Determining The Effect of Tax Planning, Tax Aggressiveness, and Tax Risk To The Firm Value: An Empirical Study on Manufacturing Companies Listed in Indonesia Stock Exchange Period 2011-2014

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Abstract

The value of the firm is one of the major concern of the management in running their company, thus some of the possible ways are performed in order to maximize the value of the firm. Tax planning is one of the tools to reduce the burden of the company because it reduces the transfer of wealth from the shareholders to the government. The activity of the tax planning is believed to be more aggressive nowadays for the value maximization, but still considering the tax risk that may occur. This purpose of this study was to examine the effect of tax planning, tax aggressiveness and tax risk to the firm value. The object of research used in this study is manufactured company listed in Indonesia Stock Exchange during the period 2011-2014. The method used was the regression of the panel data. The results showed that tax planning has significant impact on firm value but tax aggressiveness and tax risk do not have a significant impact towards the firm value.

Keywords: tax planning, tax aggressiveness, tax risk and value of firm

Introduction

Background

It is more than just an organizational objective for a company to create their value by value maximization, as it is a form of statement of corporate purpose or vision; it is a scorecard that managers, directors, and other use to assess success or failure of the organization (Jensen, 2011). Thus, firm value is one of the major concern for a company and its management to reach their purpose according to the vision their bring in running the company's business. Rockmore and Jones (in Wahab, 2010) stated that market value measures shareholders' value or wealth, further more it is also indicates the shareholders' expectations or assessment perspective towards the management performance and efficiency. If the markets are efficient, to act in the best interest of shareholders, the managers should maximize the market value of the firm's share.

Jensen and Meckling mentioned in the discussion of the *Theory of The Firm*, which in principle is a process to maximize profit or maximize corporate value by considering managerial behavior, agency costs and ownership structure of the company. In this case it

does tax planning to minimize costs in order to increase shareholder value (Lestari and Anggraita, 2014)

Meanwhile, tax is almost always a big issues for a company. As we know that nowadays there are so many practices used by a company to reduce their tax expense, as they assume it as a burden. The purpose of reducing the tax expense is almost the same, which is to increase the income after tax, hence, the profit for the company itself will be high, and it indeed makes the shareholders or the management satisfy, and or the market would assume it as a good company; thus it can also makes the company to increase the value of the firm.

Income tax of a corporation is one of the most substantial costs noticed by the management because it will determine how big is the tax payable they need to pay, sometimes considered as a burden to the firm itself. Income tax that paid by a firm to government is the process of wealth transfer from company side (especially the owners) to the government (Sari and Martani, 2010). Higher corporate tax affects lower corporate and private preserving, furthermore reductions in corporate tax rates inclines to result in incrementing corporate tax payers' compliance (Hartadinata and Shauki, 2013).

To investigate the valuation of the firm from the perspective of taxation, resea rcher considers three underlying concepts: tax planning, tax aggressiveness, and tax risk. By using some various approaches of tax planning, companies are trying to minimize their expected tax liabilities. Zain (in Lestari and Anggraita, 2014) stated that tax planning is an action related to the structuring of the potential tax consequences, the emphasis on controlling any existing transaction tax consequences with the aim to streamline the amount of tax to be transferred to the government. Based on the opinion of Desai and Dharmapala (in Lina and Anggraita, 2014) tax planning arranging can be found in two alternate points of view. To begin with, the point of view of conventional hypothesis, that the assessment arranging exercises to exchange the welfare of the State to shareholders. With through tax planning activity is organized activity that the taxation rate as low as could be expected under the circumstances by using the current regulations to obtain an increase in profit after tax would have an impact on increasing the company's value, regardless of the level of compliance of the company. Also, from the point of view of agency theory, that through tax planning exercises to encourage managerial opportunity to make a move to control profit advantage or situation of assets that don't fit and additionally the absence of straightforwardness in

running the organization's operations so tax planning arranging adversely affect the estimation of the organization. (Lestari and Anggraita, 2014).

