

The Effect of Financial Constraints on Cash Tax Savings

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Keywords: Financial Constraints, Cash Tax Savings, Tax Avoidance

Abstract: This study aims to empirically examine the effect of financial constraints on cash tax savings. The object under study is manufacturing sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period with a total sample of 185 companies over 5 years obtained by purposive sampling. The research method used is a quantitative method with a panel data regression analysis approach fixed effect model with the help of Eviews application version 11. The results of the study found that changes in financial constraints did not significantly influence the cash tax savings that was proxied by Δ GAAP ETR. This shows that companies with increased financial constraints do not obtain additional internal funds with a cash tax savings strategy. Companies pay more attention to the risks they will face if using this strategy.

1 INTRODUCTION

The main revenue for Indonesia is mostly sourced from the tax sector. The tax revenue will then be used to finance the needs of the country so that all taxpayers both individuals and entities are expected to meet their tax obligations following applicable taxation provisions. Based on data obtained from the Ministry of Finance, the amount of state revenue through the tax sector targeted by the government as a source of funding for State Expenditure Budget in 2018 reached 85.40 percent of the total state revenue of Rp 1,894.72 trillion or around Rp 1,618.10 trillion. The government must optimize tax revenue so that it can be realized according to the targets set to encourage economic growth (Wiratmoko, 2018).

One of the efforts made by the government to realize the goals of a nation in financing the country's development is to explore sources of funding from the tax sector. The government continues to be determined to carry out tax reforms to increase tax revenue. The government is trying to increase the tax ratio gradually as one indicator to assess the government's ability to collect tax revenue (www.kemenkeu.go.id).

Minister of Finance, Sri Mulyani, based on a quote from wartaekonomi.co.id (January 3, 2019)

revealed that Indonesia's tax ratio in 2018 experienced a significant increase to 11.5 percent. However, when viewed from a comparison of ASEAN countries, Indonesia's tax ratio from 2014-2018 is still far behind. The comparison of the tax ratio between Indonesia and ASEAN countries can be seen in Figure 1.

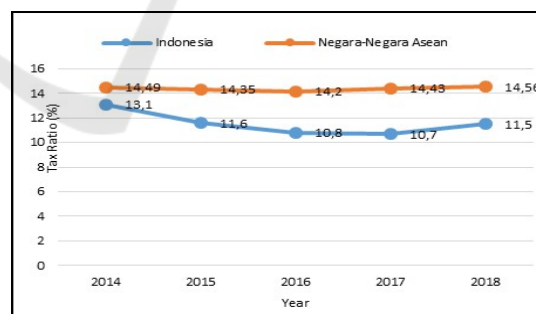


Figure 1: Comparison of Tax Ratio between Indonesia and ASEAN countries

Source : World Bank, Kementerian Keuangan (2019)

According to Darussalam (2017), a fundamental problem in the Indonesian taxation sector that has not yet been fully resolved to date, one of which is the leakage of tax revenue caused by tax avoidance activities. Taxpayers will try to do tax avoidance as a form of tax planning strategy to minimize the amount of tax paid against the state without

violating taxation laws (Mardiasmo, 2018). According to Koester, Shevlin, & Wangerin (2016), one tax avoidance strategy includes an effort to cash tax savings.

Tax avoidance strategies with tax savings by companies can cause huge losses for the government. Therefore, the government needs to learn more about the characteristics of companies that utilize tax savings as a way to do tax avoidance. It is intended that the government can consider and make it easier to assess whether transactions that occur by companies are still within reasonable limits or not. Most companies prefer to increase tax savings to maintain corporate profits to avoid bankruptcy. Based on evidence by Law & Mills (2015) and Edwards, Schwab, & Shevlin (2016) shows that companies tend to increase cash tax savings to generate internal funds in response to increased financial constraints.

Financial constraints are conditions where companies have difficulty in accessing funding from external sources. The existence of financial constraints can be caused by several conditions both from internal and external factors. Internal factors occur if the company experiences liquidity problems caused by the failure of the company in achieving sales targets, causing the company to not be able to finance the company's operations until in the end the situation causes bankruptcy for the company (Altman, 1968) and if the company faces difficulties in financing its investment (Kaplan & Zingales, 1997; Whited & Wu, 2006). External factors occur due to macroeconomic shocks, such as the economic crisis, inflation, and the banking crisis⁴.

This study is the adoption of research by Edwards, Schwab, & Shevlin (2016). The difference that supports from previous research lies in several parts, including (1) Using GAAP changes in the Effective Tax Rate (Δ GAAP ETR) to measure cash tax savings as the dependent variable. (2) Using secondary data in the form of annual reports on manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) within five years starting from 2014-2018.

