

## FACTORS AFFECTING CORPORATE DEBT POLICY OF COMPANIES LISTED IN THE JAKARTA STOCK EXCHANGE

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### ABSTRACT

Putusan keuangan badan usaha adalah cara badan usaha membiayai kegiatan investasinya yang secara garis besar dapat dilakukan dengan dua cara yakni menggunakan sumber pembiayaan dari dalam (*internal financing*) dan dari luar (*external financing*). Pembiayaan internal dapat dilakukan dengan menggunakan laba ditahan sedangkan pembiayaan eksternal dapat dilakukan dengan beberapa alternatif antara lain dengan menggunakan pinjaman bank, menerbitkan surat utang jangka pendek, yaitu *commercial paper*, surat utang jangka panjang yaitu obligasi, dan ekuitas atau saham. Penelitian ini memfokuskan pada urutan pertama dari pembiayaan eksternal yaitu dengan menggunakan pinjaman. Secara teori, ada beberapa faktor yang mempengaruhi badan usaha dalam menentukan besar-kecilnya penggunaan utang, antara lain profitabilitas, risiko bisnis, skala badan usaha, besarnya pajak yang dibayar, dan struktur kepemilikan badan usaha tersebut. Dalam praktiknya tingkat signifikansi dari faktor-faktor tersebut berbeda antara badan usaha yang satu dengan yang lain dan besar kecilnya pengaruh faktor-faktor tersebut dalam menjelaskan besar-kecilnya penggunaan utang tiap badan usaha berbeda-beda.

**Keywords:** *Pecking Order Hypothesis, Monitoring Cost, Agency Cost of Debt, Operating Risk, Inside-Owned Firm, Outside-Owned Firm.*

Corporations faced two broad financial questions: (1) what investments should the firm make? and (2) how should it pay for these investments? The first question involves spending money while the second involves raising it. The answer to the first question is the firm's investment or capital budgeting decision, and the answer to the second is the firm's financing decision. Corporations can raise funds in two principal ways - by relying on internal financing and issuing equity or debt. When the firm is financed entirely by common stock (equity), all the cash flows belong to the stock-holders, either existing or new stockholders. When it issues debt and equity securities, it undertakes to split up the cash flows into two streams, a relatively safe

stream that goes to the debt holders (lenders) and a more risky one that goes to the stockholders. Higher debt used by the firm, the higher required rate of return on equity that will be required by stockholders since they have to bear more risk.

There are several factors that will affect the decision to use debt financing. These factors are profitability, business risk, size, tax paid by the firm and structure of ownership. The author believes that it is very important to do a statistical test to justify which ones of these factors have significant effect on the firm's debt ratio. Even if the usage of debt makes the firm more risky, it will still use it because it can generate tax saving to the firm. This is consistent with the Pecking Order Hypothesis which states

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that after exploiting all its internal funds, a firm will use external source of financing, such as debt.

All utilities, banks, and real estate development firms rely heavily on debt. And so do many firms in capital-intensive industries such as steel, aluminum, chemicals, petroleum, and mining. It is rare to find a drug firm or an advertising agency that is not predominantly equity-financed. However, a drug manufacturing firm, not a drug retail firm, has investments in research and development. In other words it is holding specialized and intangible assets or growth opportunities. They are more likely to lose value during financial distress. Therefore they are expected to have low debt ratio.

There are several factors that may influence optimal corporate borrowing: (1) Relationship between agency cost and the use of debt to finance growth. (2) Operating risk. Firms with large business risk may have a lower agency cost of debt, and thus may optimally borrow more (Myers, 1984). Myers concluded that the impact of risky debt on the market value of the firm is less for firms holding investment options on assets that are risky relative to the firm's present assets. He observed that risky firms are borrowing more than safe ones. (3) Firm diversification. Earlier empirical studies was done by Kim and Sorensen showed that large diversified firms have more debt capacity than small firms. They concluded that there should be no consistent relationship between diversification and optimal debt. Related to tax as an interest deductible, there is a hypothesis of De Angelo and Masulis that "... firms with lower investment related tax shield... will employ greater debt in their capital structure." (Angelo, Masulis, 1980).