Tax planning can be done through several strategies such as tax avoidance, tax evasion and tax saving (Pohan, 2013). Tax avoidance is the strategies and a technique of tax avoidance is legal and safe for the tax payer because it does not conflict with the provisions of taxation (Pohan, 2013). Tax avoidance may infer either managerial value-maximizing behaviour or a more prominent potential for agencies conflicts in the middle of managers and shareholders (Wang, 2010). Menawhile tax evasion is a strategy and technique of avoiding taxes in the illegal ways and it is not safe for the taxpayers because this tax smuggling manner contrary to the provisions of taxation, because the methods and techniques used are not in the corridors laws and tax laws. A tax saving measures undertaken by the taxpayer is done legally and safely for the taxpayer because without conflict with the provisions of taxation. This means for the tax expense efficiency through the selection of alternative taxation at lower rate. For example, company can choose to change the way they givea treat for thier employees by giving it in the form of money allowance (Pohan, 2013).

The second concepts is the tax aggressiveness of the firm. The owner of the company is assumed to have a preference for company management to be aggressive in taxation (Hartadinata and Shauki, 2013). In accordance with Frank opinion (in Sari and Martani, 2010) tax aggressive is the action designed to reduce taxable income with the acceptable tax planning, either it is classified or unclassified as a tax evasion. Aggressive tax measures are believed to occur when a taxpayer prepares financial statements that differ between tax and supposed financial reporting purposes (Hartadinata and Shauki, 2013).

Another stream of research is the tax risk. Tax risk is different from tax evasion and aggressive tax that reflects the extent to which the company is able to maintain the tax position from time to time (Guenther, Matsunaga, and Williams, 2013). Also in the opinion of Guenther, Matsunaga, and Williams (2013), they argued that firms must provide risk-taking incentives for managers to encourage them to undertake risky value-maximizing strategies that reduce the firm’s tax payments.

The difference of this research that area of the examination of the taxation activities from the former research is expanded, by adding the tax aggressiveness and tax risk to measure the valution of the firm, the year of study is expanded to 2014 and to be focus only examine the manufacturing firm listed in Indonesia Stock Exchange.

Firm valuation is one of the key considerations for the investors to make decision. Therefore, the corporate management to maximize its firm value in order to satisfy the shareholders, including the taxation activities in the firm level, uses some of the various approaches. Based on the various results regarding the effect of the taxation activities, thus, the problem on this research focuses on the types of tax activities, which is tax planning, tax aggressiveness, and tax risk of Indonesia's manufacturing companies and its affection to the valuation of the firm.

Basic Concept

Based on Law Number 16 year 2009 about the fourth change over Law Number 6 year 1983 about "*Ketentuan Umum dan Tata Cara Perpajakan*" in article 1 verse 1: "Tax is a mandatory contribution to the state owed by individuals or entities that are enforceable under the Act, by not getting the rewards directly and used for the purposes of the state for the greatest prosperity of the people."

There are five types of tax that is similar in several countries (Pohan, 2013):

Payroll Tax, Individual Income Tax, Corporate Income Tax, Wealth Tax, Consumption Tax. Corporate taxation is an important source for the government income. It is one of the major consideration in planning the business activities. "The theory of taxation stresses the importance of looking thorugh the corporate entity and tracing the incidence of the tax to the shareholders, workers, and customers" (Slemlord, 2004). Under the Indonesia's income tax law (Undang-undang Pajak Penghasilan) Article 17, paragraph 1, letter b, generally a flat rate of corporate tax income 25% of earning before tax applies.

Tax planning is important to the management and the shareholders as it reducing the cost of corporate income tax that considered significantly as burdens the firms and shareholders. According Pohan (2013) Tax Planning is a series of strategies to manage accounting and finance companies to minimize tax obligations in ways that do not violate tax laws. The main purpose of tax planning is to find some gaps, which can be reached in corridors tax regulations (loopholes), so that the company can pay taxes in a minimal amount (Pohan, 2013). Pohan (2013) divided the tax planning activities into three ways the taxpayer can do to reduce the number of tax burdens: tax avoidance, tax evasion and tax saving

Sari & Martani (2010) and Hartadinata & Shauki (2013) adopted the definition of tax aggressiveness as an action purposed to reduce taxable income through tax planning as well

as using method that classified as tax evasion. Hartadinata and Shauki (2013) also stated that aggressive tax policy occurs as a tax payment is considered to be a burden for the company because the income of the corporate is transferred to the government through the process so called tax. Quoting Frank et al in 2009 (in Hartadinata and Shauki, 2013), aggressive tax policy of the company exists when the reports of the tax prepared by the taxpayers is different with the mandatory financial reports.