This research was conducted to test whether companies facing financial constraints tend to generate internal funds through tax avoidance activities. This study will use financial constraints and cash tax savings variables which have been tested in previous studies with inconsistent results. The results of research by Edwards, Schwab, & Shevlin (2016) argue that the increases financial constraints measured by firm-specific and macroeconomic shocks has positive effect on cash

tax savings. Different from previous studies, the results of research in Indonesia conducted by Hermawan & Riandoko (2018) conclude that the increases in financial constraints measured by firm-specific levels has significant positive effect on cash tax savings, but not significant if measured by macroeconomic shocks. Based on the background of the problems outlined above, the title of this study is "**The Effect of Financial Constraints on Cash Tax Savings**".

2 THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1 Theoretical Framework

2.1.1 Theory of Constraints

Theory of Constraints (TOC) is the development of Optimized Production Technology (OPT). This theory was first introduced by Dr. Eliyahu M. Goldratt in 1986. OPT is a technique for optimizing production scheduling that aims to increase the overall output of products sold (Throughput), reduce inventory (Inventory), and reduce operational costs (Operational expense). Goldratt (1986) has made a concept in OMO by incorporating management philosophy in improvement based on identifying obstacles to increasing profit.

The basic concept of TOC is that every organization has at least one obstacle that prevents management from achieving its operational goals. These constraints should be identified to improve performance. If an obstacle is solved then the next obstacle can be identified and updated.

2.1.2 Pecking Order Theory

Pecking Order Theory was first introduced by Donaldson in 1961 with the theory naming done by Steward C. Myers and Nicholas S. Majluf in 1984. This theory states that companies tend to prioritize funding from internal sources to pay dividends and fund investment. If the use of internal funds is insufficient, the company will use external funds besides. Internal funding is obtained from the company's operating results in the form of retained earnings, cash flow, and depreciation. Whereas external funding in the form of bond issuance takes precedence over the issuance of new shares. The

results of Donaldson's research (1961) state that bond issuance is carried out by companies to avoid issuance costs (floatation costs) that are tied to external funding because the cost of issuing bonds is cheaper than issuing new shares.

2.1.3 Financial

Financial is defined as the availability of money needed to maintain the company. According to Jatmiko (2017), finance is the art and science of managing money that influences every organization to achieve its goals. Howard & Upton (1952) in Jatmiko (2017) defines finance as an "administrative area" in a company that deals with how to manage cash flow so that the company has the means to carry out its objectives as efficiently as possible and at the same time fulfill the obligations that must be paid. If the company's finances are inadequate then the company will not be able to achieve its goals.

2.1.4 Tax Law Tax Avoidance

Tax avoidance through cash tax savings is one type of strategy that companies pay attention to because it aims to minimize the amount of tax paid to the government (Whited & Wu, 2006). Companies that always try in various ways to make cash, can be said that the company is in a state of financial constraints. But they don't always make cash through tax avoidance as a result of financial constraints. When macroeconomic shocks occur like an economic crisis, all companies will be affected. This will tend to encourage companies to generate cash through tax avoidance.

2.2 Hypothesis Development

2.2.1 Effects of Changes in Financial Constraints on Cash Tax Savings

Research by Edwards, Schwab, & Shevlin (2016) states that the increases in financial constraints both measured by firm-specific and macroeconomic shocks have positive effect on cash tax savings. Contrary to the results of previous studies, Hermawan & Riandoko (2018) found that the increases in financial constraints measured by firm-specific levels has significant positive effect on cash tax savings, but not significant if measured by macroeconomic shocks

According to Edwards, Schwab, & Shevlin (2016), companies that face increasing financial constraints will tend to generate additional internal funds through a tax avoidance strategy rather than

accessing external funding. This is because external funding is far riskier because of the emergence of greater external funding that must be borne by the company. The formulation of the hypothesis that will be tested by researchers based on the above hypothesis development path is:

H1: Changes in financial constraints has positive effect on cash tax savings

Based on the development of the hypothesis that the researcher has described above, the description of the research model adopted by the researcher, namely:

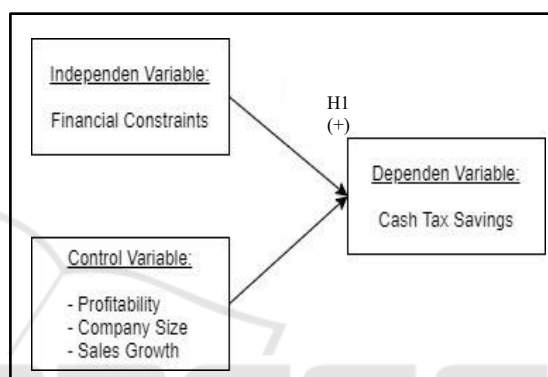


Figure 2: Research Model

3 RESEARCH METHOD

3.1 Data Types and Sources

The type of data used is quantitative data with data sources used, namely secondary data in the form of figures from annual reports on manufacturing sector companies obtained through the official website of the IDX during 2014-2018 period. Based on the time of collection, cross-section data and time series will be used in this study.

