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Full Length Research Paper

Determinants of debt policy: An empirical studying Indonesia stock exchange

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Abstract

The purpose of this study was to analyze the factors that influence the debt policy (leverage) at the manufacturing companies listed on the Indonesia Stock Exchange (IDX). Factors affecting the leverage in this study were non-debt tax shield, asset structure (tangibility), profitability, growth, and firm size. The sample in this study is a manufacturing company listed on the Stock Exchange the period 2007 to 2009. Sampling study using purposive sampling method was used. Sources of research data obtained from the publication of the financial statements of the company by IDX Indonesian Capital Market Directory (ICMD) in 2010, with a total sample of 114 manufacturing companies. The analysis technique used is multiple regression analysis. The results showed that tangibility, growth and firm size have a positive and significant impact on leverage. Profitability significantly and negatively related to leverage, while the non-debt tax shield and no significant negative effect on leverage.

Keywords: non-debt tax shield, tangibility, profitability, growth, firm size, and leverage.

INTRODUCTION

Manufacturing company are companies that dominate the companies listed on the Indonesia Stock Exchange (IDX), which are grouped into several sub categories. The number of manufacturing companies, as well as current economic conditions has created a fierce competition among manufacturers. The competition encourages each company to further improve performance in order to remain objective achieved.

In an effort to grow the company in the face of competition, it is necessary to source of funds that can be used to meet those needs. Sources of funding may come from within the company or outside the company. The proportion between the amount of funds from within and outside the so-called capital structure in financial management. Capital structure of a company is a combination of own capital (equity) and corporate debt. Equity can be derived from the company's internal and external. Internal equity in the form of common stock, paid-in capital, retained earnings, and reduced stocks pulled back (treasury stock), while external equity in the form of shares sold by the company to investors. Debt comes from debt to the creditor and corporate issuance. Debt comes from bonds issued by the company, and sold to investors in the capital market.

Various sources of funding companies require fund managers to be able to meet the exact composition of the sources of funding for the company. Each funding source decisions have consequences and different financial characteristics of the firm. Funding through debt policy decisions will have an impact on increasing the leverage of the company, instead of funding sources through internal cash resources and the issuance of shares will have an impact on the decline in corporate leverage.

Funding decisions change over time, meaning that funding decisions change with the company's financial condition. Funding decisions in the past are important in determining funding decisions at this time. This statement is supported by empirical research conducted by Titman and Wessels (1988), who found that after the company's profit, the company will use the profits to reduce debt, so the use of debt financing to be down.

Theories of conventional capital structure states that firms optimal capital structure related to the costs and benefits associated with debt and equity financing (Myers, 1977). Companies can achieve the lowest cost of financing the debt-to-equity mix is optimal, and as a result will increase the value of shareholders. Trade off

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theory states that a company should be taxed to raise the level of debt than the value of the marginal tax on the cost of the financial distress that may occur. Trade off theory in the capital structure theoretically balances the tax advantages of borrowing to cover the costs of financial distress.

In contrast to the trade off theory, another theory of capital structure, pecking order theory is based on the problems of asymmetric information (Myers and Majluf, 1984),. Myers and Majluf (1984) predicts that firms will prefer internal funds to finance investment, and when to use external financing, it will use the debt first rather than issuing new shares. This theory explains that the company has a tendency to not issue shares, but they tend to hold large cash reserves.

A number of theories have been developed to explain the variation in the debt ratio (leverage) on each company. The theory states that firms choose financing structure based on attributes that determine the benefits and costs associated with debt and equity financing (Titman and Wessels (1988). Myers (1991) states that the use of debt in a company need to consider certain leverage targets to increase the wealth of the owner.

Leverage in empirical studies, is defined as a measure that indicates the extent of the use of debt in financing assets of the company. According to Brigham and Houston (2001), the use of leverage has important implications and provides benefits, namely:

a. Interest paid can be deducted for tax purposes, thereby reducing the effective cost of debt.
b. Debt holders do not need to take their profits when the company was in good shape.

The use of leverage also creates disadvantages, namely:

a. The higher debt utilization ratio (debt ratio), the higher the risk of the company, so the interest rate may be higher.
b. If a company experiencing financial distress and operating earnings are not enough to cover interest charges, then the shareholders must close the gap, and the company will go bankrupt if they cannot afford.

Various phenomena of the company's leverage can be seen from the choice of capital structure the company in several countries. Titman and Wessels (1988) has conducted research on the determinants of capital structure choices on manufacturing companies in the United States in the period 1974-1982. The study shows that manufacturing companies in the United States to determine its funding structure by considering transaction costs. Research conducted by Buferna, *et al.* (2005) on the determinants of corporate capital structure in Libya showed evidence of capital structure theory related to developing countries. The study showed that the trade-off theory and agency theory is a theory of capital structure related companies in Libya in choosing the form of funding, but the study provides little evidence to support the information asymmetry theory. This happens because Libya is a developing country and does not have the capital market, thus fulfilling funding sources tend done through bank loans.

Research conducted by Teker, et al., (2009) about the fundamental factors that are assumed to be macro-economic factors that influence the decision of leveraged companies in Turkey. High leverage found in companies operating in the sector of agricultural fertilizers, automotive, food, iron and steel, as well as the retail sector, but the study showed there was a trend decline in the use of debt from year to year.

