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THE EFFECT OF DEBT TAX SHIELD AND NON DEBT TAX SHIELD ON CAPITAL STRUCTURE ON ADVERTISING PRINTING MEDIA COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

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ABSTRACT

To measure the proportion of debt and equity used as a source of company funding, it can be seen from the capital structure because the capital structure is a comparison between debt and equity. This study aims to examine the debt tax shield and non-debt tax shield on the capital structure of advertising printing media companies listed on the Indonesia Stock Exchange. The research approach used in this study is associative. The sample used is a saturated sample of 13 companies for the year 2017-2019. The data analysis technique used is descriptive statistics, multiple linear regression test of panel data model, hypothesis testing (t-test and F-test) and coefficient of determination test. The results of this study indicate that partially debt tax shield and non-debt tax shield have an effect on capital structure. Then the debt tax shield and non-debt tax shield simultaneously affect the capital structure. Thus, decision makers can consider these ratios as a tool of consideration in making policies in the tax system in companies.

1. Introduction

Companies in carrying out business development need funds. Fulfillment of these funds comes from internal or external sources. Funding that comes from short-term debt and long-term debt with own capital is called the capital structure, therefore the good or bad of the capital structure will have a direct effect on the company's financial position, especially with the existence of very large debt that will put a burden on the company, so managers financial institutions must be able to carefully determine the components of the managed capital structure. The way that can be done by managers is by optimizing the company's operations to increase capital efficiently, in order to minimize the cost of capital that must be borne by the company.

In [9] or MM Theory with taxes on the other hand says that the use of debt will increase the value of the company because the interest cost of debt is a cost that reduces tax payments. The determination of the ratio between debt and equity is stated in the Regulation of the Minister of Finance of the Republic of Indonesia Number 169/PMK.010/2015. The ratio between debt and equity is set at the highest of four to one (4:1). This provision is effective starting from the 2016 Fiscal Year.

Capital structure can be measured using the debt to equity ratio (DER), which is a comparison of the total debt owned by the company with its own capital [6]. The percentage of capital structure in advertising printing media companies in 2017-2019 can be seen from table 1 below:

Table 1.
Company Capital Structure
Advertising Printing Media on the Indonesia Stock Exchange
Year 2017-2019

No	Kode	STRUKTUR MODAL PERUSAHAAN 2017-2019		
		2017	2018	2019
1	ABBA	2,606	1,592	2,999
2	BLTZ	0,554	0,518	0,541

3	FORU	1,548	0,961	0,418
4	JTPE	0,731	0,679	0,546
5	KBLV	1,131	4,542	6,586
6	LINK	0,275	0,268	0,429
7	LPLI	0,235	0,226	0,261
8	MARI	0,627	0,518	0,436
9	MDIA	0,940	1,253	1,437
10	MNCN	0,536	0,535	0,424
11	SCMA	0,223	0,209	0,224
12	TMPO	1,565	0,630	0,582
13	VIVA	1,781	3,741	6,463
Rata-rata		0,98	1,21	1,64

Source: data that has been processed

From the table above, it can be seen that over a period of five years the capital structure of advertising printing media companies has increased, which means that companies tend to use debt for company funding and financing.The optimal capital structure is a capital structure that optimizes the balance between risk and return so as to maximize share prices. For this reason, in determining the capital structure of a company, it is necessary to consider various variables that influence it. The influencing factors are Debt Tax Shield and non Debt Tax Shield.

2. Method

2.1 Agency Theory

This theory shows that there is an optimal level of capital structure that can minimize agency costs. Within this theory, there is some literature that studies the impact of debt on sub-optimal managerial decision making. One important perspective is the free cash flow approach proposed by [5]. This approach states that high leverage will increase the value of the company, although there are concerns about financial distress, when the company's operating cash flow exceeds profitable investment opportunities. [5] suggests increasing manager ownership in the company to align the interests of managers with company owners or by increasing the percentage of equity owned by managers to reduce agency problems, and debt which will be used as a control tool to motivate managers to distribute free cash among shareholders. stock rather than being used for inefficient things.