3.2 Variable Operational Definitions and Measurements

3.2.1 Dependent Variable

The dependent variable defined in this study is cash tax savings. A proxy that will be used to measure cash tax savings is Δ GAAP ETR. GAAP ETR is represented by a percentage of the amount of cash paid for tax costs divided by profit before tax. Researchers measure Δ GAAP ETR in $t + 1$ year period (starting from 2015-2018) because companies

generally need time to plan and implement tax avoidance strategies (Edwards, Schwab, & Shevlin, 2016). The formula used to calculate ΔGAAP ETR according to Hanlon & Heitzman (2010) is:

$$\frac{\text{Total income tax expense } t+1}{\Delta \text{GAAP ETR}_{t+1}} = \frac{\text{Total Pretax accounting income } t+1}{\Delta \text{GAAP ETR}_{t+1}}$$

3.2.2 Independent Variable

The independent variable determined in this study is the change in financial constraints (Constraints). This variable is represented by two proxies, namely ΔAltman Z-Score and ΔKZ-Index. Researchers measured ΔConstraints in the period t-1 to t years (starting from 2014-2017) but the effect of changes in the dependent and control variables began in 2015-2018. Higher ΔConstraints represent increased financial constraints.

ΔAltman Z-Score is intended to know the prediction of financial distress and ΔKZ-Index to find out the constraints related to corporate investment. The formulas used to calculate the ΔAltman Z-Score and ΔKZ-Index according to Altman (1968) and Kaplan & Zingales (1997) are:

$$Z\text{-Score}_t = -1 \left(\begin{matrix} 3,3 \left[\frac{EBIT_t}{\text{Total Assets}_t} \right] + 1,2 \left[\frac{\text{Working Capital}_t}{\text{Total Assets}_t} \right] + \left[\frac{\text{Sales}_t}{\text{Total Assets}_t} \right] \\ + 1,4 \left[\frac{\text{Retained Earning}_t}{\text{Total Assets}_t} \right] + 0,6 \left[\frac{\text{Market Value of Equity}_t}{\text{Total Liabilities}_t} \right] \end{matrix} \right) \dots \text{Rumus 1}$$

Where:

- t = Annual financial statements for 2014-2017 period
- EBIT = Earning Before Interest and Taxes
- Working Capital = Current assets - Current liabilities
- Sales = Net sales
- Retained Earning = Appropriated + Unappropriated
- Market Value of

- Equity = Stock price x Share outstanding
- Total Assets = Current Assets + Fixed Assets
- Total Liabilities = Short-term liabilities + Long-term liabilities

$$KZ\text{-Index}_t = \left\{ \begin{matrix} -1 \left(\frac{\text{Cash Flow}_t}{K_t} \right) + 0,28Q + 3,13 \left(\frac{\text{Debt}_t}{\text{Total Capital}_t} \right) - \\ 39,36 \left(\frac{\text{Dividend}_t}{K_t} \right) - 1,31 \left(\frac{\text{Cash}_t}{K_t} \right) \end{matrix} \right\} \dots \text{Rumus 2}$$

Where:

- t = Annual financial statement for 2014-2017 period
- Cash flow = Net profit before extraordinary items + Depreciation & Amortization
- Tobin's Q = Market value of equity + Debt / Total asset (Lindenberg & Ross, 1981)
- Debt = Total Long-term debt + Debt in current liabilities
- Total Capital = Total Long-term debt + Debt in current liabilities + Stockholders' equity
- Dividend = Total Cash Dividends Paid (common and preferred)
- Cash = Cash and short-term investments
- K = Property, plant & equipment

All proxies used to measure the level of financial constraints are multiplied by -1 so that the higher values represent an increase in financial constraints.