Leverage indicates the ratio of debt to finance the use of total assets (total debt to total assets /DTA). Leverage changes caused by changes in the various factors determining corporate leverage decisions. There are several factors that affect leverage, including the non-debt tax shield; assets structure (tangibility), profitability, the growth of the company (growth), and firm size.

The purpose of this paper is to analyze the factors that determine the debt policy on manufacturing companies in Indonesia Stock Exchange. In this case we focus on the leverage as a proxy of debt policy and some explanatory variables. The analysis was conducted by examining the influence of non-debt tax shield, tangibility, profitability, growth, and firm size on leverage to reveal two opposing theories, namely the trade-off theory and the pecking order theory.

Literature Review

Corporate debt policy is one of the key policies that could determine how companies can overcome the financial and economic crisis (Çitak, Levent, et al., 2012). Corporate debt policy has been widely discussed and analyzed as a research topic in finance literature. This topic is very interesting, because it relates to the determination of corporate financing is still widely debated. In this study of corporate debt policy proxied by the leverage which is the dependent variable.

Leverage refers to the debt of the company. In the literal sense, leverage means the lever or lever. Source of fund companies can be divided into two, namely internal funding and external funding sources. Internal sources of funds come from retained earnings, depreciation, and reserves established for the purpose of business expansion. While external funding is a source of corporate funding came from outside the company, from investors, such as stocks and bonds. Both of these funding sources stated in the balance sheet on the liabilities side.

Leverage can also be defined as the use of assets or funds in which to use the company must cover fixed costs or pay fixed charges. If the "operating leverage" the use of assets with fixed costs is the hope that the revenue generated by the use of the assets would be sufficient to cover fixed costs and variable costs, then the use of financial leverage to fund fixed charges it is

with the hope to increase earnings per share common stock.

Weston and Copeland (1997) provides a concept of leverage or debt ratio which is the ratio between the book value of all debt (total debt) to total assets. This ratio emphasizes the importance of debt financing by showing the percentage of assets of companies backed by debt. The higher this ratio, the greater the risks involved, investors will require a higher rate of return. Often a company's creditors will try to prevent high leverage ratio covenant requires that a debt to the company, so the company is bound by the agreement will maintain its leverage under the specified limits. High leverage ratio also showed a low proportion of their own capital to finance assets.

Leverage is one of the solvency ratio is the ratio to determine the company's ability to pay the obligation if the company was liquidated. Another solvency ratio is in the form of Debt to Equity Ratio (DER), which is a ratio between the value of all debt (total debt) to total equity. This ratio indicates the percentage of the provision of funds by shareholders against the lender. The higher the ratio, the lower the funding provided by the company's shareholders. From the perspective of long-term ability to pay obligations, the lower the ratio, the better the ability of the company to pay for long-term liabilities.

Both leverage and the Debt to Equity Ratio (DER) both as a measure of performance used in the analysis of financial statements, the difference between the two lies in the objective analysis. The information of leverage needed to determine the risk of creditors in the company's inability to pay its obligations, while the Debt to Equity Ratio (DER) informaion is required by shareholders to know that most of the investments made by the company to be financed from shareholders' equity.

In this study, the discussion is restricted relating to the level of debt or the debt leverage ratio that reflects the company's operating assets are expected to describe the results of analysis of the company as a whole. While the Debt to Equity Ratio (DER) is not used as a proxy in this study, because DER is only a partial picture of the company's capital structure (equity). There are many factors that affect debt policy, but in this study will only limit on several factors, namely: Non-Debt Tax Shield, Tangibility, Profitability, Growth, and Firm Size.

Previous studies on the factors that affect the leverage is still showing different results. The research of non-debt tax shields effect on leverage by Titman and Wessels (1988), De Miguel and Pindado (2001), Ozkan (2001), and Shahjahanpour, et al. (2010), did not find any influence of non-debt tax shields on leverage. However, research conducted by Bowen, et al. (1982), Kim and Sorensen (1986), Allen and Mizuno (1989), Givoly, et al. (1992), Allen (1995), and Mutamimah (2003) found a significant negative effect of non-debt tax shields on debt ratio. Likewise Sayilgan, Guven (2006), and Teker, et al. (2009), found that non-debt tax shield and a significant negative effect on leverage. While the study by Bradley et al. (1984), Homaifar, et al., (1994), and Moh'd, et al., (1998) showed different results, namely non-debt tax shield has positive and significant impact on leverage.

Research on the effect of tangibility on leverage also showed different results. Titman and Wessels (1988), in his study did not find a relationship between the tangible and leverage. However, Ferri and Jones (1979), Marsh (1982), Bradley, et al. (1984), Rajan and Zingales (1995), Allen (1995), Moh'd, et al. (1998), Gaud, et al. (2005), Buferna, et al. (2005), and Teker, et al. (2009), in his research found that tangibility has positive and significant impact on leverage. While the results of Sayilgan, Guven (2006), found that the tangible has negatif and significant impact on leverage. However, research results from Çitak (2012), showed that tangibility insignificant effect on leverage. The difference is due to research studies conducted in different countries, according to the characteristics of each country.

