Factors Affecting the Capital Structure in Textile and Garment Listed in Indonesia Stock Exchange

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Abstract*: The purpose of this study was to determine and analyze the influence simultaneously and partially on these factors. The data used is secondary data. The study population was textile and garment companies listed in Indonesia Stock Exchange in 2004-2008. Sampling was done by purposive sampling method and generated eight qualified company. The data analysis used is multiple linear regressions test. The results showed: (1) size of the company, the characteristics / type of industry, sales growth, asset structure, operating leverage, Non-Debt Tax Shield and profitability simultaneously affect the capital structure, but other factors greater influence, among others : economic conditions, political, social, state security unfavourable. In the company it is a management attitude, the attitude of lenders, market conditions, the company's internal conditions, and financial flexibility. (2) The size of the company, industry characteristics, sales growth, asset structure and profitability is partially effecting on the capital structure, while the operating leverage and Non- debt Tax Shield has no effect on the capital structure. Leverage operation has no effect because the sales from year to year are relatively the same, which is sometimes up and sometimes down. This means that funding by using the fixed costs do not affect the capital structure decisions made by management. While Non-Debt Tax Shield has no effect because the textile and garment companies have total assets remained low so it does not obtain a tax advantage in the form of depreciation expense / depreciation can be deducted in calculating the amount of tax payable. This indicates that the value of depreciation and amortization, the company is not meaningful enough to add cash flow of the company, so it does not count towards the reduction of corporate debt portion.*

Keywords: *Company Size, Characteristic / Type of Industry, Sales Growth, Asset Structure, Operating Leverage, Non-Debt Tax Shield, Profitability, Capital structure.*

I.   Introduction

In developing business or expansion, in general, companies need of financial resources. Fulfilments of these funds come from internal resources or external sources. Therefore, financial managers with regard to the use of capital costs *(cost of capital)* and other costs need to determine the capital structure in an effort to determine whether the financing needs are filled with their own capital or filled with loan capital. In conducting the funding decisions, companies also need to consider and analyze the combination of economical sources of funds to finance investment requirements and business activities (Riyanto, 2001).

Capital structure theory explaining whether there is influence changes in capital structure to the company's value, if investment decisions and dividend policy are held constant. In other words, if the company replaces partly some of their own capital to the debt (or *vice versa*), whether the stock price will change, if the company does not change other financial decisions. In other words, if the capital structure changes do not alter the value of the company, meaning that there is no best capital structure. All capital structure is good, but if by changing the capital structure turned out to be the value of the company is changed, it will obtain the best capital structure. Capital structure that maximizes the value of company or stock prices is the best capital structure (Husnan and Pudjiastuti, 1994). The textile industry starting from yarn manufacturing industry (spinning), cloth-making industry (weaving and knitting), and refinement industry *(finishing)* to the apparel industry (garments). Raw materials textile industry can use either natural fibbers from plant fibbers such as cotton fibbers, animal fibbers such as wool, silk, or from other synthetic materials such as nylon, polyester, acrylic and others.

In Indonesia's, textile industry is very varied both in terms of production scale (small-scale, medium to large scale) with technology from labour-intensive to capital-intensive, as well as variations in the process including the spinning process, the process of weaving / knitting, the refinement process until the process apparel. Many factories are just doing some these processes, but there is also an integrated factory starting from yarn making up the refinement process is even equipped with a process of making garments (Winiarti, 2003). The existence of the textile industry has a very important role in the economic development in Indonesia. The textile industry is labour-intensive industries *(Labour Intensive)* that absorb labour in high enough quantities, about 4 million to 5 million people (Journal of Indonesian Capital Market 1998). Company textiles and garments increasingly difficult to obtain additional capital or new capital to run it's a business activity. This company is funded from the source of the loan so that decreased performance. Needed revamping the company's capital structure in order to be healthy performance and the company is able to survive. Companies that want to