3.2.3 Control Variable

The control variables in this study are used to complete or control the causal relationship between the independent variable and the dependent variable, to get more complete empirical model. Control variables are measured together with changes in ΔGAAP ETR in t + 1 year period (starting from

2015-2018). The control variables used in this study related to cash tax savings are:

Profitability

Profitability can be measured by proxy for changes in Return On Assets (ΔROA), ie changes in the ratio of profit before tax to the level of asset income. The formula used to calculate ΔROA based on the proxy method by Adhikari, Derashid, & Zhang (2006) is:

$$\Delta ROA_{t+1} = \frac{\text{Profit before tax } t+1}{\text{Total Assets } t+1}$$

Company Size

This variable is calculated through the $\Delta \ln \text{Sales}$ proxy, using a change in the natural logarithm ratio of total sales. This variable can directly influence the level of GAAP ETR. The formulas used to measure $\Delta \ln \text{Sales}$ according to Belkaoui & Karpik (1989) are:

$$\Delta \ln \text{Sales}_{t+1} = \text{Log natural of sales }_{t+1}$$

Sales Growth

Sales growth can be measured by the $\Delta \text{SalesGrowth}$ proxy, which is a change in the ratio of total sales in the following year after deducting sales in the previous year against sales in the previous year. The formula used to measure $\Delta \text{SalesGrowth}$ according to Poernawarman (2015):

$$\Delta \text{SalesGrowth} = \frac{\text{Sales } (t) - \text{Sales } (t-1)}{\text{Sales } (t-1)}$$

3.3 Research Object

The research object used is financial constraints and their influence on cash tax savings in manufacturing sector companies listed on the Indonesia Stock Exchange during 2014-2018 period.

3.4 Population and Sample

The research sample used was companies in the manufacturing sector listing on the Indonesia Stock Exchange from 2014-2018 with a determined population of 165 companies, but the total population had been reduced according to established criteria so that the number of samples

taken was 37 companies with 185 observations during 5 years.

3.5 Sampling Technique

The sampling technique in this study is a non-probability sampling (non-random) in the form of purposive sampling with criteria based on judgment sampling. The criteria used are companies in the manufacturing sector that are listed on the IDX and publish financial reports consistently from 2014-2018, companies that publish financial statements for the period of January 1 to December 31, present financial statements in currencies in rupiah, has complete financial data related to the research variables, companies that obtain positive profit before tax and companies whose transactions are subject to final income tax (PPH) are exempted from the sampling criteria considering the final PPH is different in terms of the level and administration of the Corporate Income Tax.

3.6 Data Collection Technique

Data collection techniques related to research to be carried out is the archive data in the database. This technique is used to determine secondary data from related sources, namely the Indonesia Stock Exchange which can be accessed through the website www.idx.co.id.

3.7 Data Processing Techniques

The data processing technique used is data tabulation. This technique is done by placing the data in the financial statements according to the needs of analysis into a table that has been made with the Microsoft Excel program to facilitate researchers in the process of data analysis. Data that have been analyzed are then processed statistically using the Eviews 11 application.

3.8 Data Analysis Technique

The data analysis technique used in this study is a panel data regression analysis technique to examine the effect of financial constraints on cash tax savings (Hermawan & Riandoko, 2018). Panel data is a combination of time series data and cross-section data (Basuki & Prawoto, 2017). The data obtained in this study were processed using panel data regression models, namely the simple effect model (common effect), fixed effect model (fixed effect), and the random effect model (random effect)

with the selection of panel data regression models based on the chow test, test Hausman, and the Lagrange multiplier (LM) test.

4 RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Descriptive statistical analysis is used to find out the mean, minimum, maximum, median, and standard deviation of Δ GAAP ETR, Δ Z-Score, Δ KZ-Index, Δ ROA, Δ LnSales, and Δ SalesGrowth as control variables. The results of the analysis can be seen in table 1

Table 1: Results of Descriptive Statistics Analysis

Variabel	n	Mean	Min	Max	Median	Std.Dev.
Δ GAAP ETR	185	0.2153	0.0000	0.5809	0.2498	0.1281
Δ Z-Score	185	378.430	1.649.791	0.0000	-46.748	2.134.653
Δ KZ-Index	185	0.2039	-789.307	3.508.786	-16.824	494.702
Δ ROA	185	0.1109	0.0000	0.7091	0.0830	0.1268
Δ LnSales	185	185.702	0.0000	30.8116	207.575	105.509
Δ Sales Growth	185	0.0635	-0.4376	0.8437	0.0457	0.1190

Note: This table displays descriptive statistical test results. Dependent Variable: Cash Tax Savings (Δ GAAP ETR). Independent Variable: Financial Constraints (Δ Z-Score, Δ KZ-Index). Control Variables: Profitability (Δ ROA), Company Size (Δ LnSales), Sales Growth (Δ SalesGrowth).

