



The Role of Corporate Risk as a Moderating Variable: The Effect of Transfer Pricing and Capital Intensity on Tax Aggressiveness

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ARTICLE INFO

Keywords:

Tax aggressiveness;
Transfer pricing;
Capital intensity;
Corporate risk; Mining
companies.

Article History:

5 Maret 2026 Submit
Manuscript
5 Mei 2026 Pre-Review
10 Mei 2026 Revision
Submitted
20 Mei 2026 Revision
Request
25 Mei 2026 Revision
Submitted
29 Mei 2026 Published

ABSTRACT

Tax aggressiveness remains a major challenge in the mining industry due to the complexity of related-party transactions, substantial fixed-asset investments, and opportunities for profit shifting. This study investigates the effects of transfer pricing and capital intensity on tax aggressiveness while examining the moderating role of corporate risk. Grounded in Agency Theory, the study argues that managerial incentives and risk preferences shape corporate tax planning decisions. A quantitative research design was employed using secondary data from audited annual reports of mining companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024. Purposive sampling produced 50 firm-year observations. The hypotheses were tested using Multiple Linear Regression and Moderated Regression Analysis (MRA). The results indicate that transfer pricing has a significant positive effect on tax aggressiveness, suggesting that related-party transactions increase opportunities for tax minimization. Conversely, capital intensity has a significant negative effect, indicating that firms with greater fixed-asset investments tend to adopt more conservative tax strategies because depreciation policies are more transparent and tightly regulated. Furthermore, corporate risk strengthens the positive relationship between transfer pricing and tax aggressiveness but weakens the relationship between capital intensity and tax aggressiveness. The study contributes to the tax compliance and Agency Theory literature by demonstrating that corporate risk functions as a contingency factor influencing the effectiveness of tax planning strategies. The findings also provide practical implications for tax authorities in strengthening risk-based supervision of transfer pricing and improving tax compliance within the mining sector.

1. Introduction

Taxation is a sector that plays a vital role in supporting the national economy, as it serves as the primary source of government revenue to fund development, provide public services, and maintain national fiscal stability. Optimal tax collection enables the government to perform income redistribution functions and foster sustainable economic growth through effective fiscal policies. The level of compliance and contribution from taxpayers, particularly corporate entities, determines the state's ability to realize predetermined tax revenue

targets. Companies, as corporate taxpayers, are faced with the obligation to fulfill tax regulations while simultaneously maintaining financial performance, which triggers various planned and legal managerial efforts to reduce the tax liabilities borne by the company ([Setyaningsih et al., 2023](#)).

Efforts to reduce the tax burden in the industrial sector, especially in multinational companies, are often manifested through the implementation of aggressive tax avoidance strategies, known as tax aggressiveness ([Safira et al., 2024](#)). Tax aggressiveness is a practice

carried out by exploiting regulatory loopholes and high-complexity tax planning schemes to minimize the amount of tax payable without formally violating legal provisions ([Fadillah & Lingga, 2021](#)). "Tax aggressiveness is a critical concern because it can affect state revenue and reflects corporate compliance behavior toward tax regulations. The Minister of Finance's

report shows that as of late October 2025, tax revenue realization reached Rp1,459 trillion, representing a 3.86% decrease compared to the same period in the previous year. The data for tax revenue realization as of October 31, 2025, is detailed as follows:

Table 1. Revenue Realization by Tax Type

Tax Type	Revenue Realization (Rp Trillion)	Growth (%)
Corporate Income Tax	237,56	-9,60
Individual Income Tax	191,66	-12,80
Final Income Tax, Art. 22, and Art. 26	275,57	-0,10
VAT and Luxury Tax	556,61	-10,30
Other Taxes	197,61	42,30

Source: www.muc.co.id, 2026.