2.2 Trade Off Theory

Modigliani and Miller and their followers developed the exchange theory of capital structure. MM points out that debt is beneficial because interest is a tax deduction, but debt also carries with it the costs associated with the possibility or reality of bankruptcy. The theory of exchange (trade-off theory) assumes that the company's capital structure is the result of the trade-off of funding gains through debt (profitable corporate taxes) with higher interest rates and bankruptcy costs. The fact that interest is a tax deductible expense makes debt cheaper than common stock or preferred stock. As a result, the government has indirectly paid part of the cost of debt capital, or in another way, debt provides tax protection benefits. The more a company uses debt, the higher its value and share price, according to the assumption of Moddigliani-Miller's writing with taxes, that a company's stock price will reach its maximum value if the company fully uses 100 percent debt. The main reason companies limit the use of debt is to keep the costs associated with bankruptcy low [3] .

2.3 Capital Structure

According to [1] , capital structure is the balance of the amount of short-term debt that is permanent or the comparison between long-term debt and the company's own capital used. One component of the Capital Structure is debt. According to [3] the use of debt has several main

advantages and disadvantages. The first advantage of debt is that the interest expense paid by the company on debt can be deducted from gross income to determine the amount of tax deductible. Each company must be able to determine the optimal capital structure that can increase the value of the company. The optimal capital structure can be measured using the Debt to Equity Ratio. Debt to Equity Ratio is a ratio used to measure how much total assets owned by a company are financed by the use of debt, so with this ratio it can find out how good the condition of a company is considering the variables that affect the capital structure so that it can determine the right capital structure decisions.

The capital structure measurement ratio is used to measure how much funds are provided by the company's owners in proportion to the funds obtained from the company's creditors. The ratio used to measure the capital structure in this study is the Debt to Equity Ratio (DER). "Debt to Equity Ratio (DER) is a ratio that shows the composition of total debt to total equity [13]

2.4 Debt Tax Shield

Debt is a company obligation that arises because of past actions or transactions to obtain assets or services, the repayment of which will only be made in the future, either by delivering cash, certain other assets, services or by creating new debt. . In the trade-off theory of capital structure theory developed by Modigliani and Miller, it shows that debt is useful because interest can be deducted in calculating taxes, but debt can also incur costs associated with actual and potential bankruptcy. According to MM theory, the optimal capital structure lies in the balance between the tax benefits of debt and the costs associated with bankruptcy [3] .

According to Bresley, [2] : "Debt financing has one important advantage: the interest rate paid by the company is a tax deductable expense, but equity income is subject to corporate tax." Funding with debt has disadvantages and advantages, namely debt will provide opportunities for rapid business development without having to have sufficient own capital to fund business development. Debt Tax Shields are determinants of capital structure, debt will be added if there are incentives for additional debt in the form of tax deductions and the imposition of debt interest on profit and loss" [4]

In determining the amount of tax payable, it is still based on the financial statements prepared by the company [14] . Debt Tax Shields are determinants of capital structure, debt will be added if there are incentives for additional debt in the form of tax reductions and the imposition of debt interest on profit and loss" [4]

2.5 Non Debt Tax Shield

The deduction of income tax payments other than corporate debt is due to non-cash costs, namely depreciation and amortization. The greater the depreciation and amortization, the greater the tax savings. Non Debt Tax Shield is calculated from the ratio of depreciation and amortization during the year to total assets. In the capital structure, non-debt tax shield is a substitute for interest expense which will be reduced when calculating corporate tax [10] . According to De Angeloet. al [12] states that tax deductions in the form of depreciation and investment tax credits can be used to reduce taxes other than debt interest. So, in carrying out the efficiency of calculating taxes other than by charging interest on debt, companies can take advantage of.

tax benefits/protection through tax facilities provided by the government or referred to as non-debt tax shield. [5] states that non-debt tax shields can be grouped into two, namely: tax loss carryforward is a facility in the form of a loss that can be compensated/deducted from profit for the next five years and investment tax credit is a facility provided by the government. The tax facilities include: reduction of tax burden, tax deferral and tax exemption. Where investment tax credit as a proxy for non-debt tax shields is generally given to companies that have large tangible assets so that they can be used as collateral for debt collection [12] .

