 2023).

Capital Intensity and Tax Avoidance

Capital intensity describes the proportion of tangible asset investment used by a company relative to its output or income generated, so that companies with high capital intensity generally have a larger proportion of fixed assets in their asset structure. This condition can affect tax avoidance because fixed assets provide room for tax planning through the utilization of fiscal treatment of capital investment, especially depreciation expenses that reduce taxable income and have the potential to create temporary differences between accounting income and taxable income (book-tax differences) that can be managed to reduce the effective tax burden. Previous studies indicate that capital intensity can be an indicator of financial motivation that is significantly correlated with the level of corporate tax avoidance, indicating that the greater the proportion of fixed assets, the greater the opportunity for companies to optimize their tax burden through investment-based instruments (Muhmad et al., 2020; Kalbuana et al., 2020). However, cross-context findings also confirm that this influence is not always uniform; for example, in a sample of US multinational corporations, more capital-intensive companies were not reported to substantially reduce their GAAP effective tax rates, suggesting the existence of contingency factors such as industry characteristics and a combination of other dominant tax incentives (Thayyib, 2025). Similarly, Marsahala et al. (2020) reported that capital intensity does not significantly influence tax avoidance practices.

Thin Capitalization and Tax Avoidance

Thin capitalization relates to the tendency of companies to finance their operations through a relatively high proportion of debt compared to equity, so that interest expenses become the main instrument for reducing taxable income through deductions (interest deductions). In this context, thin capitalization has positive implications for tax avoidance because companies can use debt financing to shift profits, especially in multinational corporations that are able to structure their financing across tax jurisdictions and take advantage of differences in tax rates between countries. To mitigate tax base erosion and protect state revenues, many countries have implemented thin capitalization rules that limit the recognition of interest expenses or certain debt ratios. Empirical evidence shows that such regulatory reforms can reduce internal borrowing practices but potentially encourage substitution to external debt, thereby reducing one channel of tax avoidance while opening avenues for behavioral adjustments through alternative financing (Jovanović, 2014). In line with this, studies on multinational companies confirm that thin capitalization restrictions affect capital structure by suppressing incentives for intra-group debt use and modifying the composition of funding, which ultimately affects interest-based tax planning space and profit shifting strategies (Buettnner et al., 2012). Thus, thin capitalization acts as a determinant of tax avoidance through profit shifting reduction mechanisms, while the effectiveness of its restrictions is greatly influenced by the company's ability to substitute financing instruments

and engineer capital structures within the applicable regulatory framework. For instance, Diah Retna Sumekar et al. (2023) reported that thin capitalization has a negative and significant effect on tax avoidance.

Environmental Disclosure and Tax Avoidance

Environmental disclosure (ED) can theoretically influence tax avoidance through two competing channels, namely the legitimacy channel and the investment strategy channel. In the legitimacy channel, environmental disclosure serves as a signal of transparency and accountability that encourages compliance, thereby reducing tax avoidance practices. However, evidence from energy sector companies in Indonesia shows that ED does not have a significant effect on tax avoidance and that governance quality does not moderate this relationship, indicating that environmental disclosure in certain contexts can be symbolic or insufficiently strong to change corporate tax decisions (Cahyati et al., 2023a). Conversely, in terms of investment strategy, ED can be positively correlated with tax avoidance when ED goes hand in hand with green investment expansion, green innovation, and capital expenditure that opens up opportunities for the utilization of fiscal preferences, timing of cost recognition, and optimization of tax treatment on investments, so that in some contexts, ED can actually encourage tax avoidance. Evidence from companies in China shows that there is a relationship between environmental information disclosure and tax avoidance through the mechanisms of green innovation and capital investments, with a stronger effect on highly polluting industries and more competitive sectors, confirming that ED is not always synonymous with tax compliance, but can be part of a corporate strategy to manage legitimacy while optimizing the tax burden (Gu & Wang, 2023). This suggests that environmental disclosure can function not only as legitimacy mechanism but also as part of corporate strategies related to financial and tax management.

RESEARCH MODEL

Based on the theoretical description and research hypothesis developed, this study describes the research model as shown in Figure 1, which illustrates how each independent variable (Capital Intensity, Thin Capitalization, and Environmental Disclosure) can influence tax avoidance practices in companies.