This decline indicates significant challenges in tax revenue optimization efforts, stemming from both economic conditions and taxpayer behavior. Transfer pricing has become one of the mechanisms frequently utilized by taxpayers or companies as part of tax aggressiveness practices. The pricing of transactions between related parties is often structured in a way that does not fully reflect the arm's length principle, allowing profits to be shifted to entities operating in jurisdictions with lower tax rates. Tax aggressiveness practices through transfer pricing are generally not carried out by overtly violating tax regulations, but rather by exploiting regulatory loopholes and differences in international tax systems. This strategy enables companies to minimize their global tax burden while potentially eroding the tax base of the country where the actual economic activity takes place. Consequently, transfer pricing has become a crucial issue demanding strict supervision from tax authorities to maintain fiscal fairness and the sustainability of state revenue.

Capital intensity is another factor alongside transfer pricing that can influence tax aggressiveness, as it reflects a company's strategy in managing its fixed asset structure to affect the amount of tax burden borne ([Margaretha et al., 2021](#)). A high ratio of total

fixed assets indicates that a company has a large fixed asset base, creating opportunities for tax burden optimization through the recognition of deductible depreciation and amortization expenses. This condition allows companies to legally reduce taxable income without explicitly manipulating transactions between related parties. Therefore, capital intensity not only reflects the characteristics of a company's asset structure but also plays a strategic role as a tax management instrument that potentially increases a company's tendency to engage in tax aggressiveness ([Sari & Indrawan, 2022](#)).

Further discussion on the factors influencing tax aggressiveness shows that internal corporate characteristics also determine the intensity of tax management strategies. Variations in financial conditions, asset structures, and business uncertainty lead to differences in risk tolerance among companies in strategic decision-making, including tax policies. The economic, legal, and reputational consequences inherent in tax aggressiveness make risk a primary consideration for management before adopting tax-saving strategies ([Hotimah & Indra, 2025](#)). Corporate risk, reflected by the ratio of net fixed assets to total assets, functions as a moderating variable that modulates the

tendency toward tax aggressiveness. Entities with a high-risk profile tend to adopt more conservative tax strategies due to financial flexibility rigidity and escalated fiscal supervision intensity, whereas low-risk entities have greater leeway in optimizing tax burdens through tax aggressiveness ([Hartati & Husnul, 2024](#)).

The phenomenon of tax aggressiveness is notably prevalent in the mining sector. As a natural resource-based industry, the mining sector is highly vulnerable to unfair transfer pricing practices due to the complexity and high value of their resources, which leads to profit shifting and negatively impacts corporate transparency. "The contribution of the mining sector to tax revenue was recorded as relatively low, at only 8.3% in 2022 and increasing to 9.4% in 2023. This low contribution is inseparable from the prevalence of tax aggressiveness practices and the existence of illegal mining activities classified under the shadow economy, which systematically erode the national tax base."

Findings from PricewaterhouseCoopers (PwC) Indonesia also highlight weak tax governance in this sector, where only about 30% have implemented transparent tax reporting, while the majority of other companies have yet to show adequate transparency in their tax reporting ([Anggraeni et al., 2025](#)). Concrete evidence of tax aggressiveness in the mining sector was reflected in the case of PT Adaro Energy Tbk in 2019; according to a Global Witness report, the company was indicated to have relocated income and profits to its subsidiary, Coaltrade Services International in Singapore, through a transfer pricing scheme. This practice was executed by selling coal to affiliates at a relatively low valuation, which was then resold at a higher price level ([Siahaya & Lingga, 2024](#)).

Another case of tax aggressiveness occurred involving PT Merdeka Copper Gold Tbk, a mining company operating in Gorontalo Province. According to a report on *SuaraIndonesia1.com* by [Puhowanto \(2025\)](#),

the company is alleged to have engaged in tax aggressiveness despite recording strong financial performance as of September 2025. In its latest financial report, the company recorded consolidated revenue of \$2.24 billion, representing 31% year-on-year growth. EBITDA also increased by 36% to \$329 million. However, this financial success has raised questions regarding the fairness of the tax obligations paid to the state. If proven true, such practices have the potential to reduce state revenue from both the tax sector and Non-Tax State Revenue (PNBP), while creating inequity for other compliant business actors. In accordance with Law Number 4 of 2009 concerning Mineral and Coal Mining (UU Minerba), mining companies are obligated to report production and pay royalties and PNBP. Any violation of these obligations can be categorized as a criminal offense.