Inconsistencies also present the results of research on the study of the influence of profitability on leverage. Research conducted by Ooi (1999), and Ellili and Farouk (2011), showed that the effect was not significant profitability on leverage. Research conducted by Titman and Wessels (1988), Allen (1991), Rajan and Zingales (1995), Moh'd, et al. (1998), Ozkan (2001), Chen (2003), Gaud, et al. (2005), Sayilgan, Guven (2006), Teker, et al. (2009), and Çiatk (2012), showed that the profitability significantly and negatively related to firm leverage. While research conducted by Mutamimah (2003) and Buferna, et al. (2005) show that profitability has positive and significant impact on leverage.

Research on the growth of the leverage also shows results that are also not consistent. Titman and Wssels (1988), in his study found no association between growth with leverage. Similarly, research conducted by Buferna, et al. (2005) showed that the growth was not significant on leverage. Research conducted by Homaifar, et al. (1994), Allen (1995), Rajan and Zingales (1995), Moh'd, et al. (1998), Ooi (1999), Ozkan (2001), and Gaud, et al. (2005), showed that growth significantly and negatively related to firm leverage. While the study by Chen (2003), Sayilgan, Guven (2006), Teker, et al. (2009), and Ellili and Farouk (2011) showed that growth significant positive effect on leverage.

Research on firm size on leverage also showed inconsistent results. Research conducted by Ozkan (2001), and Ellili and Farouk (2011), shows that the firm size was not a significant effect on leverage. Research conducted by Homaifar, et al. (1994), Rajan and Zingales (1995), Moh'd, et al. (1998), Mutamimah (2003), Gaud, et al. (2005), Buferna, et al. (2005), Sayilgan, Guven (2006), Teker, et al. (2009), Karadeniz, et al (2011), and Çitak and Ersoy (2012), shows that the firm size has positive and significant impact on firm leverage. While the study by Marsh (1982), Ooi (1999),

and Chen (2003), suggests that firm size significantly and negatively related to leverage.

Non-Debt Tax Shield

In relation to tax, corporation tax gains on loan interest payments (interest tax shield or debt tax shield). Besides the tax benefits, the company may also obtain a tax advantage other so-called non-debt tax shield, the tax advantage obtained by the company besides interest on the loan is paid. According Teker, et al. (2009), non-debt tax shield is in the form of depreciation of fixed assets. This is in accordance with the opinion of DeAngelo and Masulis (1980), that the tax deduction for depreciation and investment credit is a substitute for the benefits due to the use of debt financing. DeAngelo and Masulis (1980), explains that the relationship between the debt ratio of the non-debt tax shields is positive.

In Article 6, paragraph (1) letter b of Law No. 7 of 1983 as amended by Act No. 36 of 2008 on Income Tax explained that:

"The amount of taxable income for domestic taxpayers and permanent establishment, is determined by gross income minus: b. depreciation of expenditures to acquire tangible assets and amortization expense for the right and the other costs that have a useful life of more than one year ..... "

Therefore, companies that have a high amount of fixed assets will increasingly gain tax advantages, namely in the form of depreciation expense that can be deducted in calculating the amount of tax payable. Tax benefits in the form of depreciation expense that can be deducted in determining taxable income, also known as non-debt tax shield. In depreciation expense reflects lower total tangible assets owned by the company, further tangible assets can be used as collateral to guarantee the debt at the time of applying for loans.

Non-debt tax shield shows the amount of non-cash charges that led to tax savings and can be used as capital to reduce debt in the form of depreciation. Companies with high depreciation costs reflect that the company has large fixed assets. The large fixed assets can be utilized by the company as collateral. The company has large fixed assets that will most easily get a new loan, so there is a tendency to increase the debt again. The amount of fixed assets of the company which can be used as a collateral effect on the high cost of depreciation, so it can be said that the cost of depreciation of fixed assets positively with debt.

Tangibility

According to Titman and Wessels (1988), capital structure theory states that the form of assets owned by the company influence the choice of its capital structure. Tangibility describe some of the amount of assets that can be pledged as collateral (collateral value of assets). Assets that can be pledged constitute assets requested by the creditor as collateral for a loan. Growth assets basically describe how companies invest funds held for operating and investing activities. The increase in total assets, both current assets and long-term assets in need of funds, with internal funding or external funding alternative.

According to the trade off theory, companies with a high level of intangible assets will tend to do debt, being able to provide collateral for the loan. The more tangible assets a company has, the more assets that can be used as collateral to obtain external funding in the form of debt.

Profitability

Profitability is the level of net benefits obtained by the company in running successful operations in a period. Profitability of a company reflects the level of effectiveness achieved by an operating company (Ukago, 2005). The premise that the rate of return is used as a way to assess the effectiveness of the company's success, of course, related to the final outcome of the policies and decisions of the company that has been run in the current period. Profitability in this study was measured by Earning Power, based on the model proposed by Teker, et al. (2009), by dividing operating income by total assets.

This ratio describes the company's ability to generate profit from each dollar of assets used. By knowing this ratio can be determined whether the company efficient in utilizing its assets in the company's operations. According to the trade off theory, corporate profitability has a positive impact on leverage. The positive influence of profitability on leverage can be explained that companies with high profitability reflects that the company is able to pay interest and principal, so that financial institutions and creditors will have more confidence to give loans to companies that have a high level of profitability.

On the other hand, according to the pecking order theory profitability negative effect on leverage. The concept of funding is the main theory is from within the company, using retained earnings. High profitability will result in the increase in retained earnings, and management will use this earning as a source of financing.