survive must have an optimal capital structure. In reality, it is difficult for companies to determine the best capital structure in an appropriate composition of spending. Inequality capital structure that rests on the debt becomes worse when the load becomes high interest and depreciation of the Rupiah. This is evident from a report on *JSX Statistics* 4 [th] Quarter 2004, 2005, 2006, 2007, and 2008 on the average ratio of comparison between total debt to own equity *(Debt To Equity Ratio / DER)* in the textile and garment companies listed on the Indonesia Stock Exchange, namely: in 2004 about 24 textile and garment companies listed on the Indonesia Stock Exchange has *DER* ratio of 4.46. In 2005 about 23 textile and garment companies listed on the Indonesia Stock Exchange has *DER* ratio of 3.69. In 2006 about 21 textile and garment companies listed on the Indonesia Stock Exchange has *DER* ratio was 2.17. In 2007 about 23 textile and garment companies listed on the Indonesia Stock Exchange has *DER* ratio of 4.60. And in 2008 about 23 textile and garment companies listed on the Indonesia Stock Exchange has *DER* ratio of 0.92 *(JSX Statistics* 4 [th] Quarter, 2004, 2005, 2006, 2007, and 2008).In this situation the financial manager's main task is to continue efforts to resolve the issue. And of the problems mentioned above, the researcher are interested in doing research on textile and garment companies are expected to avoid inequality of its capital structure and seeking to achieve an optimal balance in the use of debt and equity in determining the capital structure, so that the capital cost of the average company can be minimized and further increasing the company's value.

Relating to various circumstances, it is known variables affecting capital structure includes a variable sized companies *(firm* size), the characteristics / type of industry *(industry classification),* sales growth *(growth opportunities),* the structure of assets *(tangibility assets),* operating leverage *(operating leverage)* , *Non-Debt Tax Shield* (NDTS), and profitability *(profitability)* (ROE).Titman and Wessels research (1988) entitled *"Determinant of Capital Structure Choice".* Factors affecting the capital structure as the dependent variable is the independent variable as follows: (1) *Collateral Value Of Assets* (value line of assets), (2) *Non-Debt Tax Shield (NDTS),* (3) *Growth* (growth), (4) *uniqueness* (uniqueness), (5) *industry Classification* (type of industry), (6) *firm size* (the size of the company), (7) *Volatility,* and (8) *profitability* (profitability). By using data analysis tools LISREL (development of model structure linear) obtained result: (1) there are three factors that partial effect on the capital structure, the uniqueness of the product, profitability, and the size of the company, (2) the uniqueness product factor and profitability negatively influence to capital structure, (3) the size of the company's positive effect on the capital structure.

Bauer (2004) conduct research entitled *"Determinants of Capital Structure Empirical Evidence from the Czech Republic".* Factors that affect the capital structure as the dependent variable is the independent variable as follows: (1) *Size* (the size of the company), (2) *Profitability* (profitability), (3) *Tangibility* (structure of assets), (4) *Growth Opportunities* (growth opportunities), (5) *tax* (tax), (6) *Non-Debt tax Shield (NDTS),* (7) Volatility, (8) *industry Classification* (type of industry). Its positive effect to capital structure is the size of the company, and taxes. The negative effect on profitability, asset structure, growth opportunities and *Non-Debt Tax Shield (NDTS),* while volatility has no effect. On this type of industry was difficult to calculate.

Bevan and Danbolt (2004), conduct research entitled *"Testing for inconsistencies in the Estimation of UK Capital Structure Determinants".* Factors affecting the capital structure (the dependent variable) are: (1) *The Natural logarithm of Sales (Firm Size)* (company size), (2) *Profitability* (profitability), and (3) *Tangibility* (asset structure). The analysis tool used is regression: ordinary squares (OLS) and fixed effects panel estimation model. The results of this study are: (1) Simultaneously significant effect between firm size, profitability, and asset structure to the capital structure, (2) Partially: company size and structure of assets is positively correlated to the capital structure, profitability negatively correlate, growth rates are not correlated to the capital structure.

