



## Minimizing Disguised Equity as Mandated by the Income Tax Law of Indonesia

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**Abstract:** The Indonesian government has limited the Debt-to-Equity Ratio (DER) to a maximum of 4:1 since the 2016 tax year and reduced the corporate income tax rate from 25% to 22% since the 2020 tax year. I compared data on public companies in Indonesia and Thailand to see the impact of reducing tax rates to reduce Tax Avoidance and reduce Disguised Equity. I also analyzed the findings of eleven previous studies regarding the effectiveness of DER restrictions in Reducing Tax Avoidance and Disguised Equity. As a result, a decrease in the tax rate has not been correlated with tax avoidance and DER. DER restrictions, although effective in reducing Disguised Equity, are ineffective in boosting tax revenues through company capital structure changes because with a DER limit of 4:1, companies still have room for tax savings. The DER limit of 4:1 is still higher than the average DER in sample companies of 0.3:1. Therefore, I suggest that the government immediately implement interest cost limitation regulations with the Interest Expense Limitation Based on EBITDA provisions as recommended by the OECD. I simulated changes in interest cost financing restrictions for companies listed on the Indonesia Stock Exchange between 2016 and 2021 if using a DER limit of 4:1 and if using Interest Expense Limitation Based on EBITDA. As a result, the government can increase potential tax revenues significantly.

**Keywords:** Debt-to-Equity Ratio; Disguised Equity; Tax Avoidance

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## INTRODUCTION

Tax Avoidance, as characterized by Murray (2012), is a legal practice undertaken by individuals or corporations to decrease their tax liabilities. Tax avoidance is mostly done by exploiting the tax system to one's advantage without contravening the law. Tax avoidance is done in many ways, including using thin capitalization. Thin capitalization refers to the tendency of companies to finance their operations more heavily through debt than equity (Susilawati, 2019). In the Income Tax Law of Indonesia, thin capitalization is also called disguised equity. This method is taken because interest on these loans can be deducted when calculating taxable profits, ultimately lowering the overall tax burden (Blouin et al., 2014).

Two methods are used worldwide to address disguised equity: the thin capitalization rule and the Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) method recommended by the OECD through Base Erosion and Profit Shifting (BEPS) Action 4 (see Table 1). The thin capitalization rule limits the deductibility of interest expenses based on the DER. In contrast, the EBITDA method limits the amount of interest deductible as a percentage of EBITDA. Both strategies aim to prevent unfair practices and ensure that multinational corporations pay their fair share of taxes. These approaches depend on each country's specific tax laws and policies.

Article 18 Par (1) of the Income Tax Law expressly chooses the first method, namely by limiting the ratio of debt to capital. In response, Indonesia introduced a limitation of the Debt-to-Equity Ratio (DER) ratio to 3:1 through Minister of Finance Decree Number 1002/KMK.04/1984. However, this regulation was not enforced due to concerns about potential impacts on investment until 2016.

Starting from the 2016 tax year, the Government introduced Minister of Finance Regulation Number 169/PMK.010/2015, limiting the DER to a maximum of 4:1. This rule also regulates debt without interest to shareholders (specifically those with "special relationships") as part of equity. However, it is important to mention that certain entities are exempt from the thin capitalization rules in Indonesia. This exemption applies to banks, financial institutions, insurance and reinsurance companies, and businesses in the oil and gas, general mining, and other sectors. Businesses operating in the infrastructure sector are also exempt from these rules.

The DER limitation of 4:1 in Indonesia is relatively high compared to other countries implementing thin capitalization rules. Only limited countries still utilize this high ratio, for example, Lithuania, Slovenia, Croatia, and Egypt, which also use a 4:1 ratio. In comparison, only Belgium, an Organization for Economic Cooperation and Development (OECD) member, implements a 5:1 ratio. Other countries have varying thresholds of less than 4:1, such as Australia (0.6:1), Belgium and Mexico (1:1), France (1.5:1), Japan and Turkey (3:1), and Korea and China (2:1).

The OECD has recommended a shift away from thin capitalization rules, which traditionally limited the interest that could be deducted on intragroup loans. This shift is because such regulations often result in contradictions and fail to address all financial instruments where interest deductions may be applicable. Moreover, these rules do not effectively align the deduction of net interest expenses with the taxable income of entities, as they do not necessarily correspond to the Income generated by the investments financed through debt. Therefore, the OECD has emphasized the need for alternative approaches to address the complexity of interest deductions and their relationship to taxable Income.