Source: Data processing results in Eviews 11

Based on the descriptive statistical test results in table 1, the number of samples used in this study was 185 samples. The dependent variable in the form of cash tax savings as measured by the Δ GAAP ETR proxy has an average value of 0.2153 which shows the average ability of the company to make cash tax savings. Companies that have a cash tax savings index value exceeding 1 indicate that the level of companies that use cash tax savings strategies is very high. The lowest (minimum) value of cash tax savings of 0.0000 is owned by PT. Mandom Indonesia Tbk in 2015 while the highest value (maximum) of 0.5809 is owned by PT. Argha Karya Prima Industry Tbk in 2017. The median value is 0.2498 and the standard deviation is 0.1281.

The independent variables in this study are financial constraints as measured by the proxy Δ Z-Score and Δ KZ-Index. The index value of financial constraints with Δ Z-Score proxy has an average

value of 37.8430 which shows the average ability of a company to predict financial distress. The lowest value of Δ Z-Score of 1,649.791 is owned by PT. Astra International Tbk in 2016 while the highest value of 0.0000 is owned by PT. Argha Karya Prima Industry Tbk in 2015. The mean value is -4.6748 and the standard deviation value is 213.4653. The index value of financial constraints with a Proxy Δ KZ-Index has an average value of 0.2039, which indicates the average ability of a company to know constraints related to investment. The lowest value of the ZKZ-Index of -78.9307 is owned by PT. Merck Tbk in 2015 while the highest value of 350.8786 was owned by PT. Astra International Tbk in 2016. The mean value is -1.6824 and the standard deviation value is 49.4702.

This study uses three control variables, namely profitability, company size, and sales growth. Profitability as measured by the Δ ROA proxy shows an average value of 0.1109 meaning that 11% of manufacturing companies show efficiency in utilizing assets owned by companies with the lowest value of 0.0000 owned by PT. Asahimas Flat Glass Tbk in 2018 while the highest value of 0.7091 is owned by PT. Multi Bintang Indonesia Tbk in 2017. The mean value is 0.0830 and the standard deviation value is 0.1268.

Company size is measured by performing a natural logarithm of the total sales obtained by the company showing an average value of 18.5702 with the lowest value of 0.0000 owned by PT. Astra International Tbk in 2016 while the highest value of 30.8116 is owned by PT. Mayora Indah Tbk in 2018. High and low sales values by companies greatly affect the level of company size. The middle value of the company size is 20.7575 and the standard deviation is 10.5509. The level of sales growth is measured by taking into account the level of sales in the following year after deducting the total sales in the previous year divided by total sales in the previous year having an average value of 0.0635 meaning that 6% of manufacturing companies can meet their financial obligations with a high level of sales growth. The lowest value of the sales growth rate is -0.4376 owned by PT. Merck Tbk in 2017 while the highest value of 0.8437 is owned by PT. Impact Pratama Industri Tbk in 2015. The middle value of the sales growth rate is 0.0457 and the standard deviation value is 0.1190.

Table 2: Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0144	0.0129	1.1144	0.2669
ΔZ -Score	4.9908	0.0001	0.3922	0.6954
ΔKZ -Index	6.6857	0.0005	0.1228	0.9024
ΔROA	-0.0293	0.0747	-0.3918	0.6958
$\Delta \ln Sales$	0.0112	0.0006	16.818	0.0000
$\Delta Sales Growth$	-0.0497	0.0473	-1.0506	0.2952
<i>R-Squared</i>				0.7874
<i>Adjusted R-squared</i>				0.7265
<i>Prob(F-statistic)</i>				0.0000
N				185
Hausman Test Result				<i>Fixed Effect</i>

*** Significant at level 1%, ** Significant at level 5%,

* Significant at level 10%

Note: This table displays the results of testing the hypothesis. Dependent Variable: Cash Tax Savings ($\Delta GAAP$ ETR). Independent Variable: Financial Constraints (ΔZ -Score, ΔKZ -Index). Control Variables: Profitability (ΔROA), Company Size ($\Delta \ln Sales$), Sales Growth ($\Delta Sales Growth$).