Research Baral (2004) entitled *"Determinants of Capital Structure: A Case Study of Listed Companies of Nepal"* revealed the following things. Factors affecting the capital structure (the dependent variable) are independent variables: (1) *Size of a Firm* (company size), (2) *Growth Rate* (rate of growth), (3) *Business Risk* (business risk), (4) *Profitability* (profitability), (5) *dividend payout* (dividend payout ratio), (6) *debt Service Capacity* (capacities capability repayment of debt), and (7) *operating leverage* (operating leverage). The analysis tool used is multiple regression models. The results of the research are (1) simultaneously significant effect between firm size, growth, business risk, profitability, dividend payout ratio, the capacity capability repayment of debt, and operating leverage, (2) Partially: company size, growth, and profitability significantly influence capital structure.Research Abor (2005) entitled *"The Effect of Capital Structure on Profitability: An Empirical Analysis of Listed Firms in Ghana".* By using regression analysis, the results of research on the effect of capital structure on profitability is (1) SDA (the ratio of short-term debt to total capital) positively associated with profitability; (2) LDA (the ratio of long-term debt to total assets) is negatively related to profitability. Company size and sales growth were positively associated with profitability; (3) DA (the ratio of total debt to total capital) is positively related to profitability. Research Eriotis (2007) with the title *"How Firm Characteristics Affect Capital Structure: An Empirical Study".* Factors that affect the capital structure are: (1) *Debt Ratio* (debt ratio); (2) *Size* (size of the company); (3) *The Interest Coverage Ratio* (interest coverage ratio); and (4) *The Growth of the Firm* (growth). The analysis tool used is regression. The results of the study are: (1)

Simultaneously significant effect (strong correlation) between the ratio of debt, the size of the company, interest coverage ratio, and growth of the company on the capital structure; (2) Partially: ratio positive relationships of debt and the size of the company with the capital structure; and negative relationships the interest coverage ratio and growth companies with capital structure. Research Karadeniz, et al (2009) entitled *"Determinants of Capital Structure: Evidence From Turkish Lodging Companies".* Factors that affect the capital structure are: (1) *Tangibility* (structure of assets); (2) *Non-Debt Tax Shields* (NDTS): (3) *Firm Size* (size of the company); (4) *Profitability* (profitability): and (5) *Free Cash Flows* (free cash flow). By using regression analysis, the results obtained in this study are: (1) The structure of assets, profitability is negatively related to capital structure; and (2) NDTS, free cash flow, company size does not affect the capital structure.

II.   Research Methods

In accordance with the nature of explanatory science, this research includes the study of causality, the research wants to find an explanation in the form of causal relationships *(cause-effect)* between some concept or some variable or multiple strategies developed in management (Ferdinand, 2006). Data used in the study according to the time it was collected, including data time series or time series data, which is a set of data of a particular phenomenon gained over the specified time interval (Umar, 2003). In this study which examined time is 5 years from 2004 to 2008. The data used in this study the prospectus of each issuer and scientific journals related to textile and garment companies, as well as the annual financial statements from 2004 to 2008 and *Indonesian Capital Market Directory* textile and garment companies.

The populations of this research are textile and garment companies listed on the Indonesian Stock Exchange (BEI) in 2004 to 2008. Determining sample in this study using *purposive sampling* technique or *Judgement sampling,* which is one of the sampling technique is based on specific criteria or considerations (Singarimbun and Effendi, 1995). The criteria are:
1. Textile and garment companies listed before the study period (2004 to 2008).
2. Textile and garment companies that have been published financial statements ongoing during the study period i.e. 2004 to 2008.
3. Textile and garment companies that have no negative earnings (no losses) continuously during the study period i.e. 2004 to 2008.

From the above criteria, then the companies in this study, among other:
1. PT Delta Dunia Petroindo, Tbk (DOLD)
2. PT Panasia Indosyntec, Tbk (HDTX)
3. PT Indorama Synthetics, Tbk (INDR)
4. PT Karwell Indonesia, Tbk (KARW)
5. PT Hanson International Tbk (MYRX)
6. PT Pan Brothers Tex Tbk (PBRX)
7. PT Roda Vivatex, Tbk (RDTX)
8. PT Ricky Putra Globalindo, Tbk (RICY)

Multiple linear regression models used are:

$Y = B_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7$

Where:

Y	: Capital structure
b_0	: constants
$b_1 - b_7$	: beta coefficient of independent variables
X_1	: Company size
X_2	: Characteristics / Type of Industry
X_3	: Sales growth
X_4	: Assets structure
X_5	: *Leverage e* Operation
X_6	: *Non-Debt Tax Shield* (NDTS)
X_7	: Profitability (ROE)

Hypothesis
Based on these describe above, it can be arranged hypothesis is as follows:
1. Company size, industry characteristics, sales growth, asset structure, operating *leverage, Non-Debt Tax Shield* (NDTS) and profitability (ROE) simultaneously affect the capital structure.
2. Company size, industry characteristics, sales growth, asset structure, operating *leverage, Non-Debt Tax Shield* (NDTS) and profitability (ROE) partially affect the capital structure.

