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# The Effect of Taxes on Capital Structure of Companies in Indonesia

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**ABSTRACT**

*This study aims to examine the effect of taxes on the company's capital structure. In particular, the company's capital structure is proxied by leverage. Proxied by 3, namely: Earning after tax (EAT), Effective tax rate (ETR) and marginal Tax Rate (MTR). The sample in this study were companies listed on the Indonesia Stock Exchange in 2015-2020. The sample was selected using purposive sampling, which consisted of non-financials who implemented a pension program. Tl the analytical method used in this study is panel data regression using Stata software Version 13.0. The results of this study indicate that corporate tax as proxied by Earning After Tax (EAT), effective tax rate (ETR) and Marginal Tax Rate (MTR) has a significant positive effect on the company's capital structure.*

**Keywords:** *Tax, Earning After Tax (EAT), Effective Tax Rate (ETR) And Marginal Tax Rate (MTR) And Company Capital Structure.*

## I. INTRODUCTION

The company's capital structure is one of the fundamental factors in the company's operations. In the capital structure is determined by the expenditure policy (financing policy) of financial managers who are faced with considerations both qualitative and quantitative. A good and appropriate capital structure is needed to ensure the survival of the company because the capital structure has an impact on the company's financial position which can later influence the value of the company. With an optimal capital structure, the company can avoid the problem of capital cost swelling. In capital structure decisions there are four capital factors, namely business risk, corporate taxation position, financial flexibility, conservatism or aggressiveness of management (Brigham and Houston.2006). This study focuses on discussing the position of corporate taxation (tax shields). The Government of Indonesia has issued Regulation of the Minister of Finance Number 169 / PMK.010 / 2015 for the calculation of Income Tax stipulated by the ratio between debt and capital for corporate taxpayers included in the regulation. Corporate taxpayer whose capital consists of financial elements. Companies need to consider how much activity can be financed with capital and debt.

## II. LITERATUR REVIEW

### 2.1. Capital Structure Theory

Capital structure is all long-term funding sources used by the company. In the source of capital is divided into capital and debt (loans). Capital structure requires management to maximize stock prices and increase company value (Brigham and Joel 2009; 439) stating that business risk is a determining factor in the company's capital structure. In 1958, in the absence of tax, Modigliani-Miller (MM) argued that the use of debt or capital could have the same impact on the company's prosperity. MM explained that the funding policy with debt or capital does not make a difference to the company.

### 2.2. Indonesian taxation

Taxation in Indonesia has been regulated through article 23A of the 1945 Constitution and other regulations such as Law No. 28 of 2007 concerning General provisions and taxation procedures. The Government of Indonesia has issued Minister of Finance Regulation Number 169 / PMK.010 / 2015 for the purposes of calculating income tax which

stipulates the amount of the ratio between debt and capital for corporate taxpayers established in Indonesia. There are several tax policies that are used to measure the tax relationship to corporate debt.

a. After Tax Earnings (EAT) According to Modigliani-Miller in Fama and French (1997), post-tax profit (EAT) is one of the effects of tax and includes the benefits of debt as a deduction from the tax burden. Funding through debt will increase the cost / interest expense which is a deduction from taxable income. Thus, taxable income will become smaller.
b. Effective Tax Rate (ETR) According to Wulandari (2015), one way to measure how well a company can manage its tax is to look at its effective tax rate. (Frank et al., 2008) explained that effective tax rates (Effective Tax Rate-ETR) are usually calculated using the ratio of total tax burden and pre-tax income.
c. Marginal Tax Rate (MTR) The large tax rate that applies in a country often does not last for a long time. Fiscal policy makers often consider raising one type of tax or lowering another. A change in tax rates will have an impact on deadweight loss and tax revenue. According to Mankiw and Mark (2014: 209), the amount of tax rates can affect the supply and demand curve. The higher the tax rate determined by the policy maker, the greater the deadweight loss.

**2.3 Tax Influence on the Company's Capital Structure**

According to Brigham and Houston (2006) that the higher the tax rate of a company, the greater the benefits obtained from debt due to interest payments according to Modigliani and Miller Model (1958) with the existence of tax is a tax deductible for the company, meaning that with the tax obtained two benefits of use debt, namely: debt is a cheaper source of capital than equity and interest costs become a tax deduction element.

**H1: Tax has a positive effect on the company's capital structure**

## III. RESEARCH METHOD

**3.1. Data**

The type of data used is secondary data. The data taken is the company's annual report data and the company's financial statements listed on the Indonesia Stock Exchange in 2015-2020.

**3.2 Population and Samples**

The population of this study is companies in the non-financial sector that are listed (go public) on the Indonesia Stock Exchange during the period 2015-2020. The sampling technique used was purposive sampling with the following criteria:

1. Companies in the Non-Financial Sector are listed continuously on the Indonesia Stock Exchange during the period 2015-2020.
2. The company publishes financial statements for the period 2015-2020.
3. The company does not have a negative balance (capital efficiency).