Various studies have examined the determinants influencing tax aggressiveness. [Situmorang \(2025\)](#) reported findings that transfer pricing has a significant positive implication on tax aggressiveness, reflecting the company's orientation toward minimizing tax burdens. This implies that transfer pricing actions taken by the company are specifically aimed at reducing corporate taxes. Studies on capital intensity conducted by [Margaretha et al. \(2021\)](#) and [Maulana et al. \(2024\)](#) also concluded a significant positive effect on tax aggressiveness. Conversely, different results were presented by Widiyah et al. (2025) and [Kamil & Masripah \(2022\)](#), which showed no influence from capital intensity. Meanwhile, [Rizkia & Utami \(2023\)](#) indicated that entities with a low-risk profile or those led by risk-averse executives tend to present more conservative and restrictive financial reporting, which paradoxically opens space for tax avoidance practices.

Building upon these empirical phenomena and the disparities in previous findings, this research addresses a research gap by examining the influence of transfer pricing and capital intensity on tax aggressiveness through the addition of a

moderating variable not yet explored in previous studies: corporate risk (or tax risk). The selection of this moderating variable is intended to uncover other factors that modulate the strength of the influence of transfer pricing and capital intensity on tax aggressiveness. This study is expected to enrich empirical evidence, expand academic discourse, and provide practical references for business entities regarding tax aggressiveness practices.

2. Literature Review

2.1 Agency Theory

Agency Theory was first formulated by [Jensen & Meckling \(1976\)](#) to examine conflict resolution mechanisms arising from the divergence of interests between the agent and the principal within a contractual relationship. This framework emphasizes the relationship between the entity owner as the principal and management as the agent, characterized by the delegation of decision-making authority to the agent with the expectation of optimal actions to maximize profits and reduce company expenses, including tax liabilities. From an agency perspective, according to [Ramadhan & Purnamasari \(2025\)](#), taxes are positioned as a cost component that incentivizes agents to reduce obligations through strategies that remain within legal corridors.

2.2 Tax Aggressiveness

The definition of tax aggressiveness refers to tax planning measures or actions taken to reduce taxable income. Tax planning carried out by companies involves activities that may or may not constitute tax violations. [Andini et al. \(2025\)](#) state that tax avoidance actions minimize tax burdens by exploiting various loopholes that remain within legal limits. According to [Situmorang \(2025\)](#), tax aggressiveness can be understood as the behavior of taxpayers in designing and implementing strategies aimed at lowering tax burdens or eliminating tax obligations that should arise, whether through mechanisms that comply with legal provisions or through

practices that deviate from regulations, with an orientation toward increasing corporate profits. Thus, a deep and comprehensive understanding of tax aggressiveness is essential for the government, taxpayers, and researchers as a foundation for formulating more effective and sustainable tax management policies and strategies. Here is the formula typically used in research:

$$ETR = \frac{\text{Total Cash Tax Paid}}{\text{Pre - Tax Income}}$$

Source: [Sutrisno & Setyarini \(2024\)](#)

2.3 Transfer Pricing

[Dharmawan et al. \(2017\)](#) reveal that transfer pricing is a practice of shifting taxable income by moving profits from a business entity to an affiliated company within the same group located in a jurisdiction with a lower tax rate. [Siahaya & Lingga \(2024\)](#) articulate transfer pricing as a policy for determining the transaction value of commodities, services, or intangible assets between affiliated entities. Furthermore, [Anggraeni et al. \(2025\)](#) emphasize the utilization of transfer pricing by multinational corporations as an instrument for holistic tax efficiency orchestration. [Ramadhan & Purnamasari \(2025\)](#) describe transfer pricing aggressiveness as a reflection of corporate strategy in minimizing accumulated tax liabilities through the manipulation of revenue recognition and expense charging. Based on these findings, this study defines transfer pricing as an intra-group pricing policy that potentially influences the magnitude of a company's after-tax profit.