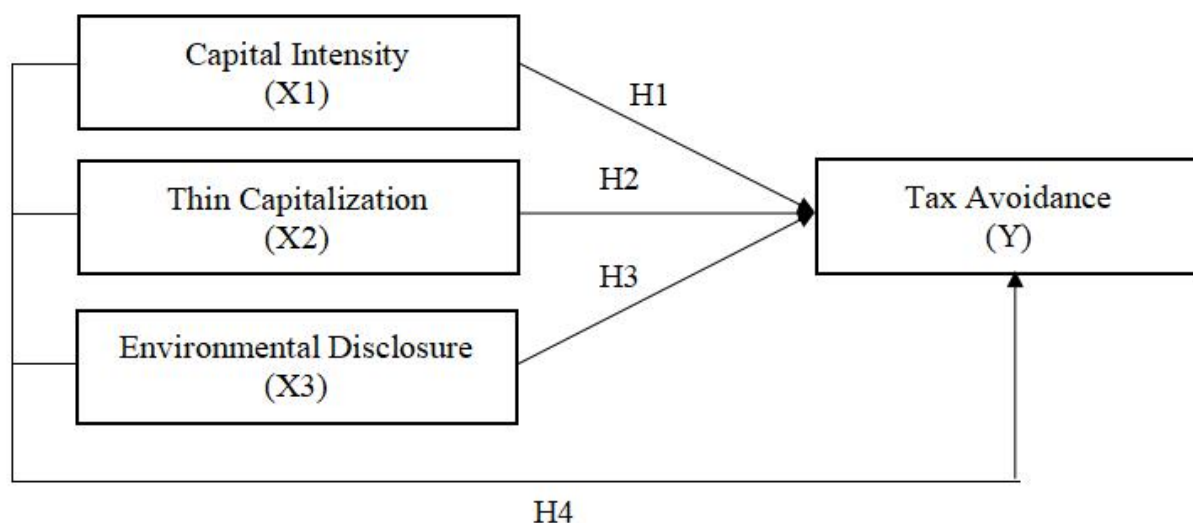


Figure 1. Research Model

METHOD

This study uses a quantitative approach with an explanatory research design to examine the effect of capital intensity, thin capitalization, and environmental disclosure on tax avoidance. The data used are secondary data in the form of firm-year observations obtained from annual reports and financial statements of companies in the financial sector in Indonesia during the period 2021–2024. The firm-year approach combines time series and cross-sectional data so that it can capture variations across companies and over time.

The research population consists of all financial sector companies listed on the Indonesia Stock Exchange (IDX) during the observation period of 2021–2024. The sample was determined using purposive sampling with the following criteria: (1) financial sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period, (2) companies that disclose environmental information in accordance with GRI 300 in, and (3) companies that did not experience negative pre-tax profits during the observation period. Based on these criteria, 21 companies met the requirements. With an observation period of four years, the total data used in this study amounted to 84 firm-year observations.

Tax avoidance is measured using the Cash Effective Tax Rate (CETR), which is calculated as the ratio between cash income tax paid and income before tax. Capital intensity is measured using the ratio of total fixed assets to total assets. Thin capitalization is proxied by the debt-to-equity ratio (DER), which reflects the proportion of total liabilities to total equity. Meanwhile, environmental disclosure is measured using an environmental disclosure index based on the GRI Standards 300 through a content analysis approach, where a score of 1 is given if the item is disclosed and 0 if it is not disclosed.

After the data were collected, they were analyzed using descriptive statistical analysis, classical assumption tests (normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test), multiple linear regression analysis, and hypothesis testing (t-test, F-test, and coefficient of determination). The research data were processed using SPSS version 31.

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Descriptive statistics were used to provide an overview of the characteristics of the data on the variables studied. This analysis included the number of observations, minimum value, maximum value, mean, and standard deviation. The descriptive statistics results for all variables in this study are presented in Table 2, as follows:

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Capital Intensity	64	.00	.05	.0206	.00979
Thin Capitalization	64	.02	10.81	4.9901	2.90924
Environmental Disclosure	64	.06	.72	.3125	.16347
Tax Avoidance	64	.11	.35	.2158	.05070
Valid N (listwise)	64				

Source : Data processed with SPSS 31, 2026

The research sample consisted of 64 observations for all variables. The capital intensity variable had an average value of 0.0206, indicating a low proportion of fixed asset investment in financial sector companies. The thin capitalization variable had an average value of 4.9901, indicating high use of debt in the capital structure of companies.