The OECD's strategy to address Base Erosion and Profit Shifting (BEPS) risks centers around a fixed ratio rule using EBITDA as a foundation. This rule restricts net interest deductions to a specific percentage of a company's EBITDA, primarily targeting entities with substantial net interest costs and high net interest to EBITDA ratios. This approach discourages profit shifting by aligning interest deductions with the taxable income generated from legitimate economic activities. Additionally, the OECD proposes complementary provisions to mitigate the impact on lower BEPS risk situations, including a de minimis threshold, exceptions for interest on loans funding public-benefit projects, and the ability to carry forward unused interest capacity and disallowed interest expenses. These measures aim to apply the rules with greater balance and flexibility. The OECD emphasizes the importance of coordinated implementation and continuous monitoring to ensure the strategy effectively curbs multinational corporations' use of debt for BEPS, making it a viable solution for governments worldwide.

Table 1. Comparison of Thin Capitalization Rule and EBITDA Method

Criteria	Thin Capitalization Rule	EBITDA Method
Method	By reducing the interest rate proportionally if the debt is over the cap on DER	Limiting interest rate to a certain percentage of EBITDA (usually a maximum of 30% of EBITDA)
Advantages	<ul style="list-style-type: none"> <li>- Customizable to local tax policy and economy.</li> <li>- Simple to understand and implement.</li> <li>- Effective in limiting excessive borrowing and tax avoidance.</li> </ul>	<ul style="list-style-type: none"> <li>- Ensures deductible interest aligns with earnings.</li> <li>- Supported by OECD, it promotes international coordination and reduces tax evasion.</li> <li>- It can be implemented with other rules for comprehensive tax protection.</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>- Does not consider the company's earnings. It can disadvantage unprofitable or start-up companies.</li> <li>- Ineffective for companies with large equity structures or those that can manipulate their financing.</li> <li>- Requires careful setting to avoid impacts on investment and growth.</li> </ul>	<ul style="list-style-type: none"> <li>- More complex and challenging to implement and monitor.</li> <li>- If too restrictive, it could limit companies' ability to finance through debt, especially in difficult economic conditions.</li> <li>- Requires regular adjustments to reflect economic and operational changes.</li> </ul>

Source: Author Elaboration

## Literature Review

Corporations are often drawn towards borrowing instead of raising equity when contemplating financial decisions, particularly regarding sourcing funds (Auerbach, 2002). The rationale behind this preference lies in the different tax implications of the two financing methods. When a firm raises funds through equity, it must pay dividends to shareholders. These dividends are often not tax-deductible, burdening the company financially (Karpavičius & Yu, 2016). Conversely, when a firm opts for debt financing, it incurs interest expenses. Unlike dividends, these interest expenses are tax-deductible (Karpavičius & Yu, 2016). The ability to deduct interest expenses from the taxable Income essentially decreases the firm's tax burden. This tax shield from debt financing often makes borrowing a more favorable option for corporations (Myers, 1977).

The trade-off theory then expands on how businesses make financial decisions. The trade-off theory asserts that businesses weigh the advantages and disadvantages of using debt to finance their operations (Ahmadimousaabad

et al., 2013). Deducting interest payments from taxable income is a significant tax advantage of using debt. Increased reliance on debt, however, also means that businesses must pay interest costs and run the risk of going bankrupt if they cannot fulfill their debt obligations. When tax rates are higher, businesses may borrow more money to pay fewer overall taxes while making more money after taxes. As a result, differences in tax rates become a key element in explaining the variations in firm leverage ratios observed (Deng et al., 2020).

Lin et al. (2014) study extends this understanding by suggesting that a firm's debt use is significantly inversely associated with its tax aggressiveness. This finding indicates that firms with higher effective tax rates tend to increase debt levels to use interest expenses to offset tax expenses. They define the expected effective tax rate as the ratio of expected taxes paid to expected pre-tax cash flow, where a lower expected effective tax rate, or higher tax aggressiveness, results in a greater expected residual cash flow for the firm's stakeholders.

In the research of Fuest et al. (2011), it is proposed that a higher corporate tax rate in the host country leads multinational affiliates to have a higher debt ratio. This influence is notably more significant in developing countries than in developed ones, indicating that high tax rates may push affiliates to use more debt in their tax management strategies. Their findings suggest that the capital structures of affiliates in developing countries are more sensitive to corporate income taxes than those in developed countries. The profit-shifting response in developing countries is about twice as large, pointing towards a greater susceptibility to tax-induced profit shifting by multinational firms.