Growth

A company that is in the industry that has a high growth rate should provide sufficient capital to finance the company. Fast-growing companies tend to use more debt than the company was growing slowly. For companies in the high growth rate of sales and profits

have tended to use debt as a source of external funding is greater than the company's growth rate is low.

Titman and Wessels (1988), states that equity-controlled firms tend to optimally invested in transferring wealth from shareholders. Costs associated with agency relationships tend to be higher for companies in its infancy, and more flexibility in determining future investment choices. Therefore, according to Titman and Wessels (1988), future growth tends to be associated negatively with the level of long-term debt, so that the relationship between growth and debt is negative.

To increase the value of the company, in addition to making dividend policy, the company is also expected to grow. Increased growth of the company, reflecting the investment opportunity, as the company experienced growth requires substantial funds to finance their investments, so as to sustain growth. Companies that require substantial funds, causing the company tends to make loans instead of using internal funds or retained earnings, thus according to the trade off theory. Trade off theory states that the increasing debt in order to achieve an optimal capital structure, the company has the option of (trade-off) between gains tax on the increase in the cost of debt and bankruptcy will occur.

Firm Size

The large companies often offer greater collateral guarantees, and the lower risk, since they tend to be more diversified (Titman and Wessels 1988). As a result, they have a better reputation in the financial markets, and can achieve a higher level of debt. As a result, from the perspective of trade-off theory, large companies can lead to higher debt, so the size of the company should be positively related to the level of debt.

The bigger the size of a company, the need for funds is also getting bigger, which one of them can come from external funding, ie debt. Large companies have advantages as well as the activity known to the public than small firms, so that the needs of large corporate debt will be higher than smaller companies. Moreover, the larger the firm size, the company more transparent in disclosing the performance of the company to outsiders, so companies find it easier to get a loan because the more trusted by creditors.

As consideration, the pecking order theory, firm size is negatively related to the company's debts. Assuming that the presence of information costs are lower, so as to obtain the internal financial resources of larger, and can reduce the amount of debt required.

The Debt Policy Determinants Variable:

Variable	**Expected Impact**
Non-Debt Tax Shields	Positive
Tangible	Positive
Profitability	Ambiguous
Growth	Ambiguous
Size	Ambiguous

RESEARCH METHODS

The research was conducted on firms in the manufacturing industry are listed in the Indonesia Stock Exchange (IDX) in the period 2007 to 2009. The population in this study is all manufacturing companies listed on the Stock Exchange in the year 2007-2009. The research sample drawn from a population with a purposive sampling method.

Data analysis techniques in this study using multiple regression equations model, the regression equations as follows:

$$Lev = \alpha + \beta_1 NDTS + \beta_2 TANG + \beta_3 PROF + \beta_4 GRO + \beta_5 SIZE + e$$

Description:
α = Constant
β = regression coefficient of each independent variable
e = Residual Variable
Lev = *Leverage*
NDTS = *Non-debt tax shield*
TANG = *Tangibility*
PROF = *Profitability*
GRO = *Growth*
SIZE = *Firm Size*

Constant amount reflected in the "α", and the regression coefficient of each independent variable indicated by β_1, β_2, β_3, β_4 and β_5.

DISCUSSION OF RESULT

Based on Table 1 variable description can be explained on the condition of the variables used in the model. The number of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the period 2007 to 2009 amounted to 144 companies. A population of 144 manufacturing companies in accordance with the method of purposive sampling, only 38 companies is eligible.

The number of samples 110 companies surveyed, the average leverage during the study period (2007-2009) amounted to 39.84 percent with a standard deviation of 16.64 percent. The same results occurred in three other independent variables, namely tangibility, growth, and firm size. Tangibility has an average 33.41% with a standard deviation of 16.62 percent, growth has on average 20:08% with a standard deviation of 19.35 percent, and firm size have an average of 627.49

Table 1. Description of Variable Statistics Research

	N	Minimum	Maximum	Mean	Std. Deviation
leverage	110	.07	.73	.3984	.16635
ndts	110	.00	4.49	.1254	.55844
tangibility	110	.07	.76	.3341	.16619
profitability	110	.00	.57	.1654	.12014
growth	110	.01	1.18	.2008	.19345
size	110	4.93	7.95	6.2749	.69065
Valid N (listwise)	110				

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

Table 2. Normality Test Results

	N	Skewness	
	Statistic	Statistic	Std. Error
Unstandardized Residual	110	.229	.230
Valid N (listwise)	110		

Sources: SPSS 17 results though secondary data from 2007 – 2009.

Table 3. Multicollinearity Test Results

	Collinearity Statistics	
Model	Tolerance	VIF
1ndts	.924	1.082
tangibility	.961	1.040
profitability	.925	1.081
growth	.974	1.027
size	.906	1.103
a. Dependent Variable: leverage		

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

percent with a standard deviation of 69.07 percent. These results indicate that low because of data irregularities standard deviation values are smaller than the average value, so that the spread of data is relatively normal.

Meanwhile, non-debt tax shield has an average of 12:54 percent with a standard deviation of 55.85 percent. These results indicate that the data deviation is high because the value of the standard deviation is greater than the average, so that research results be biased. The minimum value of 0 percent and a maximum of 449 percent of the non-debt tax shield indicates that the variability of the cost of depreciation of the manufacturing company with one manufacturing company to another is quite high, because the difference between maximum and minimum values are quite high.

