The Effect of Financial Policy on Tax Aggressiveness for Manufacturing Companies Listed at Indonesia Stock Exchange

Abstract. Introduction. This study aims to determine the effect of financial policy on tax aggressiveness for manufacturing companies listed at Indonesia Stock Exchange. Financial policy is measured by financial ratios. The financial ratios consist of debt ratio, long-term debt ratio, the market to book ratio, return on assets (ROA) and inventory turnover ratio. Researchers use effective tax rate (ETR) as a measure of corporate tax aggressiveness. The objects of this research were manufacturing companies listed on the Indonesia Stock Exchange period 2013-2016. The number of samples was 64 manufacturing companies. The data used was a combination of time series and cross section data so that it used regression analysis of data panel.

Purpose. The purpose of this research to get empirical evidence the influence of financial policy toward tax aggressiveness among manufacturing companies listed on the Indonesia Stock Exchange.

Results. The results of this research indicated that the variable of debt ratio, long-term debt ratio, the market to book ratio, return on assets and inventory turnover simultaneously had an effect on tax aggressiveness. Partially, there were only two variables that influenced tax aggressiveness namely debt ratio and return on assets, whereas the long-term debt ratio variable, the market to book ratio and inventory turnover were not significantly influenced tax aggressiveness.

Conclusion. If the debt is high, the interest expense will increase, so the tendency of companies to carry out tax aggressiveness will decrease. Financing using debt will increase costs in financial statements that affect the achievement of company profits. Companies with high Market Book Value Ratios tend to reduce costs in financial reporting. In other words, they are more aggressive towards financial statements. Assets are a source of funding from internal capital; therefore, agents try to maximize the management of internal assets in creating corporate profits. Inventory as part of investment is not the right way to implement a strategy to minimize the tax burden.

Keywords: the financial ratio; tax aggressiveness; financial policy.

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Вплив фінансової політики на податкове навантаження компаній-виробників, що розміщені на фондовій біржі Індонезії

Метою дослідження є визначення впливу фінансової політики на податкове навантаження компаній-виробників, що котируються на фондовій біржі Індонезії. Фінансова політика оцінюється на основі фінансових коëфіцієнтів, а саме: коëфіцієнт заборгованості; коëфіцієнт довгострокової заборгованості; коëфіцієнт ринкової вартості; коëфіцієнт рентабельності активів (ROA) та коëфіцієнт оборотності запасів. Дослідники використовують ефективну ставку податку (ETR) як показник навантаження корпоративним податком. Об’єктами дослідження були виробничі компанії, зареєстровані на Індонезійській фондовій біржі у 2013-2016 роках. До виборки увійшли 64 виробничі компанії, дані яких були використані при проведенні регресійного аналізу. Результати дослідження свідчать, що коëфіцієнт заборгованості, коëфіцієнт довгострокової заборгованості, коëфіцієнт ринкової вартості та рентабельності активів та оборотності запасів одночасно вплинули на податкове навантаження. При цьому значний вплив мали лише дві змінні: коëфіцієнт заборгованості та рентабельності активів, тоді як коëфіцієнт довгострокової заборгованості, коëфіцієнт ринкової вартості й
Problem statement. Based on the data collected from Directorate General of Tax Finance Ministry (DGT Finance Ministry), it was stated that until April 25, 2017, the number of Tax Payers who had submitted their Annual Tax was only around 66% or 10,936,111. Meanwhile, the number of Tax Payer listed was around 30,031,972; 16,599,632 of which must submit Annual Report Letter. This showed that the tax revenue target has not achieved its full potential. There are many factors contributed to this, among others are taxpayers’ low compliance in fulfilling their tax obligation, tax avoidance and tax collection which was not carried out optimally.