**3.3 Operational Definition of Variables**

**3.3.1 Dependent Variables, Independent Hypothesis**

1. The dependent variable is a variable that is influenced by other variables. In this study the dependent variable is the capital structure whose measurement is carried out with leverage,
2. The independent variable is in the form of a tax factor. Tax factors are proxied into three, namely After Tax Earnings (EAT), effective Tax Rate (ETR), and Marginal Tax Rate (MTR).
   a. According to (Muljono and Baruni.2009:79) explain that After Tax Earnings (EAT) or profit after tax is profit obtained from commercial profits before tax minus the corporate income tax expense owed for a year.
   b. According to Walby (2013), Effective Tax Rate (ETR) or effective tax rate is the actual tax rate that must be paid by the company compared to the profits generated by the company.
   c. Marginal Tax Rate (MTR) According to Gwartney et al (2008: 98) Marginal Tax Rate (MTR) is the addition of a person's tax liability divided by additional taxable income (taxable income). Mankiw and Mark (2014: 212) this ratio can measure how much the taxation system distorts tax incentives.

**3.3.2 Variable Control**

1. Z-Score or commonly called a bankruptcy model is a measurable control tool towards the financial status of a company that is experiencing financial distress. This measurement is used to analyze whether the company implements a pension program not experiencing financial difficulties.
2. The size of the company according to Baker and Wurgler (2002) is determined from the number of sales generated by the company and the measurement of the variable size of the company. The company is calculated using Ln total assets of the company.
3. Tobin's or Q ratio is a measure of the intangible value of intellectual assets of a company such as monopoly power, managerial system and growth opportunities because of this intellectual capital of a company often valued more by the market.
4. Current ratio is the ratio used to measure the financial performance of the company's liquidity balance sheet. This current ratio shows the company's ability to meet the needs of its short-term debt obligations within 1 year.

### 3.4 Analysis Methods

Hypothesis testing uses regression analysis as follows:

**a. *Earning After Tax* Measurement (EAT)**

$D_{i,t}$=a+$\beta_1\ EAT_{i,t} + +\beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

**b. *Effective Tax Rate*Measurement (ETR)**

$D_{i,t}$=a+$\beta_1\ ETR_{i,t} + \beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

**c. *Marginal Tax Rate*Measurement (MTR)**

$D_{i,t}$=a+$\beta_1\ MTR_{i,t} + \beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

## IV. RESULTS AND DISCUSSION

### 4.1 Determination of Samples

The number of companies listed on the IDX for all sectors in 2015-2020 was 465 companies. Companies in the financial sector are 74 companies. Companies that are in the non-financial sector are as many as 391 companies and companies that do not conduct pension plans on a scale in 2015-2020 as many as 352 companies so that after deducting companies in the financial sector, the total sample used in the study this is 39 companies.

### 4.2Descriptive statistics

| Variable | Obs | Mean | Std.Dev | Min | Max |
|---|---|---|---|---|---|
| Lev | 234.00 | 4,770,021.00 | 2,522,366.00 | 0.00 | 1.44 |
| EAT | 234.00 | 8.43 | 5.40 | 2.89 | 4.14 |
| ETR | 234.00 | 113.00 | 1,628.80 | (485,000,000,000,000.00) | 24,476.50 |
| MTR | 234.00 | (484,869.70) | 2,841,843.00 | (2,501.69) | 6,949.85 |
| d-EAT | 234.00 | 5.00 | 5,010,718.00 | - | 1.00 |
| d ETR | 234.00 | 5.00 | 5,010,718.00 | - | 1.00 |
| d MTR | 234.00 | 9,358,974.00 | 2,454,606.00 | - | 1.00 |
| insize | 234.00 | 23.48 | 3.34 | 12.83 | 32.92 |
| CR | 234.00 | 3.75 | 18.99 | 2,228,801.00 | 247.13 |
| T q | 234.00 | 9,465,536.00 | 8,171,237.00 | 39.00 | 3.63 |
| Zscore | 234.00 | 2.32 | 1.89 | (6.24) | 10.31 |

### 4.3 Testing of Hypothesis

$D_{i,t}$=a+$\beta_1\ EAT_{i,t} + +\beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

$D_{i,t}$=a+$\beta_1\ ETR_{i,t} + \beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