Using company data in the US, Faulkender and Smith (2016) findings show that firms tend to have higher debt levels and lower interest coverage when operating in countries with higher tax rates. Similarly, Faulkender and Smith (2016) argue that taxes have a first-order effect on a firm's capital structure, with companies increasing their leverage by approximately 40 basis points for every one percentage point increase in tax rates.

Deng et al. (2020) researched a sample of Chinese firms with stocks publicly traded on share markets on the Shanghai or Shenzhen Stock Exchange China. They show that Chinese firms tend not to respond to tax cuts but increase their long-term debt levels when taxes rise, especially for companies operating under low tax regimes. This finding reinforces the consensus that taxes affect the firm's capital structure choice. Lastly, Huizinga and Laeven (2008) revealed that multinational companies in Germany frequently move their profits to countries with lower tax rates, showing a 1.3 percent reduction in reported profits for every one percent increase in the highest nominal tax rate in a country.

To summarize, the literature vividly underscores the pivotal role tax rates play in shaping a firm's debt utilization and, thus, its receivables. By leveraging tax advantages, firms can strategically balance the benefits and risks of debt usage, which vary across countries, development stages, and tax regimes. It is also apparent that multinational corporations exploit this mechanism to optimize their profits, frequently shifting their revenues to lower tax-rate jurisdictions. Thus, tax policy becomes more than a fiscal tool; it emerges as a significant determinant of corporate financial behavior and can inadvertently impact companies' capital structures and financial health. These findings call for thoughtful policymaking, a nuanced understanding of healthy behavior, and careful examination of corporate tax strategies in the face of global business operations.

In their quest to optimize tax obligations, companies often lean towards excessive use of debt as a tax avoidance instrument. The motivation behind these regulations is to curb the tax benefits from debt financing, thereby promoting healthier corporate structures.

A commonly employed regulatory measure is the thin capitalization rule, which looks at accounts on the balance sheet. Under this rule, the amount of interest expenses that can be acknowledged for tax purposes depends on the firm's DER (Buettner et al., 2012). Several countries still use this method for OECD member states, including Australia, Canada, and Turkey.

However, other countries have moved towards different regulatory measures. Nations, including the United Kingdom, the United States, Japan, and Italy, have adopted rules that limit the tax-deductible interest amount based on a specific percentage of a company's EBITDA. Unlike the thin capitalization rule, which considers balance sheet items, this method considers elements from the income statement. Here, the magnitude of interest expenses acknowledged for tax purposes is a certain percentage of EBITDA (Collier et al., 2018). While the OECD suggests a 10% to 30% benchmark, it's interesting that many countries have chosen to exceed these recommendations. For example, the Netherlands and Japan have opted for a higher percentage, with caps at 75% and 40%, respectively.

Over time, the utility of the Effective Tax Rate (ETR) has expanded beyond merely indicating a firm's tax burden. It is now commonly employed to analyze the relationship between a company's tax burden and various factors. For instance, ETR can illuminate how a company's behavior varies based on certain conditions, such as the size of the company, its management patterns, capital structure, or its relationship with specific fiscal policies. By investigating these relationships, researchers can understand how companies react to changes in their operating environment and how these reactions ultimately affect their tax behavior (Ljungqvist, 2016). The nuanced insights drawn from these analyses contribute significantly to corporate finance and tax policy, shaping the decision-making process of corporations and policymakers.

## METHODOLOGY

### Data

In this study, the author aims to examine the relationship between tax rates and leverage, as well as tax rates and tax avoidance, within the context of publicly listed companies on the Indonesia Stock Exchange. The data utilized for this investigation is secondary, comprising financial reports sourced from Refinitiv Eikon.

A focal point of my examination is the impact of a tax reduction from 30% in 2008 to 28% in 2009. Notably, this tax rate has been further reduced by 5% for publicly listed companies on the Indonesia Stock Exchange since 2008. Consequently, the tax rate applicable to these sample companies in Indonesia was 25% in 2008 and 23% in 2009.

Given that Corporate Income Tax (PPh Badan) is a centralized tax, these rates are universally applied to all taxpayers in Indonesia. Thus, the tax rates for non-public companies were 30% in 2008 and 28% in 2009. Meanwhile, the rates for publicly listed companies were 25% in 2008 and 23% in 2009.

My study seeks to uncover the impact of these tax reduction policies. If I were to perform a Difference-in-Difference (DiD) analysis, I would not find any companies in Indonesia unaffected by the policy that could be used as a control variable. I need to identify a control variable from another country. I chose a country within the Southeast Asia region. My rationale is based on these countries' economic cooperation and the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement.