Testing normality to meet the requirements of the regression model results showed that the value of skewness is 0.229/0.230 = 0.996. Skewness value of 0.996 is less than 2, so that the variables in this study were normally distributed (see Table 2). While testing the assumptions of classical generate value Variance Inflation Factor (VIF). less than 10, so there is no problem of multicollinearity for the regression model (see Table 3).

In Table 4 Durbin Watson with a significance level of 0.05 ($\alpha = 0.05$) with a number of independent variables ($k = 5$) and the number of data ($n = 110$) note that du =

Table 4. Autocorrelation Test Results

Model	Durbin-Watson
1	2.091[a]

a. Predictors: (Constant), size, tangibility, growth, profitability, ndts

b. Dependent Variable: leverage

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

Table 5. Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.047	.075		.625	.534
	ndts	-.015	.015	-.102	-1.018	.311
	tangibility	.081	.048	.165	1.684	.095
	profitability	.046	.068	.068	.681	.497
	growth	-.021	.041	-.049	-.502	.616
	size	.006	.012	.049	.487	.627

a. Dependent Variable: absres2

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

1.780. The test results obtained by DW test value of 2.091.Berdasarkan Table 3 it was found that the value of 2.091 is located between du and 4-du which shows that there is no autocorrelation or correlation does not occur in the regression model.

Testing heteroscedasticity in the study conducted by Test Glejser. The test results can be seen in Table 5, which indicates that each independent variable has a significance level greater than 0.05 to absres, so it can be concluded that there is no question of heteroscedasticity in the regression model.

Based on the test results the coefficient of determination (see Table 6), the value for the coefficient of determination (Adjusted R^2) of 0.273 or 27.3 percent, meaning that leverage can be explained by variable non-debt tax shield, tangibility, profitability, growth and firm size by 27, 3 percent, while the remaining 72.7 percent is explained by other causes outside the model. While from the ANOVA test (see Table 7) obtained F value of 9206 with a significance value of F for 0.000 (Sig-F = 0.000), so that the model fit is said to be used to predict the effects of independent variables used in the model for the dependent variable.

The results of multiple regression analysis as shown in Table 8 Regression Analysis Results (in appendix), resulting in a linear regression equation as follows:

Lev = –0.022NDTS + 0.181TANG – 0.197PROF + 0.375GRO + 0.267SIZE

Based on the analysis in the above equation, can be explained the influence of each independent variable on the dependent variable as follows:

a. Non-debt tax shield has a negative effect on leverage (-0.022), ie the influence of non-debt tax shield is inversely proportional to the leverage. The greater the cost of depreciation, the smaller the company the use of debt, and vice versa.

b. Tangibility has a positive effect on leverage (0.181), meaning that the direction of influence of tangibility on leverage. The greater the tangible assets owned by the company, the greater the use of debt by the company because tangible assets can be used as collateral.

c. Profitability has a negative effect on leverage (-0.197), meaning that the effect is inversely proportional to leverage profitability. The greater the profit obtained by the company, the smaller the use of debt, because the company uses operating earnings to the company.

d. Growth has a positive effect on leverage (0.375), meaning that the direction of the leverage effect of growth. The greater the growth, the greater the chance of investment funded by debt.

e. Firm size has a positive effect on leverage (0.267), meaning that firm size influences the direction of the leverage. The larger the firm, the greater the company's use of debt for expansion.

Based on Table 8 (in appendix) indicated that t_h of non-debt tax shield is -0259, with a significance value 0.796 (sig-t = 0.796), or greater than 0.05. This shows that not empirically proven that non-debt tax shield significant effect on leverage. Proxy of non-debt tax

Table 6. Coefficient of Determination

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.554[a]	.307	.273	.14179

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

Table 7. ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.925	5	.185	9.206	.000[a]
	Residual	2.091	104	.020		
	Total	3.016	109			

a. Predictors: (Constant), size, tangibility, growth, profitability, ndts

b. Dependent Variable: leverage

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.

shield is the depreciation in the study, and the size reflects the size of the depreciation of fixed assets. Fixed assets owned by the company can be used as collateral to secure loans. Negative effects of non-debt tax shield to leverage the results of this study indicate the trend that the higher the depreciation expense of the company, the lower the use of debt, so the results of the study support the pecking order theory. The absence of a statistically significant effect of the non-debt tax shield to leverage indicates that depreciation does not affect the cost of debt. This means that non-debt tax shield is not an important factor used by the company as a consideration in determining the debt to be taken by the company.

The results of this study support the results of research conducted Titman Wessels (1988), De Miguel and Pindado (2001), Ozkan (2001), and Shahjahanpour (2010), which suggests that non-debt tax shield is not a significant negative effect on leverage. However, this study did not support the study by Bowen, et al. (1982), Kim and Sorensen (1986), Allen and Mizuno (1989), Givoly, et al. (1992), Allen (1995), and Mutamimah (2003), who found a significant negative effect of non-debt tax shields on debt ratio. Similarly, do not support the research of Sayilgan, Guven (2006), and Teker, et al. (2009), who found that non-debt tax shield significant negative effect on leverage. And do not support the research of Bradley, et al. (1984), Homaifar, et al. (1994), and Moh'd, et al. (1998) who found the influence of non-debt tax shield significant positive effect on leverage.