Source: Data processing results in Eviews 11

Based on the results of the regression analysis of the fixed-effect model panel data in table 2, using a significant level of 5%, the regression equation is obtained as follows:

$$\Delta GAAP ETR_{i,t+1} = 0.0144 + 4.9908 \Delta Z\text{-Score}_{i,t} + 6.6857 \Delta KZ\text{-Index}_{i,t} - 0.0293 \Delta ROA_{i,t+1} + 0.0112 \Delta \ln Sales_{i,t+1} - 0.0497 \Delta Sales Growth_{i,t+1} + e_{i,t}$$

The regression equation above shows the effect between the independent and control variables on the dependent variable. The definition of the equation is that there is a constant value of 0.0144, meaning that if financial constraints, profitability, and company size and sales growth are constant, then the average cash tax savings in the company is 0.0144. The regression coefficient of the financial constraints variable measured at the prediction level of financial distress and the constraints level related to investment is 4.9908 and 6.6857, meaning that if financial constraints increase by 1 unit, an increase in cash tax savings will be increased by 4.9908 and 6.6857. Profitability variable regression coefficient of -0.0293, meaning that if profitability increases by 1 unit it will be followed by a decrease in cash tax savings of -0.0293. The regression coefficient of the company size variable is 0.0112, meaning that if company size increases by 1 unit, it will be followed by an increase in cash tax savings of 0.0112. Furthermore, the regression coefficient of the variable sales growth of -0.0497, meaning that if sales growth increases by 1 unit, it will be followed by a decrease in cash tax savings of -0.0497.

4.3 Hypothesis Testing Results

Hypothesis testing is done using panel data regression analysis. The selection of an appropriate regression model is carried out using the Hausman test through the Eviews 11 data processing application. Based on the Hausman test, the best regression model used is the Fixed Effect Model.

4.3.1 The Effect of Changes in Financial Constraints on Cash Tax Savings

The hypothesis proposed in this study states that changes in financial constraints has positive effect on cash tax savings. This hypothesis can be supported if the level of significance (α) < 0.05. Here are the results of the hypothesis test based on prediction level of financial distress in this study can be seen in table 3.

Table 3: Hypothesis Test Results (Prediction Level of Financial Distress)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0135	0.0110	1.2323	0.2198
ΔZ -Score	3.5534	4.9769	0.7139	0.4764
ΔROA	-0.0293	0.0745	-0.3943	0.6939
$\Delta \ln Sales$	0.0112	0.0006	17.187	0.0000
$\Delta Sales Growth$	-0.0494	0.0471	-1.0487	0.2960
<i>R-Squared</i>				0.7874
<i>Adjusted R-squared</i>				0.7283
<i>Prob(F-statistic)</i>				0.0000
N				185
Hausman Test Result				<i>Fixed Effect</i>

*** Significant at level 1%, ** Significant at level 5%,

* Significant at level 10%

Note: This table displays the results of testing the hypothesis. Dependent Variable: Cash Tax Savings ($\Delta GAAP$ ETR). Independent Variable: Financial Constraints (ΔZ -Score). Control Variables: Profitability (ΔROA), Company Size ($\Delta \ln Sales$), Sales Growth ($\Delta Sales Growth$).

Source: Data processing results in Eviews 11

Table 4: Hypothesis Test Results (Constraints Level Related to Investment)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0116	0.0108	1.0773	0.2831
ΔKZ-Index	-0.0001	0.0002	-0.6079	0.5442
Δ ROA	-0.0294	0.0745	-0.3946	0.6937
Δ LnSales	0.0113	0.0006	17.182	0.0000
Δ SalesGrowth	-0.0481	0.0470	-1.0236	0.3077
R-Squared				0.7872
Adjusted R-squared				0.7281
Prob(F-statistic)				0.0000
N				185
Hausman Test Result				Fixed Effect

*** Significant at level 1%, ** Significant at level 5%, * Significant at level 10%

Note: This table displays the results of testing the hypothesis. Dependent Variable: Cash Tax Savings (Δ GAAP ETR). Independent Variable: Financial Constraints (Δ KZ-Index). Control Variables: Profitability (Δ ROA), Company Size (Δ LnSales), SalesGrowth(Δ SalesGrowth).

Source: Data processing results in Eviews 11

Based on the results of hypothesis testing in table 3 and table 4 above shows the value of prob. Of Δ Z-Score of $0.4764 > 0.05$ and Δ KZ-Index of $0.5442 > 0.05$ which means that the hypothesis is not supported. This shows that changes in financial constraints both measured at the level of prediction of financial difficulties and the level of constraints related to corporate investment does not have significantly effect on cash tax savings, meaning companies that face an increase (decrease) in financial constraints do not necessarily carry out cash tax savings strategies to obtain funds additional internal company and an increase (decrease) in financial constraints that occur in the company will not limit the way investors to invest when the company is increasing cash tax savings to obtain additional internal company funds. This can happen because cash tax savings are not classified as illegal tax evasion.