Furthermore, environmental disclosure shows an average value of 0.3125, indicating that the level of GRI 300-based environmental disclosure is still moderate. Meanwhile, the tax avoidance variable, proxied by CETR, has an average value of 0.2188, indicating that companies in the sample pay an average of 21.88% of pre-tax profits in cash taxes, with differences in the amount of cash taxes paid across companies in the research sample.

Normality Test

Table 3. Kolmogorov-Smirnov Test Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		64
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.04854154
Most Extreme Differences	Absolute	.100
	Positive	.100
	Negative	-.071
Test Statistic		.100
Asymp. Sig. (2-tailed) ^c		.188

Source : Data processed with SPSS 31, 2026

Normality testing was conducted to ensure that the regression model residuals were normally distributed. The normality test in this study used the One-Sample Kolmogorov-Smirnov Test on unstandardized residuals. Initially, the number of samples used in this study

was 84 observations. However, after identifying and handling outlier data, there were several observations that did not meet the normality assumption and had to be excluded from the analysis. The final sample size used in the normality test and subsequent analysis was 64 observations.

Based on the test results, an Asymp. Sig. (2-tailed) value of 0.188 was obtained, which is greater than 0.05. This result indicates that there is no significant difference between the distribution of research residuals and the normal distribution. Thus, it can be concluded that the residual data in the regression model is normally distributed, so the assumption of normality has been met and the analysis can proceed to the hypothesis testing stage.

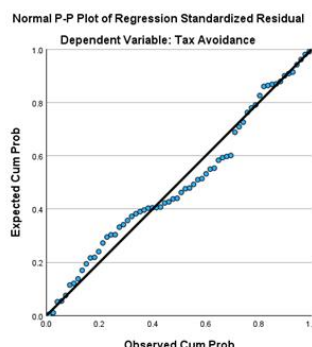


Figure 2 . Normal P-Plot Graph

Source : Data processed with SPSS 31, 2026.

The normal P-P Plot also shows that the standardized residual points are distributed around and follow the diagonal line, further indicating that the regression residuals are normally distributed. Thus, the normality assumption is satisfied and the regression model is appropriate for further analysis.

Multicollinearity Test

Table 4. Multicollinearity Test

Coefficients ^a			
		Collinearity Statistic	
Model		Tolerance	VIF
1	Capital Intensity	.866	1.155
	Thin Capitalization	.776	1.289
	Environmental Disclosure	.849	1.178

Source : Data processed with SPSS 31, 2026.

The multicollinearity test result indicate that all independent variables have tolerance values > 0.10 and Variance Inflation Factor (VIF) values < 10 . Therefore, it can be concluded that the regression model does not suffer from multicollinearity.

Heteroscedasticity Test

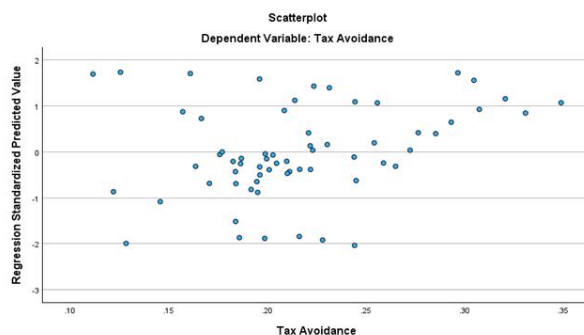


Figure 3. Scatterplot Graph

The scatterplot results show that the residuals are randomly distributed and do not form a specific pattern, so it can be concluded that the regression model does not experience heteroscedasticity.

Autocorrelation Test

Table 5. Autocorrelation Test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.288 ^a	.083	.037	.04974	1.895

Source : Data processed with SPSS 31, 2026.