The following is the formula used to calculate Transfer Pricing:

$$\text{Related Party TransactionS (RPT)} = \frac{\text{Total Receivables from Related Parties}}{\text{Total Receivables}}$$

Source: [Safira et al. \(2024\)](#)

2.4 Capital Intensity

[Marlina et al. \(2022\)](#) define capital intensity as the degree of capital investment

obtained through the comparison of total fixed assets to the company's overall assets. [Setyaningsih et al. \(2023\)](#) describe capital intensity as a manifestation of a company's investment activities related to the ownership portion of fixed assets and inventory. Furthermore, [Yahya et al. \(2022\)](#) view capital intensity as a reflection of the company's fund allocation into long-term tangible assets relative to total asset resources. Based on these perspectives, capital intensity is concluded to be the level of a company's capital concentration in fixed assets, manifested in the proportion of fixed assets to total assets, representing the allocation of resources into tangible assets to support operations and long-term value creation.

The following is the formula used to calculate Capital Intensity:

$$\text{Capital Intensity} = \frac{\text{Total Fixed Assets}}{\text{Total Assets}}$$

Source: [Adira & Tanjung \(2025\)](#)

2.5 Corporate Risk

[Hotimah & Indra \(2025\)](#), in their study, state that the level of corporate risk reflects the policy direction established by the company's leadership. Corporate risk can be defined as the level of uncertainty inherent in a company's activities, reflecting the possibility of adverse events stemming from both internal and external factors that potentially affect financial performance, business continuity, and the achievement of corporate objectives ([Wardani & Dawa, 2022](#)). These risk-taker or risk-averse characteristics describe the company's attitude in responding to business environment uncertainty. Leaders with risk-taking tendencies possess greater courage in making strategic decisions that have the potential to yield high returns but carry significant risk. Conversely, risk-averse leaders prefer conservative policies and avoid high-risk decisions. Based on these differences in orientation, the level of corporate risk can be identified and measured using the following formula:

$$\text{Corporate Risk} = \frac{\text{Pre-Tax Income}}{\text{Total Assets}}$$

Source: [Rizkia & Utami \(2023\)](#)

2.6 The Influence of Transfer Pricing on Tax Aggressiveness

Research by [Utami & Irawan \(2022\)](#) and [Anggraeni et al. \(2025\)](#) indicates a positive relationship between the intensity of transfer pricing implementation and the degree of corporate tax avoidance. Aggressive transfer pricing represents an entity's strategy to exploit disparities in tax regimes and economic conditions across jurisdictions to reduce fiscal burdens through profit-shifting mechanisms. Agency theory positions management as the party driven to implement such policies in the company's interest, whereby an escalation in transfer pricing aggressiveness potentially increases tax avoidance practices. Based on this, the research hypothesis is formulated as follows:

H1: Transfer pricing has a significant positive effect on tax aggressiveness.

2.7 The Influence of Capital Intensity on Tax Aggressiveness

Capital intensity reflects the proportion of a company's investment in fixed assets used to support long-term operational activities. A high level of capital intensity indicates that the company has a large fixed asset base, potentially generating significant depreciation expenses. These depreciation expenses are recognized as tax-deductible costs and contribute to a reduction in taxable income. This condition provides opportunities for companies to engage in more intensive tax management by utilizing applicable accounting and tax policies. Companies with high capital intensity tend to have greater flexibility in managing the timing and methods of recognizing depreciation expenses. This flexibility encourages management to optimize tax planning strategies to minimize corporate tax liabilities. The use of fixed assets as a tax reduction instrument occurs within legal

boundaries without reflecting a deviation from prevailing tax regulations. This indicates that capital intensity has a significant positive implication on the degree of corporate tax aggressiveness. The findings of [Adira & Tanjung \(2025\)](#) and [Soelistiono & Adi \(2022\)](#) affirm the empirical alignment with theoretical foundations. Based on this, the research hypothesis is formulated as follows:

H2: Capital intensity has a significant positive effect on tax aggressiveness.