Most of company’s business decisions are influenced by the tax, both directly and indirectly. Good business decisions when they are related to tax can turn bad, and vice versa (Suandy, 2011). It can happen because for companies, the tax which is imposed on the income received can be considered as the cost or expense in running their business. The strategies taken by the company to conduct tax efficiency is done through tax management. Based on Suandy (2011), one of the tax management functions is tax planning. By having this plan, the company can fulfill the settlement of tax obligation on time, and this can avoid waste of resources. Measures aimed at reducing taxable income through tax planning, either using legal means (tax avoidance) or illegal means (tax evasion), are called aggressive tax measures (Frank, Lynch and Rego, 2009).

In general, the act of aggressive tax means the process of designing business and corporate tax debt to be less. One strategy to make the tax burden efficient is to take as much benefit as possible from various exceptions, including reducing the tax obligations permitted by the constitution (Suandy, 2011). The strategies taken are considered policies that are directed at achieving certain goals (Raksasataya, 1976). This policy is a guideline in taking action (Wahab, 2016). Aggressive tax actions refer to the process of designing financial transactions either through legal means (tax avoidance) or illegal means (tax evasion). Thus, the determination of financial policies which taken will have an influence on achieving predetermined goals.

Studies related to tax aggressiveness have not been carried out much in Indonesia. This is due to the limited data regarding business entities tax and the measurement of company’s tax aggressiveness do not have a direct relationship with the financial condition of the company. That is why this research is intended to integrate some available researches by connecting financial policy which is measured by financial ratio and to get empirical evidence the influence of financial policy toward tax aggressiveness among manufacturing companies listed on the Indonesia Stock Exchange. In the researchers there are five ratios: debt ratio, long-term debt ratio, the market to book ratio, return on assets (ROA) and inventory turnover ratio. Researchers used Effective Tax Rate (ETR) as a measure of tax aggressiveness. Effective tax rates are used to measure the impact of changes in tax policy on corporate tax burden.

Test results. This study analyzes the effect of financial policy on tax aggressiveness in manufacturing companies listed on the Indonesia Stock Exchange. This research was conducted in 4 (four) years, namely in 2013-2016. These years 2013-2016 were chosen because in these years the latest data can be obtained and no preliminary studies conducted during these years. This research used manufacturing companies because the numbers are highest with various sub-sectors and companies that conduct business activities as a whole starting from the purchase of raw materials to finished goods and ready to be sold to the market so that most of the business activities are related for aspects of taxation. Sources of data in this study were taken from secondary data, namely the financial statements of manufacturing companies listed on the Indonesia Stock Exchange from 2013-2016.

The population of this study was taken from 141 manufacturing companies listed on the Indonesia Stock Exchange (IDX). Cluster Random Sampling is a technique that was applied. This technique is used because manufacturing companies listed on the Indonesia Stock Exchange are divided due to industrial sectors. This technique can maintain heterogeneity in one subgroup and homogeneity between subgroups. Through this technique, researchers divide the population into subgroups based on simple criteria. Samples were taken based on the industrial sector by considering several criteria as follows:

1. The company is registered consistently with IDX from 2013-2016.
2. The company consistently publishes its financial statements for the period 2013-2016.
3. During the observation period, the company did not suffer from losses.

Based on the above criteria, the author obtained 64 companies selected as samples. There are two variables used in this study, namely the independent variable and the dependent variable. Independent Variable. Independent variable is a type of variable which explains or influence another variable. In this study, there are five independent variables, they are:

Ключові слова: фінансовий коефіцієнт; податкове навантаження; фінансова політика.
1. Debt Ratio.