In other case, according to Jensen, there is a tendency of managers with sample free cash flow to plow too much cash into mature business or ill-advised acquisitions.

The problem, Jensen says, "Is how to motivate managers to disgorge the cash rather than investing it below the cost of capital or wasting it in organizational inefficiencies." Debt is the answer. Debt can discipline managers who are tempted to invest too much and it will put pressure on managers to be more efficient (Jensen, 1986). Debt gives an advantage for a corporation that has a lot of cash but only has a few investment opportunities. By using debt, it will motivate the managers how to satisfy the financial obligation of their firm. If the firm had an extra cash flow, it will be used to pay the obligation rather than investing it below the cost of capital or wasting it in organizational inefficiencies.

Jensen and Meckling give their opinion related to agency cost of debt, and state that : " Why don't we observe large corporations individually owned with a tiny fraction of the capital supplied by the entrepreneur in return for 100% of the equity and the rest simply borrowed? We believe that there are numbers of reason: (1) The incentive effects associated with highly leveraged firms. (2) The monitoring costs these incentive effects engender. (3) Bankruptcy costs. They don't find many large firms finance almost entirely with debt because of the effect such a financial structure would have on the owner-managers' behavior" (Jensen, Meckling, 1976). The logic of the argument is: if the firms turn out well, the owner-manager captures most of the gains; if they turn out badly, the creditors bear most of the cost. Monitoring costs are all costs associated with covenants. The cost of bankruptcy will be concern to potential buyers of fixed claim in the firm since their existence will reduce the payoffs to them in the event of bankruptcy. The total value of the firm will fall and the owner-manager equity holder will bear the entire wealth effect of the bankruptcy cost, as long as potential bond holders make unbiased estimates at the time they initially



purchase bonds. In summary, the agency costs associated with debt consist of: (1) the opportunity wealth loss caused by the impact of debt on the investment decisions of the firms, (2) the monitoring and bonding expenditure by the owner-manager, and (3) the bankruptcy and reorganization costs.

The risk-incentive problems can be seen in the context of the Black-Scholes framework (Black, Scholes, 1973), which consider stockholders of a levered firm as holding a European call option to buy back the entire firm at an exercise price equal to the face value of the debt. The value of this call option is the increasing function of the variance of the cash flows of the underlying asset (firm), and hence stockholders have the incentive to engage in high risk activities at the expense of debtholders. This in turn may lead to an adoption of suboptimal risky projects as long as the wealth transfer more than offsets the decline in project value. Another agency problem occurs when the exact nature of firms issuing bonds cannot be revealed costlessly to bondholders. This is an information asymmetry problem.

According to Barnea, Haugen, and Senbet, the agency costs of debt, if they cannot be resolved either through market forces or through complex securities, are commonly considered to be an increasing function of the amount of debt employed in the capital structure. The marginal agency costs are presumed to increase as a function of the amount of debt in the capital structure. In the case of the risk incentive problem, marginal agency costs depend on the degree of risk. The expected costs associated with bankruptcy depend on the probability of bankruptcy which in turn depends on the amount of debt. The absence of agency problems, corporations are indifferent between equity financing and debt financing as long as corporate debt yields the certainty-equivalent rate of interest. They also mention in their analysis that (1) corporate capital structure affects market value;

(2) agency costs of debt shared by all firms are shifted to bondholders in the form of lower interest rates; and (3) the observable spread between yields on taxable and nontaxable bonds can be explained (Barnea, Haugen, and Senbet, 1981).