2.8 The Influence of Transfer Pricing on Tax Aggressiveness with Corporate Risk as a Moderating Variable

Transfer pricing is positioned as a crucial strategy in managing fiscal burdens through the determination of transaction prices between related parties. This practice opens space for profit relocation to entities in lower-tax jurisdictions, driving an escalation in tax aggressiveness. The relationship between transfer pricing and tax aggressiveness shows a significant positive affiliation, triggered by price determination that deviates from the arm's length principle, thereby reducing taxable income. Transfer pricing intensity reflects managerial capability in legally exploiting cross-border tax regulation disparities. Corporate risk functions as a moderating variable, representing the degree of management's prudence in strategic decision-making. Entities with a high-risk profile tend to restrict aggressive transfer pricing practices due to the escalation of potential sanctions and fiscal supervision.

Conversely, entities with a low-risk profile have broader flexibility in optimizing transfer pricing to suppress tax burdens. This condition indicates the role of corporate risk in modulating the strength of the positive influence of transfer pricing on tax aggressiveness. Based on this, the research hypothesis is formulated as follows:

H3: Corporate risk strengthens the influence of transfer pricing on tax aggressiveness.

2.9 The Influence of Capital Intensity on Tax Aggressiveness with Corporate Risk as a Moderating Variable

Capital intensity has a significant positive effect on tax aggressiveness, representing the large proportion of corporate investment in fixed assets that can be utilized as a fiscal burden management instrument. High ownership of fixed assets provides greater opportunities for companies to optimize tax-deductible depreciation and amortization costs. Companies that invest capital in the form of fixed assets can utilize depreciation expenses as a deduction from the tax burden. The utilization of this strategy implies an erosion of reported corporate profits. This decrease in profit subsequently results in a lower Effective Tax Rate (ETR), which theoretically reflects systematic management efforts to optimize tax burdens. This indicates a tendency for companies to engage in tax planning practices to minimize tax liabilities within the corridors of prevailing tax provisions. Thus, as a company's capital intensity ratio increases, tax aggressiveness will increase ([Marlina et al., 2022](#)).

High capital intensity also indicates a relatively large scale of operations and increasing complexity in business activities. This complexity creates more space for management to design aggressive tax planning strategies. Corporate risk functions as a moderating variable in the capital intensity–tax aggressiveness relationship. [Ayem & Tarang \(2022\)](#) suggest that entities with a low-risk profile tend to amplify the influence of capital intensity on tax aggressiveness due to financial flexibility and higher risk tolerance. Conversely, entities with a high-risk profile reduce this influence, triggered by managerial prudence in implementing aggressive tax strategies to mitigate financial and reputational consequences. Based on this, the research hypothesis is formulated as follows:

H4: Corporate risk strengthens the influence of capital intensity on tax aggressiveness.

3. Research Methods

This study is designed using a descriptive quantitative approach, utilizing multiple linear regression analysis as the primary instrument for testing causality between variables. The data is secondary in nature, collected from official and credible sources, specifically the Indonesia Stock Exchange (IDX), in the form of corporate financial reports for the 2020–2024

period. The research population includes all mining sector companies listed on the IDX during the observation horizon. The selection of the 2020–2024 timeframe is based on the conditions of the post-pandemic global economic recovery. Sample selection applies a purposive sampling technique based on specific criteria:

Table 2. Sample Selection Criteria

No.	Description	Total
1.	Mining sector companies listed on the IDX during the 2020-2024 period.	70
2.	Companies that do not have complete financial reports during the 2020-2024 period.	(35)
3.	Companies that do not have complete data related to variables (transfer pricing, capital intensity, ETR, corporate risk).	(19)
4.	Companies that do not use the USD (United States Dollar) currency.	(6)
Total number of sample companies		10
Total observation data (10 companies x 5 years)		50

Source: www.idx.co.id, processed by the researcher, 2026.

4. Results and Discussion

4.1 Results

Table 3. Descriptive Statistical Analysis Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Transfer pricing	50	0,000	1,000	0,18419	0,305680
Capital intensity	50	0,006	0,656	0,22406	0,176504
Tax Aggressiveness	50	-0,073	0,812	0,27664	0,144849
Corporate Risk	50	-0,086	0,796	0,21560	0,230199
Valid N (listwise)	50				

Source: Processed Data, 2026.