Based on the Durbin-Watson value of 1.895, a comparison was then made with the Durbin-Watson table value at a significance level of 5%. With a sample size (n) of 64 and a number of independent variables (k) of 3, the upper limit value (du) obtained was 1.6946. The decision was made based on the criteria $du < dw < 4 - du$. The results show that $1.6946 < 1.895 < 2.3054$, so it can be concluded that there is no autocorrelation in the regression model used.

Regression Analysis

Table 6. Linear Regression Test

Model	Unstandardized B	Coefficient Std. Error	Standardized Coefficient Beta	t	Sig.
1					
(Constant)	.240	.018		13.600	<.001
Capital Intensity	-.184	.688	-.035	-.267	.790
Thin Capitalization	-.005	.002	-.288	-2.048	.045
Environmental Disclosure	.013	.042	.042	.313	.756

Source : Data processed with SPSS 31, 2026.

Capital Intensity and Tax Avoidance

The regression results show that capital intensity has a negative but insignificant coefficient of -0.184 with a significance value of 0.790 , so it can be concluded that capital

intensity does not have a significant effect on tax avoidance proxied by CETR. These results indicate that capital intensity does not significantly influence tax avoidance. Substantively, the negative direction of the coefficient indicates an inverse relationship between the proportion of fixed assets and CETR. However, a significance value exceeding 0.05 indicates that the relationship is not strong enough to be generalized to the sample of financial sector companies for the period 2021 to 2024.

This finding is in line with the research by Wansu and Dura (2024), which also shows that capital intensity does not affect tax avoidance and indicates that in the financial industry, which is relatively more regulated and has a tendency toward low fixed asset proportions, fixed asset investment intensity is not a primary instrument in tax avoidance strategies. On the other hand, these results contradict the findings of Lestari et al. (2024) and Siti Maisa Zahara et al. (2025), who reported that capital intensity has a positive and significant effect on tax avoidance.

The difference in direction and significance can be interpreted as an indication of differences in sector characteristics, particularly in relation to asset structure and depreciation-based tax planning opportunities, so that the effect of capital intensity on tax avoidance has the potential to be contextual and more prominent in sectors with a larger fixed asset base compared to the financial sector.

Thin Capitalization and Tax Avoidance

The regression results indicate that thin capitalization, proxied by the debt to equity ratio (DER), has a coefficient of -0.005 with a significance value of 0.045. This result indicates that thin capitalization has a significant effect on tax avoidance proxied by cash effective tax rate (CETR). The negative coefficient indicates that an increase in DER tends to reduce CETR. Since a lower CETR reflects a smaller amount of cash taxes paid relative to pre-tax income, the economic interpretation is that higher thin capitalization tends to reduce the CETR.

These findings are consistent with the argument that debt-based financing structures can expand tax planning opportunities through the recognition of interest expenses and profit shifting strategies, and are in line with empirical evidence that thin capitalization restrictions affect capital structures and profit shifting incentives, which have implications for tax planning opportunities (Buettner et al., 2012). Empirically, the results of this study are also in line with the findings of Lestari et al. (2024), who reported that tax avoidance is influenced by thin capitalization. However, these findings contradict the research of (Diah Retna Sumekar et al. (2023), which shows that thin capitalization has a negative and significant effect on tax avoidance. These differences indicate the possibility of differences in industry context, regulatory characteristics, and differences in proxies and the direction of interpretation of tax avoidance measures, so that the relationship between thin capitalization and tax avoidance can be contextual and sensitive to measurement, including the use of CETR, which is conceptually inversely proportional to the level of tax avoidance.

Environmental Disclosure and Tax Avoidance

The regression results indicate that environmental disclosure has a coefficient of 0.013 with a significance value of 0.756, suggesting that environmental disclosure does not have a significant effect on tax avoidance proxied by the cash effective tax rate (CETR). Interpretatively, the positive direction of the coefficient indicates a tendency for an increase in environmental disclosure to correlate with an increase in CETR, which means that the level of tax avoidance tends to decrease, given that a higher CETR reflects higher tax compliance

(Mahmudi & Lasulita, 2025). However, the relationship is not statistically significant.