Upon reviewing several ASEAN countries, I selected Thailand as my control variable. The reasons are: 1) There are similarities in several economic variables between Indonesia and Thailand, such as Expenditures and Revenues, both per capita and as a percentage of GDP (see Appendix 3). 2) A high similarity in export structure within the ASEAN region occurs with Thailand, represented by an Export Similarity Index of 93.77 (Chasanah et al., 2017).

The variables used in the analysis are DER, Manufacturing, Total Assets, Return-on-Assets (ROA), and Return-on-Equity (ROE) (see Table 2). The DER variable represents the total debt-to-equity ratio, providing insight into a company's financial leverage. The variable of Manufacturing is a dummy variable that takes 1 for manufacturing companies and 0 for others. Manufacturing companies have more complex business processes than non-manufacturing companies (Irawan & Novitasari, 2021). For the variable of Total Assets, the Ln shows the natural logarithm of total assets, which can help capture the scale of a company's operations. ROA measures a company's profitability by dividing its net income by total assets. Finally, ROE calculates profitability from a shareholder perspective by dividing net income by shareholder equity. These variables collectively provide a comprehensive picture of financial leverage, industry classification, firm size, and profitability in the analysis.

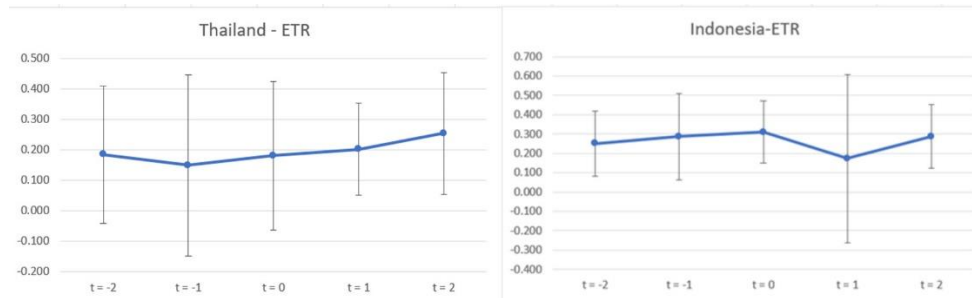
Table 2. Definition of Variable Studied

Variable	Meaning	Measure
DER	Debt-to-Equity	Ratio: Total Debt divided by Equity
MANUF	Manufacturing	Dummy variable: 1 for Manufacturing Company, 0 otherwise
CO_SIZE	Ln Total Assets	Natural logarithm of Total Assets
ROA	Return on Assets	Net Income divided by Total Assets
ROE	Return on Equity	Net Income divided by Shareholder Equity

Source: Author Elaboration

### Parallel Trend Assumption

DiD analysis was performed to identify the causal effect of the tax reduction policy on the tax avoidance rate (measured by ETR) and DER. In DiD, the treatment and control groups are moving in parallel in the absence of treatment. In this study, the treatment group was Indonesia's establishments, which experienced tax reductions starting in 2009. Meanwhile, Thailand's establishment was treated as a control group as they experienced a flat tax rate during 2007-2011. Furthermore, the model used the establishment sector (manufacture vs. non-manufacture), asset, ROA, and ROE as control variables.

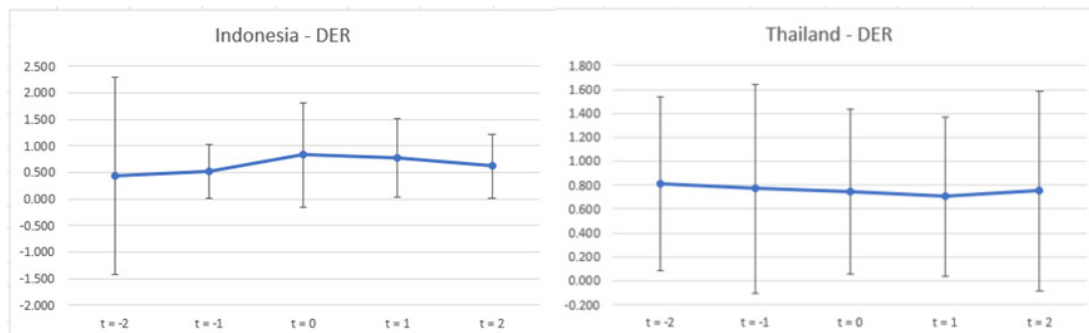


Note: t = 0 indicates the first year of the tax reduction treatment  
 Figure 1. Comparison of ETR between treatment and control group

An important assumption in DiD is the parallel trend assumption. Figure 1 illustrates the comparison of ETR between the treatment and control groups. Based on the figure, Indonesia experienced a positive ETR in the pre-treatment period. On the other hand, Thailand's ETR during the same period was slightly fluctuating. The slightly different trend between the two groups in visualization indicated an uncertain result in the parallel trend assumption. Therefore, a formal test was needed to test whether the parallel trend was violated.