The descriptive statistics in Table 3 show that the transfer pricing variable has a range from a minimum value of 0.000 (MEDC) to a maximum of 1.000 (INCO), with a mean of 0.18419 and a standard deviation of 0.305680. The capital intensity variable ranges from a minimum of 0.006 (PTRO) to a maximum of 0.656 (INCO), with a mean of 0.22406 and a standard deviation of 0.176504. The tax

aggressiveness variable shows a minimum value of -0.073 (KKGI) to a maximum of 0.812 (MEDC), with a mean of 0.27664 and a standard deviation of 0.144849. Finally, the corporate risk variable has a range from a minimum of -0.086 (KKGI) to a maximum of 0.796 (GEMS), with a mean of 0.21560 and a standard deviation of 0.230199.

Tabel 4. Classical Assumption Test Results

Variabel	Multicollinearity		Heteroscedasticity	Normality	Autocorrelation
	Tolerance	VIF	Sig	Asym. Sig	Durbin-Watson
Transfer Pricing	0,458	2,183	0,925	0,200	1,646
Capital Intensity	0,478	2,092	0,323		
Corporate Risk	0,869	1,151	0,72		

Source: Processed Data, 2026.

The classical assumption tests in Table 4 indicate that all independent variables have tolerance values > 0.10 and VIF values < 10, reflecting the absence of multicollinearity. The significance value for each independent variable exceeds 0.05, signifying that the regression model is free from heteroscedasticity. The Kolmogorov-Smirnov

normality test yielded an Asymp. Sig. value of 0.200, surpassing the 0.05 threshold, which indicates a normal data distribution. The autocorrelation test resulted in a Durbin-Watson value of 1.646, falling within the range of -2 to +2, reflecting the absence of autocorrelation.

Table 5. Regression and Hypothesis Test Results

	Multiple Linear Regression			Moderated Analysis Regression	
	B	Std.Error	Sig. T	B	Std.Error
Constant	0,334	0,051		0,486	0,42
Transfer Pricing	0,362	0,133	0,009	0,469	0,145
Capital Intensity	-0,552	0,245	0,029	-0,885	0,172
Corporate Risk				-0,708	0,154
Transfer Pricing Corporate Risk				-3,189	1,222
Capital intensity Corporate Risk				3,604	0,787
F			Sig.		0,000

Source: Processed Data, 2026.

Based on Table 5, the coefficient for transfer pricing in the multiple linear regression analysis is 0.362 with a significance value of 0.009, which is less than 0.05. These results indicate that transfer pricing has a significant positive effect on tax aggressiveness; therefore, this study accepts the first hypothesis (H1). The coefficient for capital intensity in the multiple linear regression analysis is -0.552 with a significance value of 0.029, which is less than 0.05. The test results show that capital intensity has a significant negative effect on tax aggressiveness, implying the rejection of the second hypothesis (H2).

Corporate risk as a moderating variable demonstrates a modulative function in the relationship between the independent and dependent variables. The transfer pricing coefficient after moderation by corporate risk increased from 0.362 to 0.469 ($\beta_2 > \beta_1$), indicating that corporate risk strengthens the influence of transfer pricing on tax aggressiveness, thereby supporting the third hypothesis (H3). Conversely, the capital intensity coefficient after moderation decreased from -0.552 to -0.885 ($\beta_2 < \beta_1$), reflecting the inability of corporate risk to strengthen the influence of capital intensity on tax aggressiveness; thus, the fourth hypothesis

(H4) is rejected. The F-test yielded a significance value of 0.000, lower than the 0.05 level, indicating that the independent variables simultaneously influence the dependent variable.

4.2 Discussion

4.2.1 The Influence of Transfer Pricing on Tax Aggressiveness

The findings confirm a significant positive influence of transfer pricing on tax aggressiveness, supporting the first hypothesis (H1). This influence arises because transfer pricing is frequently utilized as a tax planning instrument to optimize cost and revenue structures among affiliated companies. Such practices not only result in the reduction of taxable income in high-tax jurisdictions but also increase the complexity of tax oversight. The limited access of tax authorities to cross-border transaction information creates opportunities for companies to engage in tax aggressiveness through transfer pricing manipulations that are difficult to detect directly.