This finding suggests that environmental disclosure based on GRI 300 has not been a strong explanatory factor for tax avoidance among financial sector companies from 2021-2024 period. In this context, environmental disclosure is more likely to function as a mechanism of legitimacy and accountability reporting rather than as a determinant of corporate tax policy. The results are consistent with Cahyati et al. (2023), which shows that environmental disclosure does not affect tax avoidance, thereby strengthening the argument that environmental information disclosure does not always go hand in hand with changes in tax saving strategies.

On the other hand, these results contradict those of Dul and Wicaksono (2024), who found that environmental disclosure has an effect on tax avoidance, and differ from the findings of Gu and Wang (2023), who showed that environmental disclosure can be related to tax planning strategies through green innovation and capital investment mechanisms in certain contexts (Gu & Wang, 2023). These differing findings can be interpreted as an indication that the relationship between environmental disclosure and tax avoidance is contextual, influenced by industry characteristics, pollution intensity, competitive dynamics, and fiscal incentives for green investment. Thus, in the financial sector, where the structure of operational activities differs from that of highly polluting sectors, environmental disclosure has not been consistently linked to tax avoidance strategies.

Simultaneous Effect of Capital Intensity, Thin Capitalization, and Environmental Disclosure on Tax Avoidance

Table 7. F Test

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.013	3	.004	1.814	.154 ^b
	Residual	.148	60	.002		
	Total	.162	63			

Source : Data processed with SPSS. 31, 2026.

The F-test results show an F value of 1.814 with a significance level of 0.154. since the significance value exceeds 0.05, the results indicate that capital intensity, thin capitalization, and environmental disclosure simultaneously do not have a significant effect on tax avoidance, which is proxied by the cash effective tax rate (CETR).

Table 8. Coefficient of Determination Test
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.288 ^a	.083	.037	.04974

Source : Data processed with SPSS 31, 2026.

Based on the coefficient of determination test, the R value of 0.288 indicates that the relationship between capital intensity, thin capitalization, and environmental disclosure with

tax avoidance is weak. The R Square value of 0.083 indicates that the three independent variables are able to explain 8.3% of the variation in tax avoidance.

Furthermore, the adjusted R-square value of 0.037 indicates that after adjusting for the number of variables in the model, the contribution of independent variables to tax avoidance is 3.7%, while the rest is influenced by other factors outside the research model. The standard error of estimation value of 0.04974 indicates that the model's prediction error rate is relatively small.

These findings provide important implications for policymakers and corporate management. The results indicate that financing structure, particularly debt utilization, plays a more significant role in influencing tax avoidance compared to asset structure and environmental disclosure in the financial sector. Therefore, regulators may need to pay closer attention to debt-based tax planning practices in order to ensure better tax compliance.

CONCLUSION

This study concludes that in financial sector companies listed on the Indonesia Stock Exchange from 2021 to 2024, capital intensity does not have a significant effect on tax avoidance, which is proxied by the cash effective tax rate (CETR). Environmental disclosure, measured using the GRI 300-based disclosure index, also does not have a significant effect on tax avoidance. Conversely, thin capitalization, proxied by the debt to equity ratio (DER), was found to have a significant negative effect on CETR, indicating that an increase in debt-based financing tends to reduce CETR and conceptually reflects an increase in the tendency for tax avoidance. Simultaneously, the regression model shows insignificant results with an F-test significance value of 0.228 and a coefficient of determination of 0.083, so that the independent variables in this model have relatively limited explanatory power over the variation in tax avoidance in the research sample.

Future research could focus on strengthening the explanatory power of the model by expanding the determining variables and deepening the industrial context. Given the low coefficient of determination, subsequent research should add determinants that are more closely related to the characteristics of the financial sector, such as corporate governance, audit quality, profitability, executive characteristics, company size, and the intensity of regulation and compliance, so that tax decision-making mechanisms can be explained more comprehensively. In addition, methodological development can be carried out by expanding the observation period and sector coverage to test the stability of cross-industry findings, as well as considering the use of alternative tax avoidance proxies other than CETR so that the interpretation of tax avoidance behavior becomes more robust. A further approach that includes moderating or mediating variables is also relevant to assess whether environmental disclosure operates through legitimacy, reputation, or stakeholder pressure channels, so that the relationship between sustainability strategies and tax policies can be tested in a more causal and contextual manner.

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