The interaction between group treatment and time trend resulted in an insignificant effect,  $F(1, 143) = 1.21$ ,  $p = 0.27$ . The test indicated that the ETR pre-treatment trends between the treatment and control groups were not different. In other words, we can conclude that the parallel trend assumption was met.

Moreover, figure 2 illustrates the comparison of DER between the treatment and control groups. Based on the figure, Indonesia experienced a positive DER in the pre-treatment period. On the other hand, Thailand's DER during the same period showed a negative trend. The divergent trends between the two groups indicated a violation of the parallel trend assumption. Moreover, the interaction between group treatment and time trend resulted in a significant effect,  $F(1, 143) = 3.95$ ,  $p < 0.05$ . The test indicated that the DER pre-treatment trends between the treatment and control groups differed significantly. In other words, we can conclude that the parallel trend assumption was violated. As a result, DiD could not be performed to evaluate the impact of tax reduction on DER.



Note: t = 0 indicates the first year of the tax reduction treatment  
 Figure 2. Comparison of DER between treatment and control group

## RESULTS

### The impact of Tax Reduction on ETR

The impact of tax reduction on ETR was evaluated using DiD analysis as the parallel trend assumption was met. The equation of the study in this research is:

$$ETR_{it} = \alpha + \beta_1 t_t + \beta_2 T_i + \beta_3 t_t T_i + \beta_4 MANUF_{it} + \beta_5 CO\_SIZE_{it} + \beta_6 ROA_{it} + \beta_7 ROE_{it} + \varepsilon_{it} \quad \dots (1)$$

In equation (1), subscript  $i$  indicates the unit observation, which is establishments, and subscript  $t$  represents the year. ETR denotes the outcome variable tax avoidance. The higher the ETR indicates less tax avoidance.  $T$  is a dummy variable, which varies across observations, and it controls for fixed differences between the groups being compared. Meanwhile,  $t$  is a dummy for the post-treatment period that varies over time, and it controls for the fact that conditions change over time for all observations. The interaction term ( $tT$ ) is generated by multiplying the two dummies. The coefficient on this term indicates the DiD casual effect.  $MANUF$  denotes whether the sector of the establishment is manufactured (1) or not (0).  $CO\_SIZE$  denotes the logarithm of the establishment's asset.  $ROA$  denotes the return on assets, and  $ROE$  denotes the return on equity.

Table 3. Result of DiD analysis

	<b>b</b>	<b>se(b)</b>	<b>B</b>	<b>t</b>	<b>p</b>
(Constant)	0.25	0.11		2.22	0.03
Group	0.15	0.06	0.26	2.36	0.02
Dummy Year	0.05	0.02	0.10	2.34	0.02
Int_Year_Group	-0.05	0.04	-0.07	-1.14	0.26
MANUF	-0.01	0.02	-0.01	-0.31	0.76
CO_SIZE	-0.01	0.01	-0.10	-0.98	0.33
ROA	0.32	0.07	0.16	4.44	0.00
ROE	0.00	0.01	-0.02	-0.48	0.63

Source: Author Elaboration

The result showed that the interaction term between the group and year was insignificant ( $b = -0.05$ ,  $t = -1.14$ ,  $p = 0.26$ ). The negative coefficient indicated that the tax reduction negatively impacted ETR, but the effect was insignificant. Furthermore, the main effect of the dummy year was statistically significant ( $b = 0.05$ ,  $t = 0.05$ ,  $p < 0.05$ ). It indicated that ETR significantly differed between the two groups before and after-tax reduction events. A positive coefficient indicated that the ETR in the post-tax reduction period was significantly higher than during the pre-tax reduction period. Moreover, the result also suggested that ROA significantly positively affects the ETR ( $b = 0.32$ ,  $t = 0.32$ ,  $p < 0.05$ ).