Debt Ratio is the ratio which is used to measure the comparison between the total amount of debt and the total number of assets.

\[
Debt\text{Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\% \quad (1)
\]

2. Long Term Debt Ratio

Long-term debt ratio is a ratio used to measure the scale of long-term debt to total debt (Koh and Ah Lee, 2014).

\[
\text{Long Term Debt Ratio} = \frac{\text{Long Term Debt} + \text{Obligation}}{\text{Total Debt}} \times 100\% \quad (2)
\]

In which: Total Debt = Short Term Debt + Long Term Debt + Obligation

3. The Market-to-Book Ratio

The market-to-Book ratio means development opportunity ratio, which indicates whether the company will issue the equity or borrow more.

\[
\text{The Market-to-Book ratio} = \frac{\text{Liability + Market Value of Equity}}{\text{Total Assets}} \times 100\% \quad (3)
\]

4. Return on Assets (ROA)

Return on Assets (ROA) means the ratio which indicate the scale of asset contribution in generating profit.

\[
\text{Return on Assets (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\% \quad (4)
\]

5. Inventory Turnover Ratio

Inventory turnover ratio is used to measure how many times a mutual fund is invested in the inventory turnover over a period (Hery, 2015).

\[
\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{(Beginning Inventory + Year End Inventory)/2}} \times 100\% \quad (5)
\]

a. Dependent Variable

Tax aggressiveness is considered as the dependent variable in this study. Tax aggressiveness is measured using the Effective Tax Rate (ETR). Effective tax rates are used to measure the impact of changes in tax policy on corporate tax burden.

\[
\text{ETR} = \frac{\text{Income Tax Expense}}{\text{Profit Before Tax}} \times 100\% \quad (6)
\]

Analysis technique. The data used in this study were the data combination of time series and cross section using panel data regression analysis. Data in this study were analyzed using assistance program E-Views. There are some steps taken in applying panel data regression, they are:

1. Determining Panel Data Regression Model.

There are three approaches applied: Common Effect Model or Pooled Least Square (PLS), Fixed Effect Model (FE) and Random Effect Model (RE).

2. Testing Panel Data Regression Model.

Determining the right model was conducted through some tests: Chow Test, Hausman Test and Lagrange Multiplier Test.

3. Modeling Panel Data Regression

The following shows panel data equation model which is the combination of data obtained from cross section and time series.

\[
AP_i = \alpha + \beta_1 \text{RH}_i + \beta_2 \text{RHJP}_i + \beta_3 \text{RNBP}_i + \beta_4 \text{ROA}_i + \beta_5 \text{RPP}_i + e \quad (7)
\]

Notes:

AP – Tax Aggressiveness (ETR in percentage unit);
\( \alpha \) – Constant;
\( \beta_1 - \beta_5 \) – Regression Coefficient;
\( i \) – the i entity;
\( t \) – the t period;
\( \text{RH} \) – Debt Ratio (in ratio unit);
\( \text{LTDR} \) – Long-Term Debt Ratio (in ratio unit);
\( \text{MBVR} \) – Market-to-Book Ratio (in ratio unit);
\( \text{ROA} \) – Return on Assets (in ratio unit);
\( \text{ITR} \) – Inventory Turnover Ratio (in ratio unit);
\( e \) – Error Term, namely the level of error of the estimator in the study.

4. Feasibility Test of Panel Data Regression Model

a. Hypothesis Test

There are two hypothesis tests performed: simultaneous significance test (F-test) and partial significance test (t-test).

b. Determination Coefficient

Determination coefficient denoted by R-squares is a measurement that can inform whether the estimated regression model is good or not.

The assumption test used in this study is the multicollinearity test and heteroscedasticity test.

Result. Based on the results of analysis concerning regression models, the appropriate model used is the fixed effect model.

\[
AP_i = 52.57 - 0.64 (\text{RH}_i) - 0.14 (\text{RHJP}_i) + 0.24 (\text{RNBP}_i) - 0.61 (\text{ROA}_i) - 0.07 (\text{RPP}_i) + e \quad (8)
\]

Based on the above equation, it showed that the constant value was 52.57, which meant that if the Debt
Hypothesis testing.

Based on the test, it was obtained that the value of determination (R-square) = 0.655601. It means that the contribution of independent variables towards the dependent variable is 65.5% and the remaining 34.5% is caused by other factors.