Kim and Sorensen tried to analyze the impact of the agency costs of debt on corporate debt policy by using a sample of firms that were listed on a Compustat Tape of approximately 800 firms in the United States and were researched by Value Line (Kim, Sorensen, 1986). The main purpose of this research was to test whether or not firms whose equity ownership is concentrated among insiders make use of debt in the capital structure differently from firms that are owned by many shareholders. They are tested by the other factors influencing corporate borrowing, including earnings growth, operating risk, firm diversification, tax liabilities and the level of firm's depreciation. As a proxy for the magnitude of growth projects across firms, they used the annual growth of earnings before interest and taxes. To measure the firm's operating risk, they used the coefficient of variation of earnings before interests and taxes. As a measure of firm diversification, they used the balance sheet value of assets as a proxy for diversification. For tax liabilities factor, they use two alternatives measure: (1) the average historical tax paid as a percentage of pre-tax earnings over several years and (2) the tax paid as a percentage of earnings before depreciation and taxes.

The regression results showed that over 80 percent of the cross-sectional variation in debt ratios was left unexplained. They found that firms with higher insider ownership had greater debt ratios than firms with lower insider ownership; this might be due to agency costs. The result of the other variables showed that high-growth firms used less debt rather than more debt, high operating risk firms used more debt, and firm size appeared to be uncorrelated with



the level of debt. Regarding tax liabilities, firms with higher debt paid lower taxes, *ceteris paribus*, and the last variable, that is depreciation, had a significant negative coefficient, meaning the increase in depreciation rate was followed by a decrease in the debt ratio.

The focus of this research is to find whether debt financing is affected by profitability, operating risk, size of the firm, tax paid by the firm and the structure of ownership. If those factors affect the level of debt the next question is to determine how big the influence for each factor to debt level and the direction of the influence whether it is positive or negative relationship. Basically, this research based on the prior research done by Kim and Sorensen but it is more focused on the factors affecting corporate debt policy rather than the impact of agency costs of debt on corporate debt policy. The data was used in this research were gathered from the Indonesian Capital Market Directory 2000 published by the Jakarta Stock Exchange, which contains the year-end balance sheet and income statement of all listed companies from 1997 to 1999. The total sample consist of 272 companies. The author used pooled data. The summary of maximum value, minimum value, mean, and standard deviation of each variable is shown in Appendix 9.

The dependent variable used in this study is the ratio of total liabilities to total assets. It measures the proportion of total assets that is financed by debt.

The independent variables used in this study are: earnings before interest and taxes (EBIT), coefficient of variation of EBIT, book value of firm's assets, the ratio of taxes paid to earnings before taxes, and a dummy variable for ownership structure.

Unlike previous research done by Kim and Sorensen entitled "Evidence on the Impact of Agency Costs of Debt on Corporate Debt Policy" that used growth of EBIT, this research wants to see a relation-

ship between profitability (represented by EBIT) and debt ratio. EBIT is used instead of after tax earnings to avoid any leverage impact on earnings. The rationale of EBIT is that firms with high profitability will use less debt since they have had sufficient funds generated from their business to finance their operating and investing activities. But, it is still possible that profitable firms will also use high debt financing in case their profits are not sufficient enough to support their expenses and costs. Another explanation is that profitable firms might use debt to take advantage of tax savings from interest payments, because higher the profit, and the more taxes will be paid by the firms.

The second variable, coefficient of variation of EBIT, is used as a proxy for operating or business risk. Logically, firms with high degree of business risk will have less capacity to sustain high financial risk and therefore will borrow less. However, Myers [10] provided the opposite conclusion. He argued that firms with large business risk may have a lower agency cost of debt, and thus optimally borrow more. Specifically, Myers concluded: "We have an interesting, perhaps surprising conclusion. The impact of risky debt on the market value of the firm is less for firms holding investment options on assets that are risky relative to the firm's present assets. In this sense we may observe risky firms borrowing more than safe ones" (Myers, 1977).

The third variable is the book value of firm's assets. This variable is used as a proxy for diversification. Many earlier empirical studies alluded to the argument that large diversified firms have more debt capacity than small firms (Ferri and Jones, 1979; Flath and Knoeber, 1980; Scott, 1972; Scott and Martin, 1975; and Schneller, 1980).