Based on Table 8 indicated that t_h of tangibility is 2.177, with a significance value of 0.032 (sig-t = 0.032) or less than 0.05. This suggests that the empirically proven that tangibility significant positive effect on leverage at a significance level of less than 5 percent. According to the trade off theory, companies with a high level of intangible assets will tend to do debt, being able to provide collateral for the loan. The positive influence of tangibility on leverage in the results of this study indicate that the more tangible assets a company has, the more assets that can be used as collateral to obtain external funding in the form of debt, so these findings are consistent with the trade-off theory.

The results of this study support the results of research conducted by Ferri and Jones (1979), Marsh (1982), Bradley, et al. (1984), Rajan and Zingales (1995), Allen (1995), Moh'd, et al. (1998), Gaud, et al. (2005), Buferna, et al. (2005), and Teker, et al. (2009), who found that tangibility significant positive effect on leverage. However, research does not support the study of Sayilgan, Guven (2006), found that significant negative effect tangiible leverage. The results also did not support the study by Titman and Wessels (1988), who found no relationship between tangibility with leverage, and Çitak (2012), showed that the effect was not significant tangibility on leverage.

Based on Table 8 indicated that t_h of profitability is -2.319, with a significance value 0.022 (sig-t = 0.022) or less than 0.05. This shows that the empirical evidence that significant negative profitability on leverage at a significance level of less than 5 percent. According to the trade off theory, corporate profitability has a positive impact on leverage, which means that companies with high profitability reflects that the company is able to pay off its debts, so the financial institution or creditor will be more confident to provide loans to the company.

Negative influence of profitability on leverage in the results of this study indicates that the company has not used funds from the debt to the fullest. Companies that are in a position favorable (profitable), it should generate a rate of return (ROR) is greater than the interest rate

Table 8. Regression Analysis Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.085	.130		-.651	.516
	ndts	-.007	.025	-.022	-.259	.796
	tangibility	.181	.083	.181	2.177	.032
	profitability	-.273	.118	-.197	-2.319	.022
	growth	.322	.071	.375	4.530	.000
	size	.064	.021	.267	3.116	.002

a. Dependent Variable: leverage

Sources: SPSS 17 Output results though secondary data from 2007 to 2009.
Description:
* Significant at the level of less than 5%
** Significant at the level less than 1%

long-term debt. In such circumstances the use of debt will increase the return on equity (ROE) and earnings per share (EPS). Rate of return of additional debt will be equal to its earnings power, as such, the earning power (EP) produced manufacturing companies are listed on the Indonesia Stock Exchange during the period 2007 to 2009 is still lower than the cost of interest. This condition is caused, as in the 2008 occur global financial crisis, so many companies are not able to generate maximum profits.

The results are consistent with the trade-off theory and support the results of research conducted by Titman and Wessels (1988), Allen (1991), Rajan and Zingales (1995), Moh'd, et al. (1998), Ozkan (2001), Chen (2003), Gaud, et al. (2005), Sayilgan, Guven (2006), Teker, et al. (2009), and Çiatk (2012), who found that significant negative profitability to leverage the company. The results of this study do not support the research conducted by Mutamimah (2003) and Buferna, et al. (2005) who found that profitability significant positive effect on leverage. And do not support the study of Ooi (1999), and Ellili and Farouk (2011), who found that profitability is not significant effect on leverage.

Based on Table 8 indicated that t_h of the growth of the company is 4.530, with a significance value 0.000 (sig-t = 0.000) or less than 0.01. This suggests that the empirically proven that the growth of the company significant positive effect on leverage at a significance level of 0.000 or less than 1 percent. The increase in the company's growth, reflecting investment opportunities, as companies experiencing growth requires substantial funds to finance their investments, so as to sustain growth.

Positively influence the growth of the company to leverage the results of this study, indicate that the growth of companies in Indonesia reflects the investment opportunities funded by debt, so that the results are consistent with the trade-off theory. According to the trade off theory, in improving the debt to achieve an optimal capital structure, the company has been considering options (trade-off) between the tax advantages to be gained for the debts of the bankruptcy charges that will happen.

The results of this study support the results of research conducted by Chen (2003), Sayilgan, Guven (2006), Teker, et al. (2009), and Ellili and Farouk (2011), who found that the growth of the company significant positive effect on leverage. However, this study did not support the study of Homaifar, et al. (1994), Allen (1995), Rajan and Zingales (1995), Moh'd, et al. (1998), Ooi (1999), Ozkan (2001), and Gaud, et al. (2005), which indicates that the company's growth and a significant negative effect on corporate leverage. And there were no research support from Buferna, et al. (2005) who found that the company's growth was not significant leverage.

Based on Table 8, it was shown that t_h of company size is 3.116, with a significance value of 0.002 (sig-t = 0.002) or less than 0.01. This shows that the empirical evidence that the size of the company significant positive effect on leverage at significance level of 0.002 or less than 1%. The larger corporations, the need for funds is also getting bigger, which one of them can come from external funding, ie debt.

The positive influence of firm size on leverage in the results of this study indicate that large companies have the advantage of activities and better known to the public than small firms, so that the needs of large corporate debt will be higher than smaller companies. Moreover, the larger the size of the company, then the company more transparent in disclosing the company's performance to outsiders, thus companies find it easier to get a loan, because the more trusted by the creditor, so that the results of this study in accordance with the

trade off theory.