III. Results and Discussion

Analysis Descriptive Statistics

Table 1: Descriptive Statistics

descriptive Statistics					
	N	Min	Max	mean	Std. Deviation
X1	40	1.19532 E + 11	6.16692 E + 12	1.26777 E + 12	1.74831 E + 12
X2	40	-153.10	266.10	9.4 4	57.1 4
X3	40	-100	283.84	19.80	67.31
X4	40	1:13	88.19	44.84	25.30
X5	40	-606429.79	651.59	-15173.26	95883.11
X6	40	0.96	96.95	36.74	24.62
X7	40	-153.14	266.14	9:48	57.19
Y	40	-398.32	181.69	31.11	83.85
valid N (list-wise)	40				

Multiple Linear Regression Analysis

The regression model obtained is:

$Y = 339.056 - 9.336 X1 + 14.362 X2 + 0.141 X3 - 0.290 X4 + 1.364 X5 - 2.892 X6 - 14.366 X7$

Where:

Y   :   The capital structure
X1 :   size companies
X2 :   Characteristics / Type of industry
X 3 :   sales growth
X 4 :   the asset structure
X 5 :   operating *leverage*
X 6 :   *Non-Debt Tax Shield* (NDTS)
X 7 :   Profitability (ROE)

Hypothesis testing

First Hypothesis Testing

Table 2: Hypothesis Testing of Regression Model Simultaneous

Hypothesis	Value	Decision
There is a significant effect between the variables company size, sales growth, asset structure, operating *leverage,* NDTS and profitability on capital structure $\alpha = 0.05$	$F_{hit} = 3.120$ $sig = 0.017$ $F_{table} = 2.832$	There is significant influence

Second Hypothesis Testing

The Effect of Capital Structure Company Size

Table 3: Testing Hypotheses Regression Coefficients Variable of Companies Size

Hypothesis	Value	Decision
Variable company's size significantly influence the capital structure $\alpha = 0.05$	$t = -13.198$ $sig = 0, 000$ $t_{table} = 2.365$ β Standardized = -0.685	There is a significant influence The relationship is not unidirectional

Influence of Industry Characteristics on Capital Structure

Table 4: Testing Hypotheses Regression Coefficient Variable of Industry Characteristics

Hypothesis	Value	Decision
The profitability variables significantly influence on capital structure $\alpha = 0.05$	$t = -2.542$ $sig = 0, 036$ $t_{table} = 2,36 1$ β Standardized = 0.444	There is a significant influence The relationship is not unidirectional

Influence of Sales Growth on Capital Structure

Table 5: Testing Hypotheses Regression Coefficients Variable of Sales growth

Hypothesis	Value	Decision
Variable of sales growth significantly influence on capital structure $\alpha = 0.05$	$t = 2.641$ $sig = 0, 034$ $t_{table} = 2.365$ β Standardized = 0.366	There is a significant influence unidirectional relationship

Influence of Assets Structure on Capital Structure

Table 6: Testing Hypothesis Regression Coefficients Variable of asset structure

Hypothesis	Value	Decision
Asset structure variables have a significant effect on the capital structure $\alpha = 0.05$	$t = -2.422$ $sig = 0, 043$ $t_{table} = 2.365$ β Standardized = -0.302	There is a significant influence The relationship is not unidirectional

Effect of Operating Leverage on Capital Structure

Table 7: Testing Hypotheses Regression Coefficients Variable of Operating *Leverage*

Hypothesis	Value	Decision
Variable operating *leverage* have significant effect on the capital structure $\alpha = 0.05$	$t = 0,144$ $sig = 0,890$ $t_{table} = 2.365$ β Standardized = 0.037	There is no significant effect

Effect of Non-Debt Tax Shield on Capital Structure

Table 8: Testing Hypothesis Regression Coefficients Variable of *Non-Debt Tax Shield* (NDTS)

Hypothesis	Value	Decision
Variable NDTS have significant effect on the capital structure $\alpha = 0.05$	$t = -2,197$ $sig = 0,064$ $t_{table} = 2.365$ β Standardized = -0.710	There is no significant effect