The fourth variable is actual taxes paid divided by earnings before taxes. Firms with high expected tax payment are predicted to use larger amounts of debt.



The last independent variable is a dummy variable for ownership structure. Actually it is a dummy variable, which has a value of 1 if the firm is owned by inside shareholders and 0 if the firm is owned by outside shareholders (or more diffused ownership). If more than 51 percent of firm's outstanding shares are owned by outside investors, then the firm is classified as outsider-owned firm, but if it is less than 51 percent then it will be considered as insider-owned firm.

## METHODOLOGY

The methodology used the Ordinary Least Square (OLS) analysis. Multiple regression analysis is used to test for the effect of profitability (EBIT), operating risk (EBITVAR), book value of asset (SIZE), actual tax paid (TAXRATE) and ownership structure (INSIDER) on corporate borrowing or debt ratio (DEBT). The research estimated the following equation:

$$DEBT = \beta_0 + \beta_1 EBIT + \beta_2 EBITVAR + \beta_3 SIZE + \beta_4 TAXRATE + \beta_5 INSIDER + e_i \quad (1)$$

Where,

EBIT : earnings before interest and taxes;

EBITVAR: coefficient of variation of EBIT;

SIZE : book value of firm's assets;

TAXRATE : actual taxes paid divided by earnings before taxes;

INSIDER: dummy variable, equal to 1 if the firm is owned by inside shareholders, and equal to 0 if the firm is owned by outside shareholders;

$e_i$  : error term.

However, the regression results were not robust and the  $R^2$  was very low. A plot of the scatter diagram indicated a non-linear

relationship. Therefore a new regression model was specified by doing a logarithmic transformation all variables (except INSIDER):

$$\ln DEBT = C_0 + C_1 \ln EBIT + C_2 \ln EBITVAR + C_3 \ln SIZE + C_4 \ln TAXRATE + C_5 \ln INSIDER + u_i \quad (2)$$

Where,

$\ln EBIT$  : natural logarithm of EBIT;

$\ln EBITVAR$  : natural logarithm of EBITVAR;

$\ln SIZE$  : natural logarithm of SIZE;

$\ln TAXRATE$  : natural logarithm of TAXRATE;

INSIDER : dummy variable, equal to 1 if the firm is owned by inside shareholders, and equal to 0 if the firm is owned by outside shareholders;

$u_i$  : error term.

Data 1997, 1998, and 1999 were pooled. To test whether heteroscedasticity problem exists, White's Heteroscedasticity Test was used to confirm the presence of heteroscedasticity in the regression estimates.

## ANALYSIS OF EMPIRICAL RESULTS

After doing regression test for equation (1) the results can be summarized in following explanations.

Based on Tables 1, 2, and 3, they show that the most independent variables are not significant in explaining the variation in the dependent variable; in other words they don't have relationship with the dependent variable. Also, it shows that the coefficient of determination in the three years is very small. It means that the independent variables are negligible contribution to the variation in the dependent variable. Based on this result it



**Table 1**  
**Regression Result for the year 1997**

Variable	Coefficient	t-Statistic	Probability
Constant	0.733471	2.383551	0.0178
EBIT	1.11E-05	0.064926	0.9483
EBITVAR	0.001660	0.091749	0.9270
SIZE	2.45E-09	0.130026	0.8966
TAXRATE	4.05E-05	0.041990	0.9665
INSIDER	0.048652	0.151558	0.8797
R <sup>2</sup> = 0.000189			
N = 273			

**Table 2**  
**Regression Result for the year 1998**

Variable	Coefficient	t-Statistic	Probability
Constant	0.835254	9.427653	0.0000
EBIT	7.13E-05	1.445169	0.1496
EBITVAR	-0.004461	-0.855226	0.3932
SIZE	1.29E-08	2.732528	0.0067
TAXRATE	0.015322	0.600600	0.5486
INSIDER	-0.062135	-0.671803	0.5023
R <sup>2</sup> = 0.039877			
N = 273			