According to Hite & McGill and Murphy (in Desai and Dharmapala, 2007) aggressiveness in tax reporting is a situation where a company runs a particular tax policy and some potential risks related to their actions (with the expectation to be missed or not to be audited by the authority body). The potential for value destruction is greater in firms that use aggressive tax activities to manufacture fake accounting earnings and to mask insider self-serving behavior (Wang 2010). Martinez and Ramalho (2014) in his study adopted some tax aggressiveness theory, such Frischmann, Shevlin and Wilson (2008) define it as being involved in a significant tax position with a relatively weak supporting facts. Another definition given by Lisowsky, Robinson, Schmidt (2010), as a set of tax avoidance activity falls along a continuum of legitimate tax planning for the misuse of offshore tax shelters.

Aggressiveness taxes, or the extent to which companies use ambiguities in the tax law to reduce their tax payments. For example, a company may decide that there is no clear authority on the applicable tax treatment for certain transactions and assess the probability that the interpretation favorable to have a 10% chance of supported based on technical merit. An aggressive company will choose the interpretation of tax benefit in preparing his tax return, thus reducing tax payments at this time. Taking aggressive tax positions can be considered a risky activity because there is a possibility that their positions will be reversed in the future and the company may have to pay taxes plus interest and penalties. (Guenther, Matsunaga, and Williams, 2013)

In 2009, Hanlon and Slemlord tested the reaction of the market to the tax avoidance actions by the companies. They stated that the tax aggressiveness actions can either increase or decrease the value of the company. Of the tax aggressive is seen from the perspective as an effort to tax planning and tax efficiency, thus the impact is positive. But from the persrpective of the non-compliance action, it will increase the firm risk and decrease the firm value (Chasbiandani and Martani, 2012).

Brealey and Myers (in Guenther, Matsunaga, and Williams, 2013) define finance risk is usually refers to the spread or dispersion of possible outcomes or payoffs from an

investment, reflecting the degree of uncertainty about the future. Guenther, Matsunaga, and Williams (2013) also define tax risk as uncertainty regarding the future tax payments, which reflects the extent to which a firm is able to sustain its tax position over time, the firm's ability to maintain tax-favored investment. Also stated by Hutchens and Rego in 2013 that if the tax risk influences the uncertainty of future after-tax cash flows, then tax risk will have valuation implications for the firm. These tax-related uncertainties include uncertainty in the application of tax law to company facts, the likelihood of audit by tax authorities, uncertainty in the financial accounting for income taxes and also the quality of the accounting information on which tax decisions are based (Hutchens and Rego, 2015). Former literature suggested that tax risk is an important metric to evaluate the tax strategies implemented by the company (Drake, Lusch, and Stekelberg, 2014).

Market Value of Equity in Firm Valuation

Rockmore and Jones as quoted by Wahab (2010) stated that market value measures shareholders' value or wealth, further more it is also indicates the shareholders' expectations or assessment perspective towards the management performance and efficiency. If the markets are efficient, to act in the best interest of shareholders, the managers should maximize the market value of the firm's share. According to Beaver (in Wahab, 2010), there are three reasons why the share price may reflect future earnings information. The first reason is related to the availability of short time interval in viewing the annual earnings (for example quarterly, monthly and daily), which will then allow the share price to extract information about the pre-aggregated earnings series. Secondly, share price could be a remedy for limitations of current earnings in reflecting the events that effect future earnings. Finally, share price could reflect information in the case of earnings as a compound process that involves several stochastic variables.

Tax planning might affect firm value in both positive and negative directions since excess valuation is computed as the ratio of the sum of market value of equity and book value of long-term debt minus book value of total assets, to sales (Chyz, 2010).