The results of hypothesis testing based on the prediction level of financial difficulties show the value of profitability and sales growth as a control variable has a significant value of 0.6939 and 0.2960 greater than the three significance levels of 1%, 5%, and 10% while the significant value of company size is 0.0000 less than the three levels of significance, namely 1%, 5%, and 10%. The R-Square value from the analysis above shows that the variation of the dependent variable can be explained by the independent variable, namely financial constraints by 79% (0.7874), and the rest is explained by other variables outside this research model.

Hypothesis testing results based on the level of constraints related to investment show the value of

profitability and sales growth as a control variable has a significant value of 0.6937 and 0.3077 is greater than the three levels of significance that are equal to 1%, 5%, and 10% while the significant value of company size is 0.0000 less than the three levels of significance, namely 1%, 5%, and 10%. The R-Square value from the analysis above shows that the variation of the dependent variable can be explained by the independent variable, namely financial constraints by 79% (0.7872), and the rest is explained by other variables outside this research model.

4.4 Data Analysis

Based on the results of hypothesis testing between independent variables, control variables, and the dependent variable then the summary of the hypothesis test results can be seen in Table 5

Table 5: Summary of Hypothesis Test Results

Hypothesis	Prob.	t	Result
Changes in financial	0.4764	0.7139	Hypothesis is not supported
H1: constraints has positive effect on cash tax savings	0.5442	-0.6079	

Description: $\alpha = 5\%$

Source: Self-processed

4.4.1 The Effect of Changes in Financial Constraints on Cash Tax Savings

Based on the results of testing the hypothesis that has been described in tables 3 and 4, the results show that changes in financial constraints does not have significantly effect on cash tax savings so the hypothesis is not supported. The existence of tax avoidance determinants also supports the results of this study by testing based on the average profitability of manufacturing companies listed on the Stock Exchange with a graph that can be shown in Figure 3

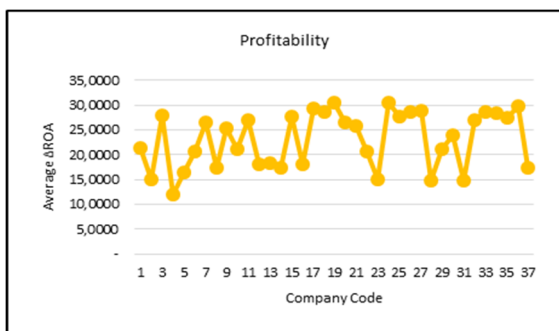


Figure 3: Average Profitability (ΔROA) in 2014 – 2018
Source: Self-processed

Based on the graph above, it can be seen that the value of profitability in manufacturing companies on the Indonesia Stock Exchange during the five years of observation mainly has increased with an average percentage reaching 68%. This means that these companies generally try to reduce operational costs or reduce unnecessary costs and maximize the use of assets owned by companies to increase profits. Besides, the company's ability to increase profits is also influenced by the size of the company. With the increasing size of the company, there will be more availability of resources that can be utilized by managers, so that it can help the company in optimizing the achievement of company profits.

One of the utilization of the availability of resources by managers to determine the level of company size is to increase sales volume. If illustrated in graphical form, it can be seen the average value of company size as shown in Figure 4

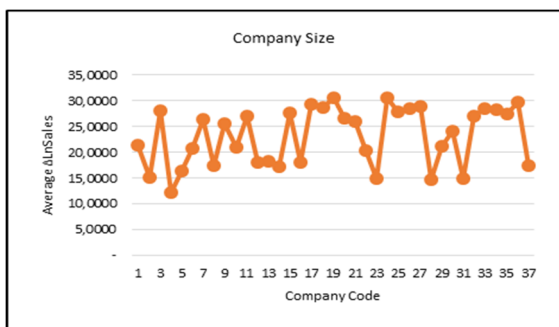


Figure 4: Average Company Size (ΔLnSales) in 2014 - 2018
Source: Self-processed

Based on the graph above, the value of the size of the manufacturing companies listed on the Stock Exchange during the five years of observation mainly has increased with an average percentage

reaching 59%. This means that these companies generally try to obtain greater profits by increasing the sales the volume of a company each year. The sales volume in the company's operational activities can increase revenue which in turn can support the higher the profitability of the company so that the company will be able to determine the level of company size.