**Table 3**  
**Regression Result for the year 1999**

Variable	Coefficient	t-Statistic	Probability
Constant	0.880463	8.467927	0.0000
EBIT	8.42E-05	1.452543	0.1475
EBITVAR	-0.002594	-0.420058	0.6748
SIZE	2.83E-09	0.645991	0.5188
TAXRATE	-0.026128	-0.609212	0.5429
INSIDER	-0.140193	-1.289331	0.1984
R <sup>2</sup> = 0.017895			
N = 273			

is evident that the relationship between the dependent variable and the independent variables is not linear. The study then proceeded to estimate equation (2). Table 4 shows the regression results after estimating equation (2).

There are four specifications in Table 4. Specifications 1, 2, 3 and 4 refer to running the regression equations using 1997, 1998, 1999, and pooled observations, respectively.

In specification 1, it is shown that LNEBIT is significant at 5 percent level, while LNSIZE is significant at 1 percent level. In specification 2, LNEBITVAR and LNSIZE are significant at 1 percent level, while LNTAXRATE is significant at 10 percent level. In specification 3, LNEBIT and LNEBITVAR are significant at 5 percent level, while LNSIZE is significant at 1 percent level. In the last column, which is specification 4, it is shown that by pooling



all the years (1997-1999) into one single regression equation, the result is that LNEBIT, LNEBITVAR, and LNSIZE are significant at 1 percent level.

In general, since LNSIZE is significant in all of the specifications then it can be concluded that size of the firm is statistically significant in explaining the level of the firm's debt. Also, its coefficient has a positive sign, meaning there is a positive relationship between the change in size of the firm and the change in debt level of the firm. The logic of this relationship is that the

larger the size of the firm, in terms of its total asset, the greater its capital requirement, which can be financed by increasing its debt. The firm with large asset size has the ability to raise its debt level until it reaches its optimal capital structure. From the point of view of creditors, the larger the size of the firm, the more assured they are in granting the loan to the firm, because the firm has more choices of collaterals. Based on specification 4, it shows that if size of the

firm (in terms of total asset) increases by 1 percent, then the debt level will increase by 17.56 percent. The magnitude of changes in all of the specification is not below 15 percent.

The other variables are also statistically significant in most of the specifications are LNEBIT and LNEBITVAR. The signs of the regression coefficient of LNEBIT are negative, while those of LNEBITVAR are positive. Meaning, the increase in firm's profitability (LNEBIT), will decrease the usage of debt financing in the firm's capital structure. The reason is the greater the profitability of the firm, the less debt it needs to finance its business operation, since it will use internal financing first before using the external fund. It is what the Pecking Order Hypothesis postulates. The magnitude of change in LNEBIT to LNDEBT level is not below 4 percent. Meaning, if there is an increase in profitability by 1 percent, the level of debt will decrease by at least 4 percent.

Table 4  
Regression Result Using Log-Linear Model

Variable	Specification			
	1	2	3	4
Constant	-2.00951* (-3.850706)	-1.659568* (-3.597509)	-2.412351* (-4.090065)	-2.058977* (-6.848562)
LNEBIT	-0.10393** (-1.826711)	-0.043364 (-1.180725)	-0.076629** (-1.704468)	-0.065661* (-2.577153)
LNEBITVAR	0.01072 (0.165583)	0.253894* (3.44472)	0.15408** (1.921226)	0.125404* (3.002476)
LNSIZE	0.193032* (3.191276)	0.152304* (3.541569)	0.208177* (3.740317)	0.17563* (5.890386)
LNTAXRATE	-0.014877 (-0.524262)	0.062604*** (1.571978)	0.064097 (0.996504)	0.01553 (0.70806)
INSIDER	-0.052288 (-0.261656)	-0.173559 (-0.913251)	-0.038239 (-0.186794)	-0.059595 (0.521618)
N	273	273	273	273
R <sup>2</sup>	0.091285	0.158002	0.121464	0.102148

\* statistically significant at the 1 percent level

\*\* statistically significant at the 5 percent level

\*\*\* statistically significant at the 10 percent level

Note: Figures in parentheses are t-values.