Stakeholder's Theory on Firm Valuation

According to the Stakeholder Theory, firms should pay attention to all their constituencies, consistent with value maximization or value-seeking behavior, which

implies that managers must pay attention to all constituencies that can affect the value of the firm (Jensen, 2001)

Wahab (2010) also stated that Stakeholders' opinion or perspective is an important consideration in tax planning activities since the opinions are likely to mediate tax planning activities, as it is a crucial element in valuation and approval considerations.

Tobin's Q on Firm Valuation

The measurement developed by Tobin (1969) in discussing a general equilibrium to monetary theory. Tobin's Q is defined "as the ratio of the market value of the firm to replacement cost of assets, evaluated at the end of the fiscal year of each firm" (Wahab, 2010). Base on the former researcher, Lewellen and Badrinath, Wahab (2010) adopted the calculation of Tobin's Q by deflating the market value of the outstanding financial claims with the current replacement cost, which also can be defined by scaling the market value of the firm's assets with the costs that need to be incurred to replace the asset at the current market price.

Literature Review

Table 1 Literature Review

No	Author	Research Title	Main Findings
1.	Nanik Lestari and Anggraita (2014)	*Pengaruh Perencanaa Pajak Terhadap* Nilai Perusahaan *Dengan Moderasi Corporate Governance*	Tax planning activities have a positive impact to the firm value. Secondly, the mechanism of corporate governance weakens the positive impact of the tax planning to the firm value.
2.	Nanik Lestari (2014)	*The Effect of the Tax Planning to Firm Value with Moderating Board Diversity*	Positive relation between tax planning and firm value. Board diversity (age and bstudy) could increase the positive influence of tax planning t firm value. Minority could decrease the positive influence of tax planning into firm value.
3.	Hartadinata and Shauki (2013)	*Agency, Leverage Policy, and Tax Aggressiveness During Transition Period: Evidence From Indonesia*	Lower level of corporate tax rate predict less level of tax aggressiveness (in line with agency theory where an increase in managerial shareholders predicts decrease level of tax aggressiveness though).
4.	Wang (2010)	*Tax Avoidance, Corporate Transparency, and Firm Value*	Corporate transparency plays an important role in understanding the determinants and economic consequences of tax avoidance and transparent firms avoid more tax than opaque firms

5.	Desai and Dharmapala (2007)	*Corporate Tax Avoidance and Firm Value*	Higher quality firm governance leads to a larger effect of tax avoidance on firm value. The valuation of tax avoidance is a function of firm governance suggests that tax avoidance and managerial efforts
6.	Guenther, Matsunaga, and Williams (2013)	*Tax Avoidance, Tax Aggressiveness, Tax Risk, and Firm Risk*	The researchers found a significantly positive relation between tax risk and firm risk, but do not find evidence of a significant association between either tax avoidance or tax aggressiveness and firm risk.
7.	Koanantachai (2013)	*Tax Aggressiveness, Corporate Governance, and Firm Value: An Empirical Evidence from Thailand*	Corporate governance is positively related to tax avoidance. The board of directors and audit committee play an important role on tax reduction. Firms with better governance lead to good performance on firm valuation.
8.	Drake, Lusch, Stekelberg, (2014)	*Investor valuation of tax avoidance and tax risk: Evidence from the pre- and post-FIN 48 periods*	Investors generally positively value tax avoidance but negatively value tax risk. Second, tax risk moderates the positive association between tax avoidance and firm value. Third, we find that in the post-FIN 48 period, investors generally do not rely on measures of tax avoidance and tax risk constructed using cash effective tax rates.
9.	Chyz (2010)	*Personally Tax Aggressive Managers and Firm Level Tax Avoidance*	Aggressive managers are associated with firm-level tax avoidance Tax planning might affect firm value in both positive and negative directions since excess valuation

Based on this research, there are four developments of hypotheses

H_1 : Tax Planning has significant impact to the firm value

H_2 : Tax Aggressiveness has significant impact to the firm value

H_3 : Tax Risk has significant impact to the firm value

Tax Planning and Firm Value

According to Chyz (2010) tax planning might affect firm value in both positive and negative directions since excess valuation is computed as the ratio of the sum of market value of equity and book value of long-term debt minus book value of total assets, to sales.