Effect of Profitability on Capital Structure

Table 9: Testing Hypotheses Regression Coefficients Variable of Profitability

Hypothesis	Value	Decision
The profitability variables significantly influence on capital structure $\alpha = 0.05$	$t = -2,546$ $sig = 0,040$ $t_{table} = 2.365$ β Standardized = -0.448	There is a significant influence. The relationship is not unidirectional

Based on the hypothesis test shows a significant effect simultaneously between the variables firm size, characteristics / type of industry, sales growth, asset structure, operating *leverage, Non-Debt Tax Shield* (NDTS) and the profitability to the capital structure. The regression model has a coefficient of Adjusted R Square 0.343 or 34.3%. This shows that the capital structure of the textile and garment industry in Indonesia Stock Exchange is not only influenced by the size of the company, sales growth, asset structure, operating *leverage, Non-Debt Tax Shield* (NDTS), and profitability, but also influence by another factors (0.657 or 65, 7%), such as economic conditions, political, social, security unfavourable state characterized by the presence of frequent natural disasters and bombings that caused investors lack confidence to invest funds on companies in Indonesia, as investors worried about not getting *the return* on the funds invested in the company. In the company it is a management attitude, the attitude of lenders, market conditions, the company's internal conditions, and financial flexibility.

The Effect of Company Size on Capital Structure

Based on hypothesis testing showed that the level of firm size has a significant effect on the capital structure with the regression coefficient is negative. This means that small or large (size) effect the company's has effect to capital structure based on the fact that the larger a company has a high level of sales growth that more companies dare to issue new shares and the tendency to use the greater loan.

Effect of Characteristics / Type industry on Capital Structure

Based on hypothesis testing showed that the industry characteristics variables have a significant effect on the capital structure. This means the company has the ability to repay debt depends on the amount profitability and sales volume.

Influence of Sales Growth on Capital Structure

Based on hypothesis testing showed that sales growth variables have a significant effect on the capital structure with the regression coefficient is positive. This means greater sales growth, the greater the debt incurred by the company, the less debt taken by the company.

Influence of Assets Structure on Capital Structure

Based on hypothesis testing indicate that the asset structure variables have a significant effect on the capital structure with the regression coefficient is negative. This means that the higher the asset structure of the company showed that the higher ability of these companies to be able to guarantee long-term debt borrowed.

Effect of Operating Leverage on Capital Structure

Based on the hypothesis testing shows operating *leverage* variables have no significant effect on the capital structure. Changes on EBIT and sales from year to year are relatively the same, which is sometimes up and sometimes down. This means that funding by using a fixed cost *(fixed cost)* does not affect the capital structure decisions made by management.

Effect of Non-Debt Tax Shield on Capital Structure

Based on hypothesis testing showed that the variables of *Non-Debt Tax Shield* (NDTS) have no significant effect on the capital structure. This means that the company does not benefit from the provisions of taxation in the form of facilities from the government that the form of loss compensation to the company that

loss into profit in the next year to five years and tax facilities for company foreign *(tax holiday)* and the imposition of depreciation of assets permanent.

Influence of Profitability on Capital Structure

Based on hypothesis testing showed that the variables of profitability have significant effect on the capital structure with the regression coefficient is negative. This means that company has a high profitability and will reduce its dependence on outside parties, because of high rates of return allow the company to obtain most of their funding from retained earnings.

IV. Conclusions and Recommendation

From the analysis and discussion that has been described in previous chapters, can be summarized as follows: Company size, industry characteristics, sales growth, asset structure, operating *leverage, Non-Debt Tax Shield* (NDTS), and profitability (ROE) simultaneously affect the capital structure. Other factors affecting larger capital structure, such as economic conditions, political, social, state security unfavourable. In the company it self is management attitude, the attitude of lenders, market conditions, the company's internal conditions, and financial flexibility. Company size, characteristics / type of industry, sales growth, asset structure, and profitability (ROE) partially affect the capital structure. The operating leverage and *Non-Debt Tax Shield* (NDTS) no partial effect on the capital structure.

Recommendation

1. The company manager in determining the need its capital, it is necessary to consider several things including how big funding requirements, in the form of what the source of funds, and how long the funds are used will affect the company's capital structure which shows the composition of comparisons permanent fund source used by the company to finance investment.
2. Investors can be more selective in choosing a financing company that will be a place for investment.
3. Creditor in providing loan funds should always observe the company's ability to repay its financial obligations (the risk of bad debts).

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