According to [2] non-debt tax shield is a form of depreciation of fixed assets. Depreciation can be used as a deduction from the company's taxable income, so the tax that companies pay to the government is less. The high depreciation value also reflects the fixed assets owned by the company. Fixed assets can be used by the company as collateral for debt, so it is easier for the company to get debt.

2.6 Conceptual framework

The conceptual framework is an explanation of how the theory relates to various factors that have been identified as important issues. The independent variables in this study are debt tax shield

and non-debt tax shield. While the dependent variable in this study is the capital structure. In providing an overview in the conceptual framework in this section can be developed as follows:

1) The effect of debt tax shield on capital structure
   Debt tax shield is measured by the cost of borrowing interest divided by profit before tax. Funding from debt will provide an opportunity to develop a business quickly without having to use sufficient own capital for funding as well as tax deductible benefits as a result of interest payments on loans that can reduce taxable income, which will ultimately increase profits. received by the shareholders. This is in line with research conducted by [4] which states that the debt tax shield variable has a positive effect on capital structure.
   H1: Debt tax shield affects the capital structure of advertising printing media companies listed on the Indonesia Stock Exchange
2) The effect of non-debt tax shield on capital structure
   Non Debt Tax Shield is an instrument to replace interest expense (interest expense) which will be reduced when calculating taxes on profits earned by the company [8] . If the company has high fixed assets, it will bear a high depreciation expense, so the company will make efficiency by using an instrument to replace interest costs, with the hope that it will decrease when calculating the tax calculated from the company's profit. This is in line with research conducted by [7] which states that the non-debt tax shield variable has a positive effect on capital structure.
   H2: Non debt tax shield affects the tax structure of advertising printing media companies listed on the Indonesia Stock Exchange
3) The effect of debt tax shield and non-debt tax shield on capital structure
   In carrying out the company's operations, the financial manager has three main responsibilities in making decisions, namely financing, investment and divided policy. In terms of financing, the problem faced by financial managers is making capital structure decisions, namely how to use the optimal combination of debt financing and own capital (equity). Funding with debt, has losses and advantages, according to research conducted by [4] which states that debt is a driving force for companies to receive more loans, because loan interest charged as a fee in the calculation of profit and loss will reduce the company's income tax. . Likewise with depreciation expense originating from fixed assets owned by the company, if the company has high fixed assets it will bear a high depreciation expense, so the company will make efficiency by using instruments to substitute interest costs, in the hope that it will be reduced when calculating the taxes incurred. calculated from the company's profit. This is in line with research conducted by [7]
   H3 : Debt tax shield and non debt tax shield affect the capital structure of advertising printing media companies listed on the Indonesia Stock Exchange

Based on the explanation stated above, the conceptual framework of the independent and dependent variables in seeing the influence between variables both simultaneously and partially can be done in the paradigm image below:

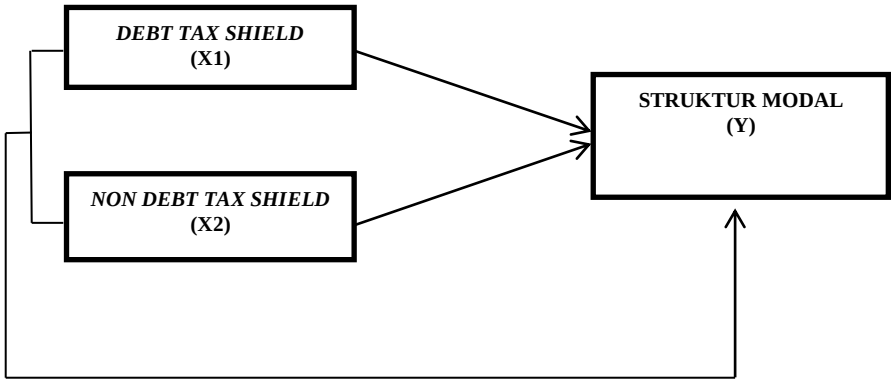

Figure 1.
Research paradigm

The population in this study were all advertising printing media companies listed on the Indonesia Stock Exchange from 2017–2019. Sampling was carried out using a purposive sampling method with the criteria of publishing annual audited financial data as of December 31 during 2017-2019 on the Indonesia Stock Exchange (IDX) and the advertising printing media company was not delisted during the observation period. So that the samples obtained in this study were 13 samples.

The data analysis model used in this study is a multiple linear regression analysis model for panel data using Eviews 7 software. Panel data is a combination of cross section data and time series data. Cross section data observes the value of one or more variables taken from several sample units or subjects in the same time period. Time series data observes the value of one or more variables over a period of time. So that the panel data equation which is a combination of cross section and time series equations can be written as follows:

$$\mathbf{Yit= \alpha+\beta 1X\,it + \beta 2X\,it + \varepsilon it}$$

Yit	= Struktur modal perusahaan *advertising printing media* ke-i tahun ke-t
α	= Konstanta
X1it	= *Debt tax shield* perusahaan *advertising printing media* ke-i tahun ke-t
X2it	= *Non debt tax shield* perusahaan *advertising printing media* ke-i tahun ke-t
β1...β5	= Koefisien regresi
ε	= Tingkat kesalahan (*standard error)*

3. Results and Discussion

3.1 Determination of Panel Data Estimation Model

a) Test Model Specifications with Chow Test

The Chow test is used to choose between the fixed effect model or the common effect model that should be used

H0 : Common Effect
Ha : Fixed Effect
Redundant Fixed Effects Tests
Equation: Untitled

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Table 2.
Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.518388	(11,45)	0.0000
Cross-section Chi-square	87.579587	11	0.0000

Source: Processed Data

Based on the results of the model specification test using the Chow test, it can be seen that the Chi-square probability value is 0.0000. This value is below 0.05, this means that H0 is rejected and Ha is accepted. So the model chosen is the Fixed Effect Model (FEM). After the Fixed Effect Model (FEM) is

selected, it is necessary to do another test, namely the Hausman test to find out whether it is better to use the fixed effect model (FEM) or the random effect model (REM).

b) Test Model Specifications with Hausman Test

Hausman test is used to select the best model, whether Fixed Effect Model (FEM) or Random Effect Model (REM). The hypothesis in the Hausman test is as follows:

H0 : Random Effect Model

Ha : Fixed Effect Model

If H0 is rejected then the conclusion should use the Fixed Effect Model. Because the random effect model (REM) is likely to be correlated with one or more independent variables. On the other hand, if Ha is rejected, the model that should be used is random

Table 2.
Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.910474	3	0.0019

Based on the results of the model specification test using the Hausman test, it can be seen that the random cross-section probability value is 0.0019. The value is smaller than 0.05, this means that H0 is rejected and Ha is accepted. So the model chosen is the Fixed Effect Model (FEM). After determining the panel data model, the classical assumption test is then carried out with the aim of providing certainty that the regression equation obtained has accuracy in estimation, is unbiased and consistent. Then the data can be analyzed by multiple regression analysis of the panel data model. The following are the results of data processing using *Eviews 7.*

Table 3.
Model Estimation Results

Dependent Variable: Y
Method: Panel Least Squares
Date: 15/05/20 Time: 11:29
Sample: 2017 2019
Periods included: 3
Cross-sections included: 13
Total panel (balanced) observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.138916	0.365958	0.397213	0.0058
X1	0.129528	0.123035	2.670817	0.0417
X2	0.352027	2.718169	4.238413	0.0001