Tax avoidance activities are traditionally viewed as tax saving devices that transfer resources from the state to shareholders and thus should increase after-tax firm value (Wang, 2010). The most obvious benefit of doing tax avoidance is the cash savings from the

taxes avoided which leads to increased cash flow to the firm which offers it the opportunities for further investments and in turn increases the firm's value. (Annuar, Salihu, Obid, 2014).

Based on the theories discussed above, the first hypothesis can be developed as:

H_1 : Tax planning has significant impact to the firm value

Tax Aggressiveness and Firm Value

Wang (2010) and Koanantachai (2013), both stated that aggressive tax activities could also cause increasing of shareholder's wealth through the rise of firm value because it viewed as tax saving method in order to transfer benefit from the state to shareholder.

That is mean the tax aggressiveness also has an impact to the firm value, so the second hypothesis would be:

H_2 : Tax aggressiveness has significant impact to the firm value

Tax Risk and Firm Value

In 2013, Hutchens and Rego (in Drake, Lusch, and Stekelberg, 2014) stated that tax risk would have valuation implications for the firm because tax risk influences the uncertainty of future after-tax cash flows. Quoting Neuman et al. in 2013 (in Drake, Lusch, and Stekelberg, 2014) find that current tax risk is associated with lower future cash ETRs, which indicates that the firm engage in tax strategies that benefit the firm over time.

Based on the theory, that is mean the tax risk also has an impact to the firm value, thus, the third hypothesis for this research is:

H_3 : Tax risk has significant impact to the firm value

Populations and Sample

Population selected by the researcher is all company that listed in Indonesia Stock Exchange (IDX), specifically the criteria of manufacturing company for the period 2011 to 2014. Purposive sampling method will be applied to select the criteria as follows:

(1) Manufacturing companies listed in *Indonesia Stock Exchange (IDX)* for the period 2011-2014. (2) Company is fully operated during 2011-2014. (3) The stock of the company is actively traded in the market during the research period. (4) Company never occurs

delisted from IDX during the period of research. (5) Company never occurs loss during the period of research.(6) The reporting period/closing of the company's book is December 31st. (7) Company presented the financial report in Currency of Indonesian Rupiah. (8) Company presented the financial report clearly and completely. (9) Company's data of variable used in this research available for 2011-2014.

Research Object Description

This research is applying the purposive sampling on the process of selecting the sample. From the population of manufacturing companies that are listed in Indonesia Stock Exchange, the samples selected are 58 companies within four years observation period (2011 to 2014).

Table 2. Descriptions of Sampling Criteria

Description	Quantity
Manufacturing Companies listed on IDX in year 2011-2014	139
Companies occur delisting during research period	3
Companies establish IPO in 2011 and above	15
Companies use currency other than Rupiah in financial statement	20
Companies' financial statement is not ended on December 31	2
Companies occur loss during the research period	41
Total sample of companies per year	58
Total firm-year observation	232

Source: Processed secondary data, 2015

Table 2 shows the summary of how the samples are chosen based on the purposive sampling criteria. There are 130 manufacturing companies listed in Indonesia Stock Exchange (IDX) in 2011. Meanwhile in 2012 there are 131 companies with 3 IPO (TRIS, ALTO, WIIM), and one company delisted (SIMM). In 2013, there are 134 manufacturing companies listed in IDX, with 5 companies IPO (SMBR, ISSP, KRAH, SRIL, SIDO), and 2 companies were delisted which are PAFI and SAIP. There are 139 manufacturing companies listed in IDX for the year 2014, with 4 IPO companies, which are CINT, DAJK,

IMPC, WTON, meanwhile there is no company delisted.

Data used for this research are manufacturing companies listed in IDX during the research period, which are 139 companies. The total of 139 companies are deducted by the criteria as follows: companies occur loss during the research period are 41 companies, companies established IPO are 15 companies, companies use currency other than rupiah are 20 companies, companies' financial statement is not ended on December 31 is 2 companies. In total there are 58 companies per year. Thus, this research is using 232 firm-year observations for 58 companies data year 2011, 58 companies data year 2012, 58 companies year 2013, 58 companies year 2014.