The statistic result of the test showed Prob was F (5.234913) < 0.05 which was statistically significant. It means that simultaneously, Debt Ratio, Market-to-book Ratio, Return on Assets, Long-Term Debt Ratio and Inventory Turnover Ratio significantly influence the tax aggressiveness (Effective Tax Rate).

Based on this test, it showed that only the variables of Debt Ratio and Return on Assets are statistically significant influencing the tax aggressiveness (proxy by Effective Tax Rate), while the variables of Market-to-book Ratio, Long-Term Debt Ratio, and Inventory Turnover ratio statistically have not significantly affected the Tax Aggressiveness (proxy by Effective Tax Rate).

Discussion

The Effect of Debt Ratio on Tax Aggressiveness

The results of data processing showed that the regression coefficient value of Debt Ratio variable was negative, that was -0.64 with a probability value of 0.0368 <0.05. This study showed that Debt Ratio variable had a correlation and a negative influence or inverse proportion to Tax Aggressiveness variable. It was in accordance with the proposed hypothesis.

The result of this study was made in line with the studies of the Koh and Lee (2015), Lanis and Richardson (2007), Darmawan and Sukartha (2014), and Swingly and Sukarta (2015), which stated that Debt Ratio (leverage) negatively affected the tax aggressiveness. The high debt will cause interest expense to increase, so the tendency of companies to practice tax aggressiveness will decrease. Tax aggressiveness and debt are substitute. The company will apply tax aggressiveness when the company’s debt is low. Vice versa, if the debt increases, the company will not implement tax aggressiveness.

An agent is accountable to optimize the benefits of the owners morally. Costs which are arising from increasing debt ratio will affect the achievement of corporate taxable income. The decrease in taxable income can reduce the agent’s management performance from the principal because the main goal to maximize shareholder profits is not achieved. The company’s debt ratio related to cost of debt and debt financing will increase the risk of violating debt agreement. Therefore, the management will use debt at an optimal level.

The ratio to measure how much the company’s assets are financed by debt or how much the company’s debt affects the financing of assets is called debt ratio. In the period of 2013-2016, the company’s debt ratio experienced a fluctuation, namely 43.49% in 2013, 43.30% in 2014, 42.39% in 2015, and 40.49 in 2016. The average value of debt ratio within 4 years was 42.37%. It means that 42.37% of the company’s assets were financed by debt and the rest was 57.63% by capital. The average value of this ratio was still below the general principle. The general principle is that a company should have a debt ratio of less than 0.5 (Heri, 2015).

The Effect of Long-Term Debt Ratio on Tax Aggressiveness. The result of data analysis showed that the value of long-term debt ratio was not significantly influenced tax aggressiveness whereas the probability of the value of short-term debt ratio variable was 0.0695 > 0.05. Therefore, the proposed hypothesis was rejected. However, the coefficient value of long-term debt showed a negative relationship to tax aggressiveness, which was -0.14. The result of this study indicated that when Long-Term Debt Ratio variable increased or changed, tax aggressiveness experienced a decline or change towards the opposite of the coefficient value. The result of the study was different from Lee’s study (2015), Newberry and Novack (1999), and Husnaini, Cahyaningtyas and Effendy (2016) which stated that the long-term debt ratio influences tax aggressiveness.

Debt financing will increase costs of financial statements that affect the achievement of company profits. As a matter of fact, managers, as the agents, have the urge to choose and apply accounting methods that can show performance, in this case, the achievement of...
profits to earn compensation in accordance with the contract with the principal. Principal, as the owner, demands the agents to act in accordance with the interests of the principal. Agents are expected to be able to improve performance and be able to perform cost efficiency including tax burden.

The high leverage results in financial distress and high agency costs. Furthermore, not all interest burden emerged from long-term debt can be used to reduce the tax burden. It is due to the Indonesian Minister of Finance Regulation No: 169 / PMK.010 / 2015 concerning the determination of the debt to equity for corporate taxpayers for calculating Income Taxes. Companies can take advantage of depreciation and tax credit to reduce the tax burden as an alternative choice in reducing the tax burden.