### The effect of Tax Reduction on DER

The effect of tax reduction on DER could not be evaluated using DiD analysis as the parallel trend assumption was violated. Therefore, multiple linear regression was performed to evaluate the effect. The treatment group was removed from the dataset as it was not used in the model. Hence, only establishments that experienced treatment were included as unit observations. The equation of the study in this research is:

$$DER_i = \alpha + \beta_1 t_i + \beta_2 MANUF_i + \beta_3 CO\_SIZE_i + \beta_4 ROA_i + \beta_5 ROE_i + \varepsilon_i \dots (2)$$

In equation (2), subscript  $i$  indicates the unit observation, which is establishments. DER denotes the outcome variable, which is a DER. A higher DER indicates a high dependence on debt. The  $t$  is a dummy for the post-treatment period (1). MANUF denotes whether the sector of the establishment is manufactured or not. CO\_SIZE denotes the logarithm of the establishment's asset. ROA denotes the return on assets, and ROE denotes the return on equity.

The result suggested that the dummy year's coefficient was insignificant ( $b = 0.24$ ,  $t = 1.34$ ,  $p = 0.18$ ). The positive coefficient indicated that the tax reduction positively affected DER, but the effect was insignificant.

Table 4. Result of Multiple Linear Regression

	<b>b</b>	<b>se(b)</b>	<b>B</b>	<b>t</b>	<b>p</b>
(Constant)	2.07	1.47		1.41	0.16
Dummy Year	0.24	0.18	0.11	1.34	0.18
MANUF	-0.09	0.18	-0.04	-0.48	0.63
CO_SIZE	-0.05	0.05	-0.09	-1.04	0.30
ROA	-0.43	0.62	-0.06	-0.70	0.49
ROE	-0.06	0.05	-0.10	-1.16	0.25

Source: Author Elaboration

Moreover, linear regression assumptions were evaluated to check whether the regression result was valid. However, the normality and homoscedastic assumption were violated as the variance of the DER was different across the time (Figure 2). The heteroscedastic was due to a large variance in time  $t = -2$ , causing a problem as there were influential observations in the data. Hence, robust regression was used to overcome the problem of the outliers and influential observations in the data and minimize their impact on the regression coefficients, and a reliable estimate could be obtained.

Table 5. Result of Robust Regression

	<b>b</b>	<b>se(b)</b>	<b>t</b>	<b>p</b>
(Constant)	0.62	0.73	0.85	0.38
Dummy Year	0.004	0.09	0.04	0.97
MANUF	0.02	0.09	0.21	0.83
CO_SIZE	0.003	0.03	0.11	0.91
ROA	-1.64	0.30	-5.39	0.00
ROE	-0.05	0.03	-2.19	0.02

Source: Author Elaboration

Regression analysis robust M-estimator with a Tukey Bisquare was chosen as it resulted in a smaller residual



standard error than the Huber function. The robust regression result can be seen in Table 5. However, similarly, with the multiple linear regression using Ordinary Least Square (OLS), the dummy year coefficient was insignificant ( $b = 0.004$ ,  $t = 0.04$ ,  $p = 0.97$ ). The positive coefficient indicated that the tax reduction positively affected DER, but the effect was insignificant. Moreover, the result suggested that ROA ( $b = -1.64$ ,  $t = -5.39$ ,  $p < 0.05$ ) and ROE ( $b = -0.05$ ,  $t = -2.19$ ,  $p = 0.02$ ) have a significant negative effect on the DER.

### Effectiveness of Thin Capitalization Rules in Reducing Tax Avoidance

According to Nuraini and Marsono (2014), thin capitalization is a condition where a company is financed more by debt than capital. The thin capitalization rule in Indonesia, as regulated under Article 18 Par (1) of the Income Tax Law and implemented through Minister of Finance Regulation Number 169/PMK.010/2015, has sparked much discussion about its effectiveness. This rule restricts the DER to a limit of 4:1, which essentially aims to prevent companies from excessively leveraging debt for financing.

Factors such as the degree of multinationalism, usage of tax havens, tax uncertainty, and the firm's size significantly influence the likelihood of thin capitalization. Interestingly, research by Nugroho and Suryarini (2018) found that the size of a company's audit committee negatively affects thin capitalization, suggesting its potential moderating role in debt financing decisions. Furthermore, Elok (2020) study on public companies in Indonesia aligns with the research of Sismi and Martani (2022), which found that the presence or absence of subsidiary or affiliate entities does not significantly influence thin capitalization.

Several researchers in Indonesia have been examining the effectiveness of the thin capitalization Rule in reducing thin capitalization and tax avoidance. Thin capitalization is proxied by the DER, while tax avoidance is proxied by the Effective Tax Rate (ETR). A higher DER indicates that a company relies more on debt than equity, leading to thin capitalization. Meanwhile, ETR is calculated by comparing the taxes paid by a company to its pre-tax income. The logic is that if the ETR is lower, there is a higher tendency for tax avoidance.