$D_{i,t}$=a+$\beta_1\ MTR_{i,t} + \beta_2\ Tobin's\_Q_{i,t} + \beta_3 ZSCORE_{i,t} + \beta_4\ Cr_{i,t} + \beta_5\ SIZE_{i,t}$ +e i,t

| LEVERAGE | Random Effect | Random Effect | Random Effect |
|---|---|---|---|
| **EAT** | -4,600 | | |
| | (-3,83)** | | |
| **ETR** | | 0000 | |
| | | (-2,56)** | |
| **MTR** | | | -3.200 |
| | | | (1,81)** |
| **Insize** | -0268 | -0310 | -0305 |
| | (-7,46)*** | (-13,15)*** | (-10,10)*** |
| **Cr** | 0024 | -0023 | -0024 |
| | (-3,12)** | (-3,85)** | (-3,10)** |
| **t_q** | -0418 | -389 | -0500 |
| | (-3,69)** | (-3,56)** | (-4,45)*** |
| **Zscore** | -0482 | -0495 | -4567 |
| | (-10,25)*** | (-10,81)*** | (-9,93)*** |
| **_CONS** | 1,257 | 1,351 | 1,343 |
| | (15,27)*** | (26,04)*** | (19,45)*** |

In the table above shows that the dependent variable is the company's capital structure with proxy leverage and tax as an independent variable with Proxies, namely Earning after tax (EAT), Effective tax rate (ETR) and Marginal tax rate

(MTR). EAT testing on LEVERAGE is significant at the 5% level. ETR testing on LEVERAGE is significant at the 5% level. The MTR test on LEVERAGE is significant at the 5% level.

### 4.4 Discussion

#### 4.4.1 Tax Influence on the Company's Capital Structure

Based on the results of regression testing shows that Tax has a positive effect on the company's capital structure. There are 3 proxies in tax measurement and capital structure consists of 1 namely leverage. In the first tax proxy, EAT is positive, significant in company tax proxies, namely corporate tax has a positive effect on the company's capital structure. This means that the benefits of profitability affect the company's debt ratio. This influential direction indicates that the increase in profit after tax can reduce the value of the company LEVERAGE. Thus, if the company intends to reduce the ratio of debt to capital debt, the company can increase the amount of profit after tax.

The next proxy in testing this study uses a significant positive ETR on corporate tax proxies, namely corporate tax has a positive effect on the company's capital structure. This means that the existence of benefits from taxes, namely tax rates obtained from the ratio between the total tax burden with profit before tax. While the tax burden is obtained from the sum of the current tax burden and deferred tax expense that the company has in a period. According to Modigliani-Miller, companies have the tendency to choose funding by using debt. This is because funding with debt can cause savings in paying taxes, especially income tax. Tax savings are due to a deductible expense payment. According to Shuetrimet all (1993) an increase in tax rates will be able to maximize the company's capital structure. The higher the applicable tax rate, the higher the desire of the company to use debt as a source of funding. Next is to use MTR as a tax proxy. Tax proxies use a significant positive MTR on company tax proxies, that is, corporate taxes affect the company's capital structure. This means that the existence of benefits from taxes, namely the change in MTR can affect changes in LEVERAGE companies because the use of MTR is more utilizing in providing information related to decision making regarding funding in the form of investment. According to Gwartneyet all (2008: 98) the marginal tax rate is obtained from a comparison between the difference in deferred tax liabilities and the difference in taxable income. While the ratio of debt to capital is obtained from total debt with total company capital. Deferred tax liabilities are a small component in total debt. Changes in deferred tax liabilities have little effect on changes in total debt.

## V. CONCLUSION

### 5.1 Conclusions

This study was conducted aimed at testing the effect of pensions on the company's capital structure, and testing whether tax variables can strengthen the effect of pensions on the company's capital structure or moderating variables directly influence the dependent variable. The number of samples in this study were 234 samples classified as non-financial samples. The period in this study began from 2015-2020. The independent variable in this study is tax, the dependent variable in this study is the company's capital structure that is proxied by Leverage, the independent variable in this study is 3, namely: Earning after tax, Effective tax rate and Marginal Tax Rate while the control variables in this study use SIZE, TOBIN-Q, ZSCORE and Current ratio.

The test results for the second hypothesis, namely the tax burden has a positive effect on the company's capital structure. This is evidenced from the regression results which show that the tax burden consists of 3, namely: Earning after tax (EAT), Effective tax rate (ETR) and Marginal Tax Rate (MTR) have a significant positive effect on leverage. This shows that the benefits of profitability affect the company's debt ratio. This influential direction indicates that the increase in profit after tax can reduce the value of the company's leverage.

### 5.2 Limitations of Research

Limitations of this study are as follows:

1. Researchers still use periods that are still lacking so that the research sample is small.
2. Variables that are used as dependent, independent and moderating variables are still few.
3. Company's capital structure.
4. The companies used are still limited, namely non-financial companies.

### 5.3 Suggestions

1. The next researcher can extend the research period.
2. Variables can be added such as the type of industry and the age of the company.
3. Researchers can use all companies as a sample of researchers to compare with non-financial companies**.**

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