The sign of LNEBITVAR change in LNDEBT level is positive. It means that if there is an increase in the operating risk, the debt ratio will also increase. This is because of firms with large operating risk may have a lower agency cost of debt, and thus may optimally borrow more.

LNTAXRATE and INSIDER variables are not statistically significant in this regression result.

The coefficient of determination in specification 4 is 10.21 percent, meaning the debt ratio explained by all of the independent variables is 10.21 percent, and 89.79 percent of debt ratio is explained by external factors that are not captured in this research. Among all four specifications above, specification 2 has the highest coefficient of determination. Meaning, all of the independent variables have significant influence in explaining the debt ratio in year 1998, that is 15.8 percent.

Although we have arrived at a more satisfactory result, we still have to perform the heteroscedasticity test. In other words, the objective of this test is to check whether the variance of each disturbance term is equal (homoscedasticity) or not (heteroscedasticity). By using White's Heteroscedasticity Test, it shows that we cannot accept the null hypothesis that there is no conditional heteroscedasticity. Therefore, the conclusion is that the heteroscedasticity problem exists. Because of a remedial measure is needed to tackle this problem. The weighted least square method is used

Based on Table 5 it shows that using pooled data all of the independent variables are significant in explaining the dependent variable (the probability is below 5 percent) and the  $R^2$  is 49 percent<sup>2</sup>. The sign of each variable is the same as before adjusting for heteroscedasticity (see column 5, Table 4). The regression coefficient of LNEBIT is -0.065964. It means that if there is 1 percent increase in profitability then the debt ratio

to adjust the regression estimates and try to remedy the heteroscedasticity problem. Based on this method, each of variables should be divided by its standard deviation. The summary of the regression result is shown in Table 5.

**Table 5**  
**Regression Result: Pooled Data**  
**(Adjusting for Heteroscedasticity)**

Variable	Coefficient	t-statistic
LNDEBT	-29.17425	-2.222908**
LNEBIT	-0.065964	-3.869072**
LNEBITVAR	0.221514	6.302323**
LNSIZE	0.089829	5.917135**
LNTAXRATE	0.040506	2.915074**
INSIDER	-0.643988	-4.815794**
$R^2 = 0.493774$		
$N = 816$		

\*\* statistically significant at 5 percent level

will decrease by 6.5964 percent. This is contrary to the trade-off theory stated in Myers' article (Myers, 1977) which states that under the trade-off theory, high profits should mean more debt-servicing capacity and more taxable income to shield and should give a higher target debt ratio. Higher profits imply higher market value as well as stronger incentives to borrow. However, the result shows that high profitability is not followed by high debt ratio. There is a tendency to follow the Pecking Order Hypothesis, which states that firms prefer internal finance. It also states that most profitable firms generally borrow less not because they have low target debt ratios but because they don't need outside

money. The finding is supported by the study of the financing practice of a sample of large corporations by Donaldson, which found out that management strongly favored internal generation as a source of new funds even to the exclusion of external funds except for occasional unavoidable "bulges" in the need for funds (Donaldson, 1961). By relating two statements above with the regression result,

<sup>2</sup> The author used pooled data only because all of significant variable are in the same level of significance.



it makes sense that profitability has negative coefficient. It means that profitable firms will have low debt ratio because they prefer to use funds that is generated from operating profits.