I have compiled 11 available studies on this issue and reviewed them to determine the strength of their findings in proving the rule's effectiveness. Reviewing these studies may offer valuable insights into the effectiveness of the thin capitalization rule and help guide future policy adjustments.

The effectiveness of Indonesia's thin capitalization rule in reducing tax avoidance has been the subject of multiple studies. Zaina's (2017) research on publicly listed companies found that the rule primarily affected high-debt-to-equity ratio (DER) firms but not those with lower DER, reducing leverage in the former but not directly impacting effective tax rates (ETR). Pramajaya et al. (2019) did not find a significant relationship between DER and Earning Before Tax (EBT) in their study, suggesting the limited effectiveness of the rule. Bachriansyah's (2019) qualitative research explored the government's motives for implementing the rule but did not provide a clear verdict on its effectiveness.

Prastiwi and Ratnasari (2019) found that thin capitalization positively affected tax avoidance due to the relatively large debt-to-capital ratio limit in Indonesia, indicating ineffectiveness. Salwah and Herianti (2019) observed a reduction in DER after implementing the rule, potentially reducing tax avoidance opportunities. Atmaja's (2021) difference-in-difference study showed significant tax evasion reduction but found the rule ineffective due to a high DER threshold. Fadillah et al. (2021) noted an impact on tax avoidance without directly proving rule effectiveness.

Mahardika and Irawan's (2022) DiD approach indicated that thin capitalization rules reduced tax avoidance with varying effects on high and low DER firms, suggesting effectiveness in some cases. Anindita et al. (2022) found similar results in their analysis. Finally, Ramadhan (2023) identified a reduction in tax avoidance over time but not a direct effect on current ETR, indicating mixed findings regarding the rule's effectiveness.

After analyzing the 11 studies above, I created a quadrant table to evaluate the effectiveness of the Thin Capitalization Rule based on its effect on reducing DER and reducing Tax Avoidance (with an increased ETR proxy) (see Figure 3). This quadrant is divided into four based on the results of the study based on the effect of the Thin Capitalization Rule on reducing DER and reducing Tax Avoidance (with an increased ETR proxy).

Tax Avoidance	High	<b>Quadrant: 3</b> -	<b>Quadrant: 4</b> Prastiwi and Ratnasari (2019) Atmaja (2021) Fadillah et al. (2021) Ramadhan (2023) Mahardika and Irawan (2022)
	Low/No Effect	<b>Quadrant: 1</b> Zaina (2017) for High DER Pramajaya et al. (2019) Bachriansyah (2019)	<b>Quadrant: 2</b> Salwah and Herianti (2019) Atmaja (2021) Anindita et al. (2022)
		Low/No Effect	High
		Debt-to-Equity Ratio	

Figure 3. Quadrant of Evaluation of the Effectiveness of the Thin Capitalization Rule in Reducing DER and Tax Avoidance

Source: Author elaboration

From the studies mentioned above, nine research papers concluded that the thin capitalization rule effectively reduces the level of DER. Five studies in Quadrant 4 imply that the thin capitalization rule is effective in reducing the level of indebtedness and in curtailing tax avoidance. However, three out of the five studies (Atmaja, 2021; Fadillah et al., 2021; Prastiwi & Ratnasari, 2019) suggest that the effectiveness of the thin capitalization rule in reducing DER is limited to companies with a high initial DER. The remaining two studies offer further observations. Ramadhan (2023) states that the thin capitalization rule did not affect tax avoidance over the entire period for the manufacturing sub-sample. Meanwhile, Mahardika and Irawan (2022) suggest that the Director General of Taxes consider conducting studies related to other approaches that can be used, like the earnings stripping rules recommended by the OECD. The rest of the studies found no significant relationship between thin capitalization and the level of indebtedness and tax avoidance.

## **DISCUSSION**

### **Problem Statement and Policy Alternatives**

From the analysis above, the problem statement found is 1) A decrease in the tax rate has a positive correlation with a decrease in tax avoidance, but it is not strong enough to affect DER. 2) The Thin Capitalization rule in Indonesia, which utilizes a DER of 4:1, is ineffective in increasing tax revenues through company capital structure changes. The average DER in 2021 was just 0.3:1, far below the 4:1 threshold. The company still has enough room to carry out a debt strategy. Limitation of the company to take debt according to the trade-off theory, where debt not only provides tax benefits but also carries the risk of increasing bankruptcy.