The results of this study support the results of research conducted by Homaifar, et al. (1994), Rajan and Zingales (1995), Moh'd, et al. (1998), Mutamimah (2003), Gaud, et al. (2005), Buferna, et al. (2005), Sayilgan, Guven (2006), Teker, et al. (2009), Karadeniz, et al (2011), and Çitak and Ersoy (2012), who found that the size of the company's significant positive effect on firm leverage. However, these results do not support the research pnelitian of Marsh (1982), Ooi (1999), and Chen (2003), who found that a significant negative effect of firm size on leverage. And do not support the study of Ozkan (2001), and Ellili and Farouk (2011), who found no significant effect of firm size on leverage.

CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

Conclusion

Based on the results of the analysis that has been conducted and the results of the previous discussion, it can be summed up as follows:

a. Non-debt tax shield effect is negative, but not significant effect on leverage. The results of this study show an indication if the depreciation cost increases, the use of debt by the company decreased, but the decrease was not significant. This condition cannot be separated from the global financial crisis in 2008, the impact on corporate financing policy.

b. Tangibility significant positive effect on leverage. These results indicate that the higher the intangible assets a company have the higher debt usage.

c. Profitability significant negative effect on leverage. These results indicate that the higher the earnings, the lower the use of debt. The results of this study indicate there is an indication that the performance of manufacturing firms in Indonesia Stock Exchange is not efficient, and this is as a result of the influence of global financial crisis in 2008.Growth significant positive effect on leverage. These results indicate that the higher the growth, the higher use of debt.

d. Firm size significant positive effect on leverage. These results indicate that the larger the size of the company, the higher the use of debt.

Implication

Managers companies listed on the Indonesia Stock Exchange in the decision to add new debt financing, should have to pay attention to the factors that influence the debt. Based on these results, the most dominant factor affecting the debt, is the company's growth, because growth standardized beta values indicate the highest value is 0375, then the size of the company by the standardized beta values for 0267, and the last is a tangibility to the standardized beta values for 0.181.Oleh Therefore, management needs to increase efficiency by maximizing the use of debt, because it proved that the results are consistent and support the trade-off theory.

Limitations and Future Research

In this study, there are limitations that need improvement for future studies include:

a. Adjusted R^2 value of 27.3 percent is relatively low. This indicates that non-debt tax shield, tangibility, profitability, growth, and firm size is only capable of influencing the lending policies by 27, 3 percent, and amounted to 72.7 percent debt policy is influenced by other factors. Therefore, further research is suggested to include other variables such as corporate tax, liquidity and free cash flow.

b. The study was only conducted in one business group, the manufacturing industry, so the results of this study may not be the same if applied to other groups. In a subsequent study suggested that research conducted on diverse groups, such as finance or banking, so it can be used as a comparison with the results of previous studies.

c. In the variable non-debt tax shield, the researchers only used as a basis to depreciate its proxy with the results no significant effect on leverage. In further research, it is recommended to use a proxy, such as a tax loss carry forward and investment tax credit.

d. On the profitability variables, researchers used Earning Power as its proxy with negative results and the significant leverage. In further research, it is recommended to use a proxy, such as Return on Assets (ROA) and Return on Equity (ROE).

REFERENCES

Allen DE (1991). “The Determinants of Capital Structure of Listed Australian Companies: The Financial Manager ‘s Prospective”. Aust. J. Manag.,16(2):103-128.

Allen DE, Mizuno H (1989). “The Determinants of Corporate Capital Structure: Japanese Evidence”. *Applied Economics* 21:569-585.

Allen MT (1995). “Capital Structure Determinants in Real Estate Limited Partnerships”. *The Financial Review*, 30(3):399-426.

Bowen RM, Daley LA, Huber CC (1982). “Evidence on the Existence and Determinants of Inter-Industry Differences of Leverage”. *Financial Management*, 11,10, 20.

Bradley M, Jarrell GA, Kim EH (1984). “On the Existence of An Optimal Capital Structure”. *Journal of Finance,* 39(3):857-878.

Brigham EF, Ehrhardt MC (2005). “*Financial Management”.* Theory and Practice. South-Western, Cengage Learning.

Buferna F, Bangassa K, dan H (2005). “Determinants of Capital Structure : Evidence from Libya”. *Res. Paper Series The University of Liverpool*.

Chen JJ (2003). “Determinants of Capital Structure of Chinese Listed Companies”. *J. Bus. Res.;* 57:1341-1351.

Çitak L, Ersoy E, (2012). “The Determinants of Corporate Debt Ratio: An Empirical Analysis on Turkish Corporations”. *Int.l Res. J. Finan. Econom*.; 95:151-162.

De Miguel A, Pindado J (2001). “Determinants of Capital Structure: New Evidence from Spanish Panel Data”. *J. Corporate Finan*., 7:77-99.

DeAngelo H, Masulis R (1980). "Optimal Capital Structure Under Corporate and Personal Taxation". *J. Finan. Econom.*; 8:3-30.

Ellili Nejia OD, Farouk S (2011). "Examining The Capital Structure Determinants: Empirical Analysis of Companies Traded on Abu Dhabi Stock Exchange". *Int. Res. J. Finan. Econom*., 67:82-96.