This result is also aligned with Agency Theory, where management, acting as the agent, tends to exploit these limitations to manage profit allocation among affiliates to suppress tax burdens. The divergence of interests between management and owners drives management to make decisions oriented toward after-tax profit efficiency, especially when oversight is sub-optimal. These conditions demonstrate that the intensification of transfer pricing practices correlates with an escalation in corporate opportunities for tax aggressiveness as a manifestation of opportunistic managerial behavior. [Situmorang \(2025\)](#) and [Andini et al. \(2025\)](#) support these findings, showing that transfer pricing significantly and positively affects tax aggressiveness.

Conversely, [Fadillah & Lingga \(2021\)](#) obtained the opposite result, finding no effect. This discrepancy is likely caused by differing levels of tax regulation enforcement across countries; the effectiveness of transfer pricing

in tax aggressiveness depends heavily on strict oversight from affiliate countries, which tends to weaken transfer pricing practices and limit a company's ability to manipulate prices.

4.2.2 The Influence of Capital Intensity on Tax Aggressiveness

The findings indicate that capital intensity has a significant negative effect on tax aggressiveness, thus rejecting the second hypothesis (H2). This negative relationship reflects that an increase in the proportion of a company's investment in fixed assets tends to lower the incentives and opportunities for tax aggressiveness. Theoretically, this relates to the nature of tangible assets, which possess a relatively high degree of traceability and transparency, making them easier for tax authorities to monitor through financial statements and accompanying administrative tax obligations. Furthermore, fixed assets generally have long-term useful lives with depreciation treatments strictly and detailedly governed by tax regulations, which ultimately limits managerial discretion in manipulating tax burdens.

Consequently, high capital intensity functions as a limiting mechanism against opportunistic managerial behavior in the context of tax avoidance. Companies with high capital intensity tend to have stable, long-term operational structures, encouraging managerial prudence in risky fiscal decision-making. This finding is supported by [Maulana et al. \(2024\)](#) and [Widiyah et al. \(2025\)](#). In contrast, [Soelistiono & Adi \(2022\)](#) and [Sutrisno & Setyarini \(2024\)](#) argue that higher fixed assets increase the opportunity to use depreciation as a means of tax aggressiveness. However, despite these differences, varying corporate objectives, affiliate country policies, and observation periods determine these distinct outcomes.

4.2.3 The Influence of Transfer Pricing on Tax Aggressiveness with Corporate Risk as a Moderating Variable

The findings demonstrate that corporate risk strengthens the influence of transfer pricing on tax aggressiveness, supporting the third hypothesis (H3). Companies facing higher risk levels tend to show a greater tolerance for tax aggressiveness ([Wardani & Dawa, 2022](#)). Corporate risk reflects uncertainty in cash flows and future performance, driving management to maximize tax efficiency as a protective mechanism against potential declines in profitability. Transfer pricing becomes a strategic instrument used more intensively in high-risk companies because it provides flexibility in allocating profits among affiliates.

High operational and financial risks push management toward opportunistic decisions, including setting transfer prices aimed at suppressing tax burdens. This condition increases the tendency for tax aggressiveness when transfer pricing is practiced in a high-volatility environment, as evidenced by [Kamil & Masripah \(2022\)](#). Corporate risk acts as a driver for managerial risk-taking behavior regarding tax policies. Management in high-risk companies tends to prefer aggressive tax strategies because the perceived benefits of tax savings outweigh the potential penalties or compliance risks.

4.2.5 The Influence of Capital Intensity on Tax Aggressiveness with Corporate Risk as a Moderating Variable

The findings show that corporate risk weakens the influence of capital intensity on tax aggressiveness, thus rejecting the fourth hypothesis (H4). According to [Rizkia & Utami \(2023\)](#), companies with high risk levels tend to adopt more conservative tax policies, despite having a large proportion of fixed assets. Research by [Hartati & Husnul \(2024\)](#) also explains that high operational and financial risks drive management to avoid aggressive tax strategies that could increase exposure to sanctions and fiscal scrutiny.