In 2013-2016, long-term debt ratio of manufacturing companies listed on the Indonesia Stock Exchange increased, that was 26.40% in 2013, 27.94% in 2014, 30.94% in 2015, and 32.70% in 2016. The average value of the long-term debt ratio in the period of 2013-2016 was 29.49%. It indicated that the amount of long-term debt was 29.49% of the total debt made by manufacturing companies. Manufacturing companies use more short term debt as a source of corporate financing than long-term debt.

The Effect of Market-to-Book Ratio on Tax Aggressiveness

In the period of 2013-2016, market-to-book ratio decreased in 2013 by 61.75%, 60.66% in 2014, 58.72% in 2015 and 55.71% in 2017. The ratio average was 59.21%. It indicated that more external funding sources were used by companies than their own capital. Although external funding sources were used more, the variable of market-to-book ratio did not significantly influence tax aggressiveness with a significance level of 0.3595. Therefore, the proposed hypothesis was rejected. However, the correlation coefficient indicated a positive correlation with the level of 0.24. It means the market-to-book ratio has a relationship with tax aggressiveness. Every time market-to-book ratio variable changes, tax aggressiveness variable will also change.

The result of this study was different from the result of the study conducted by Koh and Lee (2015) which stated that companies that have Market-to-Book Ratio tend to be more aggressive in tax reporting. The result of the study conducted by Hanlon and Shimron (2007) also stated that the emphasis of the act of tax reporting; in this case, the act of tax aggressiveness can affect the capital market. The result of this study indicated that the companies with high market-to-book ratio were more likely to reduce the costs of financial reporting, in other words, were more aggressive towards financial statements. It can happen so it is worth-funding.

Agents as managers are expected to provide assurance to investors that they will receive the return from the funds they have invested. Financial performance is closely related to how investors are assured that managers will return the profit, not embezzle the fund or invest in unprofitable projects related to capital invested by investors. The contract bond with a principal makes the agent act in accordance with the principal’s interest, which is to maximize the value of the company and make the best decision for the principal.

The Effect of Return on Assets (ROA) on Tax Aggressiveness

The Return on Assets (ROA) ratio shows how much assets contribute to generate net income. Return on Assets (ROA) fluctuated in 5 year period. It was 11.23% in 2013, 9.58% in 2014, 8.68% in 2015, and 9.75% in 2016. Based on the calculation, the result showed that the average value of Return on Assets was amounting to 9.81%, meaning that the contribution of asset utilization to the achievement of the company's net profit is 9.81%. The higher the value of asset contribution, the higher the amount of net income resulted from every rupiah invested in total assets.

The result of this study indicated that Return on Assets had a significant effect with a significance level of 0.00017. The regression coefficient value was -0.61. This result was in accordance with the hypothesis proposed, but different from the result of a research conducted by Darmawan and Sukartha (2014) and Kurniash and Sari (2013) which stated that ROA has a positive influence on tax aggressiveness. The relationship between the variable Return on Assets (ROA) and tax aggressiveness is negative or in the opposite direction. If the variable of Return on Assets (ROA) changes, the aggressiveness will change in the opposite direction as much as the coefficient value. The coefficient value of -0.61 indicated that the relationship between the two variables was strong.

In an agency theory, agents have the urge to choose and apply accounting methods that can show a good performance, in this case for the achievement of profits. The higher the profit earned, the higher the amount of income tax will be, according to the level of profit earned. The agent will try to manage the tax burden so as not to reduce the agent's performance compensation as a result of reduced corporate profits due to the tax burden. Assets are a source of funding from internal capital, therefore agents try to maximize the management of internal assets in creating corporate profits. As a decision maker, agents are expected to make decisions in accordance with the interests of the principal.

Return on Assets (ROA) is used to measure the level of efficiency of the utilization of company-owned resources or to assess the company's ability to carry out daily activities. The higher the ROA, the better the performance of the company is in using assets to get net income. Thus, if Return on Assets increases, the tax aggressiveness decreases. Companies with high Return on Assets (ROA) show no indication of tax aggressiveness.