The company's ability to increase sales growth is also influenced by a higher level of profitability and company size. Sales growth reflects the success of past investment periods and can be used as a prediction of future growth. If illustrated in graphical form, it can be seen the average value of sales growth as shown in Figure 5

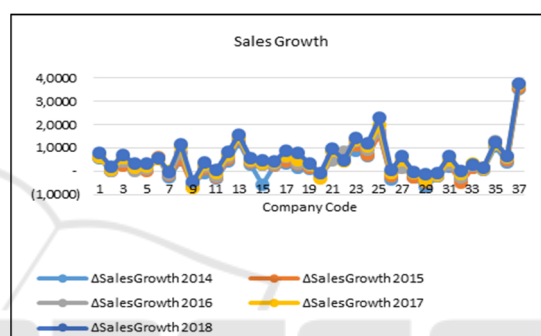


Figure 5: Sales Growth Rate (ΔSalesGrowth)
Source: Self-processed

Based on the graph above, the value of sales growth in manufacturing companies listed on the Stock Exchange mainly has increased every year. This means that these companies generally try to increase total sales from year to year. The higher the sales growth, the less tax avoidance activity of a company because a company with a relatively large level of sales makes it possible for the company to obtain large profits and be able to pay taxes. Companies with high sales growth will be able to meet their financial obligations if the company funds its investment activities with debt.

These results also support research conducted by Putri & Chariri (2017) which states that financial distress does not have significantly effect on tax avoidance, meaning that the greater the manufacturing sector companies listed on the IDX are involved in financial distress, then it will be smaller to the company for doing tax avoidance. In other words, companies with large financial distress tend to report higher taxes or obey paying taxes (Putri & Chariri, 2017).

The results of this study differ from the results of research conducted by Richardson, Taylor, & Lanis

(2015) by taking a sample of companies in Australia stating that the financial distress has significant positive effect on tax avoidance. This increase in financial constraints causes the tax payments made by companies to increase. This is because managers more consider the risks and costs that will arise when doing tax avoidance. When companies are in financial constraints, investors will view tax avoidance activities as a high-risk action. As a result, investor concerns arise if the possibility of the company is bankrupt or liquidated in the future, which in turn will spend money invested by investors in the company. If tax evasion is illegal and known to the tax authority, it will lead to sanctions that are even more burdensome to the company's finances.

Companies that if declared bankrupt by the court, the curator must settle their tax obligations first. The tax rules applicable in Indonesia in the Law of the Republic of Indonesia Number 16 of 2009 concerning the Fourth Amendment to the Law of the Republic of Indonesia Number 6 of 1983 concerning General Provisions and Tax Procedures Article 21 paragraph 1 define the position of the state as a creditor preferring to have a prior right to debt tax on goods owned by the Taxpayer to be auctioned in public, while payments to other creditors are settled after the tax debt is paid. This tax debt includes tax principal, administrative sanctions in the form of fines, interest, increases, and tax collection costs.

In Article 32 it is stated that the Taxpayer is represented one of them in the case of a body declared bankrupt by the curator, where the representative of the Taxpayer is personally and/or specially responsible for the payment of the tax due, the Taxpayer is represented in terms of the body by the management, namely, the person has the authority to participate in determining policies and/or making decisions in running a company, this provision also applies to commissioners and majority or controlling shareholders. When viewed from these rules, the higher the risk obtained from a tax audit if there are findings of a lack of tax payments in the past so that the risk to be borne by the manager, shareholders, and creditors will also be higher.

To minimize the high level of risk, companies must settle their tax debts to the state when the company is nearing bankruptcy. The use of funding from internal sources is preferred to fulfill its tax obligations. If the use of internal funds is insufficient, the company will use external funds also. One form of external funding is bond issuance. Modigliani & Miller (1963) in theory argue that the

value of a company with debt will be higher than the value of a company without debt. The higher the level of use of debt by companies, the level of profit required will also increase. The existence of high-interest costs obtained from the use of debt can reduce the amount of tax paid.

5 CONCLUSIONS AND SUGGESTIONS

5.1 Conclusion

Based on the results of the research conducted, the authors can conclude that changes in financial constraints experienced by company does not have significantly effect on cash tax savings so that the hypothesis is not supported. This is because the way to obtain additional internal funds when financial constraints occur is not to avoid taxes or save taxes. The company will prioritize paying off all of its tax debt to the state when the level of financial constraints faced by the company is very high and avoids a high level of risk if the company takes cash tax savings.

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5.2 Limitation

The limitation in this study is the sample in this study is only limited to manufacturing sector companies so it does not cover all industrial sectors listed on the IDX. The sample data only uses 185 observations over the five years, namely from 2014-

2018 so it does not represent the existing population. The author only uses financial constraints as an independent variable to test its effect on cash tax savings. This study only uses the Δ GAAP ETR proxy to measure changes in cash tax savings and Δ Z-Score and Δ KZ-Index to measure changes in financial constraints. Time series data and cross- section writer use in statistical testing.

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