Corporate risk serves as a controlling factor for managerial behavior, particularly in tax planning decisions. Risks inherent in assets

are often manifested through damage or excessive wear and tear, which results in increased depreciation expenses. This increase in depreciation leads to a decrease in taxable income, thereby lowering the company's tax liability. Consequently, the company lacks a strong incentive to engage in aggressive tax practices, as it already bears significant costs due to the asset risks faced.

Previous research by [Hotimah & Indra \(2025\)](#) also emphasizes results consistent with Agency Theory: if managers know the company is in a high-risk condition with high capital intensity, they tend to avoid aggressive tax avoidance. High-risk companies face greater reputational and compliance pressure from external stakeholders. This pressure limits management's room for maneuver in exploiting tax loopholes, even when the company holds significant fixed assets. Overall, the findings confirm that corporate risk plays a role in weakening the relationship between capital intensity and tax aggressiveness, aligning with the perspective of managerial prudence in fiscal decision-making.

5. Conclusion

5.1 Summary of Key Findings

This study demonstrates that transfer pricing has a positive and significant effect on tax aggressiveness, indicating that companies tend to utilize affiliated transactions as a strategy to reduce tax burdens through profit shifting mechanisms. In contrast, capital intensity exhibits a negative and significant effect on tax aggressiveness, implying that firms with higher proportions of fixed assets tend to be more conservative in their tax strategies due to stricter depreciation regulations and greater transparency in asset reporting. Furthermore, corporate risk is proven to play a moderating role by strengthening the influence of transfer pricing on tax aggressiveness while weakening the influence of capital intensity on tax aggressiveness. These findings confirm that corporate risk acts as a contingency factor

influencing managerial decisions related to corporate tax strategies.

5.2 Theoretical Contributions

This research contributes to the development of agency theory by reinforcing the argument that managerial decisions regarding taxation are influenced by opportunistic behavior and risk preferences. The study extends prior literature by positioning corporate risk as a moderating variable in the relationship between transfer pricing, capital intensity, and tax aggressiveness. The findings provide empirical evidence that the impact of tax planning strategies cannot be fully understood without considering the firm's risk profile. Additionally, the study enriches the tax aggressiveness literature within the mining sector context, particularly in emerging economies where regulatory oversight and corporate governance structures may vary significantly.

5.3 Practical and Policy Implications

From a practical perspective, the findings suggest that companies should carefully evaluate the long-term financial, reputational, and regulatory consequences of aggressive tax strategies, especially those involving transfer pricing practices. Corporate management is encouraged to strengthen internal governance and risk management systems to ensure compliance with taxation regulations.

For policymakers and tax authorities, this study highlights the importance of intensifying supervision of transfer pricing activities, particularly among high-risk companies. Tax authorities should also improve transparency requirements, strengthen transfer pricing documentation standards, and enhance cross-border information exchange mechanisms. In addition, tax regulations may need to incorporate firm-specific risk considerations to improve the effectiveness of tax compliance monitoring and reduce opportunities for aggressive tax practices.

5.4 Limitations of the Study

This study has several limitations. First, the research only focuses on mining companies listed on the Indonesia Stock Exchange during the 2020–2024 period, limiting the generalizability of the findings to other sectors or countries. Second, the study uses a relatively small sample size consisting of 50 observations, which may restrict the robustness of the results. Third, the measurement of tax aggressiveness, transfer pricing, capital intensity, and corporate risk relies on specific proxies that may not fully capture the complexity of each construct. Finally, this study only examines two independent variables and one moderating variable, while other determinants of tax aggressiveness may also play significant roles.

5.5 Directions for Future Research

Future studies are encouraged to expand the research scope by including companies from different industrial sectors or conducting cross-country comparisons to improve the generalizability of the findings. Researchers may also incorporate additional variables such as corporate governance, profitability, leverage, executive characteristics, political connections, or environmental, social, and governance (ESG) factors to provide a more comprehensive understanding of tax aggressiveness. Moreover, future research could employ alternative proxies for measuring tax aggressiveness and corporate risk, as well as utilize larger datasets and longer observation periods to enhance empirical accuracy and consistency.

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