Descriptive Statistics Test Result

Table 3 Descriptive Statistics Result

Variable	Mean	Standard Deviation	Minimum	Maximum
MVE_3months	4.84223	9.168753	0.0098782	71.10528
ETR	0.272886	0.1851347	0.0011484	2.479084
CETR	-0.580475	0.9144007	-13.92104	0.1590434
BTD	-0.0071237	0.2211892	-1.948304	0.2276556
STD_annCETR	0.4274778	1.085107	0.0110093	10.9036
N	2 32			

Source: Output Stata13, 2015

From the descriptive statistics on table 3, it is shown that the dependent variable, MVE has minimum value of 0.0098782 and maximum value of 71.10528. The mean value of this variable is 4.84223 while the standard deviation value is 9.168753.

There are three independent variables which are used this research. The three variables are Cash Effective Tax Rate (CETR), Book Tax Difference (BTD), and Standard Deviation of Annual Cash Effective Tax Rate (STD_annCETR).

Tax planning or Cash Effective Tax Rate (CETR) has the minimum value of -13.92104 and maximum value of 0.1590434. This variable has mean value of -0.580475 while the standard deviation has the value of 0.9144007. On the average the effective tax

rate (ETR) of the companies, which has the mean value of 0.272886 or 27.3% means that this is higher than the applicable tax rate set by the government, which is 0.25or 25%. This has the different result from Lestari and Anggraita (2014), which shows the effective tax rate is 23%. The difference might caused by the difference in companies sample where they used all companies listed in IDX for two years period 2011 and 2012, meanwhile this research is using only manufacturing companies (which dominate in the IDX) for four years period from 2011 to 2014.

Tax aggressiveness of Book Tax Difference (BTD) has minimum value of -1.948304 and maximum value of 0.2276556. This variable has mean value of -0.0071237 while the standard deviation has the value of 0.2211892.

Tax risk or Standard deviation of Annual Cash Effective Tax Rate (STD_annCETR) has minimum value of 0.0110093 and maximum value of 10.9036. This variable has mean value of 0.4274778 while the standard deviation has the value of 1.085107.

Panel Regression

There are three approaches to determine the regression of the panel data; they are Pooled Regression Model, Fixed Effect Model, and Random Effect Model. To choose the best method to regress the data, this research is using Hausman Test.

The result of the Hausman test we got Prob>chi2 0.5762 which is bigger than our confidence level of 1% and 5%, so the fixed effect model and random effect model do not differ substantially. This also means that we can use random effect model because there is no correlation between the error component u_i and the regressors in a random effects model. Then we run Breusch and Pagan Langarian Multiplier (BPLM) Test. The result is P>chibar2 = 0.0000 (belwo confidence level of 0.05), which means we reject the null hypothesis and we can use random effect for our model.

Table 4 Panel Regression Determination Result

chi2(3)	=	(b-B)	'	[(V-b-V_B)	^	(-1)](b-B)
	=	1.98				
Prob>chi2	=	0.5762				

Source: Output Stata13, 2015

Table 4 shows that after running Hausman Test and BPLM Test, the result of the probability is 0.5762 and 0.0000, means that reject the null hypotheses is rejected and random effect model is used for this research. In the random effects model we assume that all individual differences are captured by the intercept parameters but we also recognize that the individuals in our sample were randomly selected, and thus we treat the individual differences as random rather than fixed, as we did in the fixed-effects dummy variable model.

Autocorrelation Test Result

The output result generated from Stata13, using the Wooldridge test, shows Prob > F = 0.0061 which is lower that 0.05. It means that we reject the null hypostheses and this means this data has autocorrelation problem.

Table 5 Autocorrelation Test Result

Autocorrelation Test Result	
F(1, 57)	0.121
Prob> F	0.0061

Source: Output Stata13, 2015

Heteroscedasticy Test Result

The output result generated from Stata13 using shows that Prob > F = 0.000 which is lower than the significance level of 5%. This means that we reject the null hypotheses. This means that the data also has a heteroscedasticity problem.