The Effect of Inventory Turnover Ratio on Tax Aggressiveness
The average value of inventory turnover ratio is 8.6 times with an average length of inventory of 42 days. Lower inventory turnover ratio indicates that working capital invested in merchandise inventory is greater (over investment) and this is not good for the company. The lower inventory turnover ratio will also cause a large inventory of merchandise since it will be piled up in the warehouse because of the long sale of inventory and resulting in a low return on investment.

Although inventory turnover ratio has decreased, the result of data analysis showed that inventory turnover ratio did not significantly affect tax aggressiveness and had a negative relationship. This was indicated by a probability value of 0.8488 > 0.05 and a coefficient value of -0.07. The results of this study were in accordance with the hypothesis proposed. However, it was different from the results of the research by Richardson and Lanis (2007) and Adisamartha and Noviari (2015). These results indicated that companies with a high inventory value due to falling inventory turnover tend not to do tax aggressiveness. Inventory as a part of investment is not the right way to implement a strategy to minimize the tax burden.

Generally, companies that have a higher inventory level than that of their competitors tend to have a worse competitive position. Inventory turnover has a strong influence on a company’s ability to generate cash right now and in the future. Meanwhile, inventory levels affect selling prices, quality, product engineering, idle capacity, overtime, ability to respond to customer demand, waiting time, and overall profitability. Related to the contract with the principal, namely maximizing shareholder’s wealth and company value, it tends to encourage the agent to choose and use accounting methods that will make the high profit earned.

**Conclusion.** Based on the results of the analysis and testing carried out in this study, the conclusions in this study are as follows:

a. Debt ratio (leverage) has a significantly negative effect on tax aggressiveness. If the debt is high, the interest expense will increase, so the tendency of companies to carry out tax aggressiveness will decrease. Costs arising from increasing debt ratios will affect the achievement of corporate taxable profits. The decrease in taxable profits can reduce management performance as an agent of the principal because the main objective of maximizing shareholder profits is not achieved.

b. The long-term debt ratio does not significantly affect tax aggressiveness. Financing using debt will increase costs in financial statements that affect the achievement of company profits. Meanwhile, managers as agents have the incentive to choose and apply accounting methods that can show performance in this case the achievement of profit. Principal as the owner wants the agent to act in accordance with the interests of the principal.

c. The Market Book Value ratio does not significantly influence tax aggressiveness. Companies with high Market Book Value Ratios tend to reduce costs in financial reporting. In other words, they are more aggressive towards financial statements. This is done so that it looks more feasible in funding for investors. Agents as managers are expected to convince investors that they will receive returns on the funds they have invested. Contractual engagement with the principal makes the agents act in accordance with the interests of the principal in this case maximizing the value of the company and make the best decision for the principal.

d. Return on Assets has a significant effect on tax aggressiveness. Assets are a source of funding from internal capital; therefore agents try to maximize the management of internal assets in creating corporate profits. The higher the ROA is the better the performance of the company using assets in obtaining net income.

e. Inventory turnover ratio does not significantly affect tax aggressiveness. Inventory as part of investment is not the right way to implement a strategy to minimize the tax burden. This is because inventory levels affect the selling price, quality, product engineering, idle capacity, overtime, ability to respond to customer demand, waiting time and overall profitability.

**Limitations.** (a). This study only uses variables related to financial policy as measured by financial ratios. Future research is expected to add other variables that can detect tax avoidance activities. (b) This study only uses one means of measurement calculation to detect tax aggressiveness. Future studies are expected to use other calculations so that they can be compared.

**Recommendation.** The company is expected to report the true financial condition, because taxes are a contribution of the country that is used for public welfare in various sectors. Tax collectors (tax authorities) is expected to further improve monitoring and supervision of the implementation of corporate tax obligations.

**References:**