Ferri MG, Jones WH (1979). "Determinants of Financial Structure: A New Methodological Approach". *The J. Finan*., 34(3):631-644.

Fred Weston J, Thomas EC (1997). *"Managerial Finance".* Revised Edition. The Dryden Press.

Gaud P, Jani F, Hoesli M, Bender A (2005). "The Capital Structure of Swish Companies: An Empirical Analysis Using Dynamic Panel Data". *European Financial Management*, 11(1).

Givoly D, Hayn C, Ofer AR, Sarig O (1992). "Tax and Capital Structure: Evidence from Firms Response to the Tax Reforms Act of 1986". *The Rev. Finan. Stud*., 5(2):331-355.

Gujarati D (2003). "*Basic Econometric*). Fourth edition, Mc Graw-Hill Inc.

Hermeindito K (2001). "Analisis Leverage dan Dividen Dalam Lingkungan Ketidakpastian : Pendekatan Pecking Order Theory dan Balancing Theor". *Simposium Nasional Akuntansi IV*.

Homaifar G, dan Z (1994). "An Empirical Model of Capital Structure: Some New Evidence". *J. Bus.s Finan. Accounting 21 (1):*1-14

ICMD (2011). " *Indonesian Capital Market Directory".* Jakarta

Imam G (2007). "*Aplikasi Analisis Multivariate dengan Program SPSS".* Penerbit Universitas Diponegoro, Semarang

Karadeniz E, Kandir SY, Iskenderoğlu O, Onal YB (2011). "Firm Size and Capital Structure Decisions: Evidence From Turkish Lodging Companies". *Int. J. Econom. Finan. Issues,* 1(1):1-11.

Kim WS, Sorensen EH (1986). "Evidence on the Impact of the Agency Costs of Debt on Corporate Debt Policy". *J. Finan. Quant. Analysis*, 21.

Korner P (2007). "The Determinants of Corporate Debt Maturity Structure: Evidence from Czech Firms". *Czech J. Econom. Finan*., 57(3-4):142-158.

Law of the Republic of Indonesia Number 36 Year 2008 concerning the Fourth Amendment of Act No. 7 of 1983 on Income Tax.

Marsh P (1982). "The Choise Between Equity and Debt: An Empirical Study". *J. Finan.,* 37(1):121-144.

Modigliani F, dan M, Miller H (1958). "The Cost of Capital, Corporation Finance, and The Theory of Investment". *Am. Econom. Rev*., 261-297.

Modigliani F, dan M, Miller H (1963). "Corporate Income Taxes and The Cost of Capital : A Correction". *Am. Econom. Rev*., 433-443.

Moh'd Mahmoud A, Perry LG, Rimbey JN (1998). "The Impact of Ownership Structure on Corporate Debt Policy: A Time Series Cross Sectional Analysis". *The Finan. Rev. 33:85-98*.

Mutamimah provide initial??? (2003). "Analisis Struktur Modal Pada Perusahaan-perusahaan Non-Finansial yang Go Publik di Pasar Modal Indonesia". *J. Bisnis Strategi*, 11, Juli 2003.

Myers S (1977). "Determinants of Corporate Borrowing". *J.Finan. Econom*., 5:147-176.

Myers S (1984). "The Capital Structure Puzzle". *J. Finan.*, 39:575-592.

Myers SC, dan Brealy RA (1991). "*Principle of Corporate Finance*" .Fourth Edition, Mc. Graw-Hill International Edition.

Myers SC, dan Majluf NS (1984). "Corporate Financing and Investment Decission When Firms Have Information Investor Do Not Have". *J. Finan. Econom*., 31:187-221.

Ooi J (1999). "The Determinants of Capital Structure: Evidence of UK Property Companies". *J. Property Investment and Finan.,* 17(5).

Ozkan A (2001). "Determinants of Capital Structure and Adjusment to Long Run Target: Evidence from UK Company Panel Data". *J. Bus. Finan. Accounting 28(1&2)*, January/March.

Pandey IM (2003). "*Capital Structure and Market Power Interaction: Evidence from Malaysia".* in Zamri Ahmad, Ruhani Ali, Subramaniam Pillay, Proceedings for the fourth annual Malaysian Finance Association Symposium 31 May-1 June 2002, Penang, Malaysia.

Rajan RG, Zingales L (1995). "What Do We Know About Capital Structure?: Some Evidence from International Data". *J. Finan*, 50(5):1421-1460.

Sayilgan G, Karabacak H, G (2006). "The Firm-Specific Determinants of Corporate Structure: Evidence from Turkish Panel Data". *Investment Management and Financial Innovations* 3(3):125-139.

Shahjahanpour A, Ghalambor H, Aflatooni A (2010). "The Determinants of Capital Structure Choice in the Iranian Companies". Int. Res. J. Finan. Econom., Issue 56:167-178.

Teker D. Tasseven O, Tukel A (2009). "Determinants of Capital Structure for Turkish Firms: A Panel Data Analysis". *Int.l Res. J. Finan. Econom.,* 1450-2887:29.

Titman S, dan Wessels R (1988). "The Determinants of Capital Structure Choice". *J. Finan*., 43:1-19.

Ukago K (2005). "Faktor-faktor yang Berpengaruh Terhadap Ketepatan Waktu Pelaporan Keuangan Bukti Empiris Emiten di BEJ". *Jurnal Maksi*, 5 Januari 2005.