In overcoming this problem, I propose four policy alternatives: 1) Status Quo: The status quo represents the existing tax policy with no changes. The primary advantage of maintaining the status quo is that it avoids any potential disruptions in the community, thereby maintaining the stability of businesses. With no changes in taxation regulations, businesses can continue to operate as they are currently without adapting to new tax rules; 2) Reducing the Tax Rate Alone: Reducing tax rates can potentially increase Foreign Direct Investment (FDI), making Indonesia more competitive with other countries in the Southeast Asia region. In addition, reducing rates can also reduce tax avoidance; 3) Reducing the Tax Rate and Setting the DER to 1:1: The reasoning behind this alternative is that the average DER for public companies is only 0.3:1, which is more in line with the spirit of thin capitalization regulations in the income tax law. The significant advantage of this policy alternative is that it would encourage taxpayers to increase capital through shares, which is considered a healthier approach to finance; and 4) Reduce the Tax Rate and Change the DER Limitation to Interest Expense Limitation Based on EBITDA: This alternative policy suggests replacing the existing DER limit with a limit on interest expense based on EBITDA. The justification for this alternative is that, according to simulations, many taxpayers whose interest expenses meet the Thin Capitalization requirements would exceed a limit set at 30% of EBITDA. The major advantage of this alternative is that it aligns with OECD recommendations and better reflects the assignment of interest costs in line with business activity. Combined with a competitive interest expense, taxation in Indonesia would become even fairer under this alternative.

### **Policy Evaluation and Comparisons**

In the comprehensive evaluation of proposed alternatives based on various weighted criteria, it becomes evident that Alternative 4 emerges as the top-performing option. This finding suggests that adopting the policy changes proposed in Alternative 4 could strike a harmonious balance between consistent revenue generation, equity in the tax system, minimal disruption to economic productivity, technical efficiency, and political viability. It effectively addresses multiple key criteria and aligns Indonesia's tax system more closely with international best practices, particularly those recommended by the OECD.

Conversely, despite achieving high scores in specific individual criteria, the Status Quo (Alternative 1) falls short in overall performance. This deficiency is primarily attributed to its low scores in Revenue Consistency and Equity, underscoring the pressing need for policy adjustments to rectify these shortcomings.

Alternative 2, focusing on lowering the tax rate, may create a conducive environment for Foreign Direct Investment (FDI). However, it is crucial to recognize that such a step alone may not suffice to address the fundamental issues within the tax system, including concerns related to economic productivity and equality.

Alternative 3, while promising a stable revenue stream, presents potential drawbacks in the form of higher implementation costs and resistance from taxpayers who require time to adapt to the changes.

In conclusion, each alternative exhibits distinct strengths and drawbacks. However, Alternative 4 stands out as the most well-rounded and efficient approach, considering all essential aspects of a robust and equitable tax system. Nevertheless, any decision to implement these policy changes should involve extensive stakeholder consultation and a thorough impact assessment to ensure a seamless transition and successful implementation. This approach will enable Indonesia to enhance its tax system effectively while considering the interests and concerns of all relevant parties.

## **CONCLUSION**

This study has highlighted the current shortcomings in Indonesia's tax policy concerning tax avoidance, focusing



specifically on the current corporate tax rate and the Thin Capitalization rule.

A decrease in the tax rate has a positive correlation with a decrease in tax avoidance, but it is not strong enough to affect DER. Similarly, the Thin Capitalization rule, intended to limit the debt companies can take on to deter disguised Equity, does not significantly boost tax revenues. The study has shown that companies still have substantial leeway to engage in debt strategies for tax avoidance, as they are juggling the benefits they receive from debt with the risks it poses, such as the potential for bankruptcy.

These findings underline a pressing need for an alternative approach to combating tax avoidance in Indonesia. These findings are particularly crucial concerning disguised equity usage, which seems inadequately addressed. The recommendations of the OECD could provide a useful roadmap for improving Indonesia's tax policy, fostering a more effective and equitable system. However, adopting such guidelines would necessitate significant dedication and effort from the Government and all relevant parties.

This study aims to contribute to the ongoing conversation about improving tax policies and hopes to provide useful insights for policymakers. We suggest that the Government can reduce the corporate tax income rate and change the DER Limitation to Interest Expense Limitation Based on EBITDA as promoted by OECD. With a clear understanding of the current dynamics and potential alternatives, we can work towards a tax environment that minimally allows tax avoidance and promotes healthy corporate behavior in Indonesia.

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