Effects Specification

Cross-section fixed

R-squared	0.547862	Mean dependent var	0.975167
Adjusted R-squared	0.510530	S.D. dependent var	0.789997
S.E. of regression	0.352829	Akaike info criterion	0.966649
Sum squared resid	5.601960	Schwarz criterion	1.490235

Log likelihood	-13.99947	Hannan-Quinn criter.	1.171452
F-statistic	17.91318	Durbin-Watson stat	1.854266
Prob(F-statistic)	0.000000		

From the table above, the following values are known:
a constant = 0.138916
Debt tax shield coefficient (X1) = 0.129528
Non-deb tax shield coefficient (X2) = 0.352027
These results are entered into the multiple regression equation of the panel data model so that the following equation is known:
Capital Structure **= 0,138916+0,129528X1+0,352027X2**

3.2 Discussion

1) The effect of debt tax shield on capital structure

From the results of partial hypothesis testing which shows that the tstatistic value for the debt tax shield variable is 2.670 and ttable with prob = 5% is known to be 2.022. Thus, tstatistics is greater than ttable (2,670 > 2.022) and a probability value of 0.0417 (0.000 < 0.05) means that the hypothesis is accepted. The positive value of the statistic indicates an increase in the debt tax shield followed by an increase in capital structure.

This research is in line with research by [4] which states that the debt tax shield has an effect on capital structure because the debt tax shield is a determinant of capital structure, debt will be added if there are incentives for additional debt in the form of tax reductions and the imposition of debt interest on profit and loss. This tax reduction is what drives companies to prefer debt financing over equity.

2) The effect of non-debt tax shield on capital structure

The results of this study indicate that the non-debt tax shield has an effect on the capital structure. This can be seen from the statistic that is greater than ttable (4.238 > 2.022) and the probability value is 0.0001 (0.0001 <0.05), meaning that the hypothesis is accepted. This shows that the non-debt tax shield partially affects the capital structure of advertising printing media companies listed on the Indonesia Stock Exchange. This shows that the greater the non-debt tax shield or the tax savings in the form of depreciation of fixed assets, the greater the capital structure derived from the use of company debt. The greater the depreciation of a company, the greater the fixed assets owned by the company, so the company will find it easier to get debt from outside parties. Companies that have a high amount of fixed assets will get more tax benefits in the form of depreciation or depreciation costs that can be deducted in calculating the amount of tax payable. This study is in line with research conducted by [7] which states that the non-debt tax shield variable has a positive influence on capital structure and rejects research conducted by [15] and research conducted by [11] . who found that the non-debt tax shield had no effect on capital structure

3) The simultaneous effect of debt tax shield and non-debt tax shield on capital structure

From the results of the fixed effect model test in the table above, the F statistic is 17.91318 with a probability level of 0.0000, while the Ftable is known to be 2.87. Based on these results, it can be seen that FStatistic is greater than Ftable (17.91318 > 2.87), so the hypothesis is accepted. So it can be concluded that the variable debt tax shield and non debt tax shield simultaneously have a significant effect on the capital structure of advertising printing media companies listed on the Indonesia Stock Exchange.

This means that the debt tax shield and non-debt tax shield are closely related to the capital structure in which the company uses debt as a source of external funding for the company, because it can benefit from the interest expense that arises as tax protection. Debt is also a good alternative to developing an internal profit fund.

Then with a relationship level of 51.05% which means there are 48.95% explained by other factors not examined in this study such as the effective tax rate, sales growth, profitability, accounts receivable, and business risk.

4. Conclusion

Based on the results of the research and discussion that have been stated previously, it can be concluded from research on the effect of debt tax shield and non-debt tax shield on capital structure in advertising printing media companies listed on the Indonesia Stock Exchange in 2017 to 2019 with a total sample of The 13 companies are as follows Debt tax shield has a significant positive effect on capital structure.The non-debt tax shield has a significant positive effect on the capital structure. Debt tax shield and non-debt tax shield together affect the capital structure.

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