Table 6 Heteroscedasticity Test Result

Heteroscedasticity Test Result	
chi2 (58)	1.00E+09
Prob>chi2	0.0000

Source: Output Stata13, 2015

Multicollienarity Test

Table 7 Multicolinearity Test Result

Variable	VIF	1/VIF
STD_annCETR	1.33	0.749334
BTD	1.33	0.750089
CETR	1	0.999738
Mean VIF	1.22	

Source: Output Stata13, 2015

Table 7 above shows the VIF test thas has been run in Stata13. The variable STD_annCETR, which is Standard Annual Cash Effective Tax Rate has the VIF value of 1.33,the variable BTD or Book Tax Difference, which is Debt to Equity Ratio has the VIF value of 1.33, the variable CETR, which is Cash Effective Tax Rate, has the VIF value of 1.00 and the mean of VIF 1.22 (< 10), this means the overall mean of the independent variables does not have a multicollinearity problem, thus this model of regression can be assumed as a good regression model.

Cluster Robust

To overcome the problem of autocorrelation and heteroscredasticity, by also run the data using StataMP 13, this research is using the cluster robust to continue for the hypotheses test results.

Hypothesis Test Results

Coefficient of Correlation (R^2) Test Result

The result of the coefficient of determination test from the equation estimation result performed by using Stata13 shows that the value of the overall R-square is 0.0257. The value indicates how well the variance of firm value can be explained by the tax planning, tax aggressiveness, and tax risk. It means, from the regression model used in this research only 2,57% of the independent variables can explain the variance of the dependent variable (firm value).

Simultaneous Significance Test (F-Test) Result

The result from the equation estimation result in table 8 shows the value of the probability of F-statistic (Prob > chi2), which is 0.0034. The result of the prob(F-statistic)

indicates that the regression model used in this research is significant at significance level of 5% (0.000000 < 0.05) or in a confidence level of 95%, which means that all the independent variables Cash Effective Tax Rate, Book Tax Difference, and Standard Deviation of Annual Cash Effective Tax Rate used in this research has significant impact towards the dependent variable Market Value Equity+3months simultaneously.

Individual Parameter Significance Test (t-Test) Result

1. Cash Effective Tax Rate (CETR): Cash Effective Tax Rate has a significant impact towards the firm value . The probability (p-value) of this variable is 0.001 which is lower than 0.05 (at significance level of 5%). The regression result shows the positive relationship between tax aggressiveness and firm value.

The result is consistent with the research conducted by Lestari and Anggraita in 2014. It means that this result show the activities of tax planning through the tax saving. According to Lestari and Anggraita (2014) consistent with the former research conducted by Desai and Dharmapala (2006), by implementing tax planning activities, that is doing structured actions so the tax burden as low as possible by utilizing the existing regulations to obtain the earning after income tax, which will have an impact on increasing the firm's value. This result is also consistent with the research conducted by Nanik Lestari (2014), Wang (2010), and Drake, Lusch, Stekelberg, (2014). Therefore, this research result supports the hypothesis H1.

2. Book-Tax Difference (BTD) as the proxy of Tax Aggressiveness. Tax Aggressiveness has no significant impact towards the firm value. The probability (p-value) of this variable is 0.145 which is greater than 0.05 (at significance level of 5%). This result is not consistent with the research result by Hartadinata and Shauki (2013) and Koanantachai (2013), and Chyz (2010), where their result showed a significant impact of tax aggressiveness, towards the firm value. This difference of the result may be caused by the total book tax difference can't be exactly give a picture of tax aggressiveness since book tax difference still could change in the near future. Meanwhile the research conducted by Frank, Lynch, and Rego (2008) where they're using permanent book tax difference as the proxy of book tax difference (deducting the temporary difference from the total book tax difference) so the possibility of the difference would change is small. Using permanent book tax difference means eliminating the temporary difference from the total book tax difference.

3. Standard deviation of annual Cash Effective Tax Rate (STD_annCETR) as the proxy of Tax Risk. Standard deviation of annual Cash Effective Tax Rate has no significant impact

towards the firm value. The probability (p-value) of this variable is 0.750 which is greater than 0.05 (at significance level of 5%). This result is not consistent with the result conducted by Guenther, Matsunaga, and Williams (2013) and Drake, Lusch, Stekelberg, (2014) where in their research result states that tax risk has an implication value to the firm value.

This might be the proxy of tax risk used by the former researcher tested in mostly United States country cannot be implemented in Indonesia, means the standard deviation of annual cash effective tax rate could not give a picture of the tax risk in Indonesia.

Another proposed measurement of tax risk are unrecognized tax benefit (UTB) by Hutchens and Rego in 2013 as they stated the UTB captures tax decisions that potentially impose significant costs on firms and thus, should influence the market's assessment of current and future after-tax cash flows as well as Neuman, Omer, and Schmidt in 2013 who also took UTB as their tax risk assessment captures that UTB does capture the tax risk. Thus, for the next research regarding the tax risk might be use the unrecognized tax benefit or a composite measure that captures multiple facets of tax risk as the proxy, and this might give a different result of the research with the sample from Indonesia companies.

Table 8 Hypothesis Test Result

Random-effects GLS Regression				Number of obs		= 232
Group variable: Firm1				Number of groups		= 58
R-sq	within	= 0.0002		Obs per group	min	= 4
	between	= 0.0398			avg	= 4.0
	overall	= 0.0257			max	= 4
					waldchi2(3)	= 13.65
corr(u_1, X)	= 0 assumed				Prob > chi2	= 0.0034
				Std. Err. Adjusted for 58 clusters in Firm1		
MVE_3months	**Coef.**	**Robust Std. Err.**	**z**	**P>|z|**	**[95% Conf. Interval]**	
CETR	0.0873842	0.0252731	3.46	0.001	0.378499	0.1369185
BTD	2.04363	1.402863	1.46	0.145	-0.7059298	4.79319
STD_annCETR	-0.0410706	0.1288854	-0.32	0.075	-0.2936814	0.2115402
_cons	4.880409	1.081326	4.51	0.000	2.76105	6.999768
sigma_u	7.8481779					
sigma_e	4.919564					
rho	0.71791099	(fraction of variance due to u_1)				

Source: Output Stata13, 2015

Conclusion and Recommendation

Conclusion

This research aims to investigate whether the tax planning, tax aggressiveness, and tax risk have an impact to the valuation of the firms. The dependent variable used in this research is market value equity. Meanwhile, the independent variables used in this research are cash effective tax rate as the proxy of tax planning, book tax difference as the proxy of tax aggressiveness, and the standard deviation of annual cash effective tax rate as the proxy of tax risk.

This research is done on all manufacturing companies listed in IDX who fulfill the purposive sampling criteria from the period year 2012 to 2014. The conclusion of findings in this research is as follows:

1. This research provides evidence that tax planning has significant impact on firm value.
2. Tax Aggressiveness does not have a significant impact towards the firm value .
3. Tax Risk are proven to not having a significant impact towards the firm value .

Recommendation

Based on the conclusions and limitations listed above, there are some suggestions given for the future research, they are:

1. Extending the period of the year of observations, thus the result might given a picture of a long-term result of the valuation of the firm and the taxation activities of the companies.
2. Expanding the scope of the research area. Since this research only using the manufacturing companies listed in the IDX, future research may use all of the publicly traded companies listed in IDX as the sample populations. Thus, the research result may represent the overall population.
3. Future research might use different kind of measurement of the firm value such as Tobin's Q (as research conducted by Desai and Dharmapala in 2007; Drake, Lusch & Stekelberg in 2014; and Chyz in 2010), Stakeholde Theory as Jensen stated in 2011 that a firm which ignores the interest of its interest cannot maximize its value.
4. Future research might use the permanent book tax difference as the proxy of tax

aggressiveness following the former research conducted by Frank, Lynch, and Rego in 2008 where they're using permanent book tax difference as the proxy of book tax difference, so the possibility of the difference would change is small.

5. Future research might use another proxy of tax risk such as unrecognized-tax benefit; Neuman, Omer, and Schmidt in 2013 as well as Hutchens and Rego in 2015 stated that UTB captures tax decisions that potentially impose significant costs on firms and thus, should influence the market's assessment of current and future after-tax cash flows.
6. Future research might use a controlling variable or moderating variables related to taxation activities to give more a clarification or assess of the relationship between two or more other variables, such as good corporate governance that might affect the activities of the company itself.

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