The second variable, LNEBITVAR, is used as a proxy for operating risk, has positive coefficient and indicates that a 1 percent increase in operating risk will increase debt ratio by 22 percent. This result is actually contrary to the traditional perception that firms with high risk will have lower debt ratio. However, this result is similar to find Kim and Sorensen. Their finding is based on Myer's argument that, in the presence of growth-induced agency problem, high operating variance may reduce the agency cost of debt, rather than increase it (Kim and Sorensen, 1986). Specifically, Myers concludes: "We have an interesting, perhaps surprising conclusion. The impact of risky debt on the market value of the firm is less for firms holding investment options on assets that are risky relative to the firm's present assets. In this sense we may observe risky firms borrowing more than safe ones" (Myers, 1984). An alternative explanation is that firms with high operating risk cannot borrow more unless there are other factors that mitigate it, such as the size of the firm and monopoly power. For example, in the case of PT. Telekomunikasi Indonesia (TELKOM) the largest state-owned telecommunication company, it has monopoly power in the country and may have higher operating risk and also has high debt ratio. It has high operating risk since it has huge amount invested in equipment. The creditor will be willing to lend money even if the firm has already high debt because the firm's probability of default is small. It means that the creditors are more secure to lend their money.

The third variable, LNSIZE, has positive coefficient. It means that the greater the size of the firms in terms of the book

value of its assets, the higher its debt ratio. LNSIZE is also used as a proxy for asset diversification. The result is consistent with many earlier empirical studies that large diversified firms have more debt capacity than do small firms (Ferri, Jones, 1979; Flath, Knoeber, 1980; Scott, 1972; Scott and Martin, 1975; and Schneller, 1980).

These studies found some inter-industry variation in debt ratios and stated that firm size is an important determinant of debt ratios. The large and diversified firms may have greater debt capacity and obtain more favorable terms when compared to small firms.

The fourth variable, LNTAXRATE has significant effect on the level of debt and has a positive coefficient. The implication is that the higher the tax liabilities, the higher firm's debt ratio because interest on debt can shelter the tax payment and hence can give tax saving to the firm. Kim and Sorensen [8] also stated that corporations with high expected tax liabilities are predicted to use larger amounts of debt to help account for tax shelters.

The last independent variable is ownership structure, INSIDER, which indicates whether the firm is inside-owned or outside-owned. The result shows that this factor is also statistically significant determinant of debt ratio and has negative coefficient. The interpretation is that firms owned by insiders have lower debt ratio as compared to firms owned by outsiders. This result is contrary to the statement of Megginson [9] in one of his observed capital structure patterns that "ownership structure clearly seems to influence capital structure, though the true relationship is ambiguous. Generally speaking, the more concentrated a firm's ownership structure (the tighter the pattern of share ownership) the more debt it seems to desire and to be able to tolerate. Therefore, family-controlled firms tend to be more levered than similar publicly-traded firms with more atomized share ownership;



and individual managers who place a high value on the personal benefits of controlling a corporation will tend to prefer new debt to new equity issues for financing, because this minimizes dilution of their ownership stake." The regression shows that the more concentrated the ownership of the firm the less debt it will use. The explanation behind this result is that firms will prefer to use internal financing rather than external financing. Moreover, the existing owners do not want to bear financing risk and they choose to have low debt ratio. This is true in the case of family-owned firm, such as PT. Gudang Garam Tbk., the biggest manufacturer of cigarette in Indonesia in which 84.26% of its equity are owned by family members, and only 15.74% of the shares are sold to the public, because the existing shareholders do not want to reduce their ownership proportion and want to have direct control of the firm. The firm's debt ratio is 40%, 39%, and 28% in 1997, 1998, and 1999 respectively, which is way below 50%. It indicates that the firm using low debt financing in its capital structure.

## CONCLUSION

The result of this research showed the significance of all of the independent variables. The relationship of these variables to debt is shown to be non-linear. Firms will use high level of debt as its total asset size becomes larger because the greater the capital requirement or source of financing it needs the better its ability to raise its debt

level until it reaches an optimal capital structure. The more profitable the firm, the lesser the debt financing it needs, since it has already the capability to generate funds from its operating activities, and it will prefer to use internal financing first before searching for external financing. The firm with high operating risk will increase its level of debt financing, since it has lower agency cost of debt, and thus optimally borrows more. The higher tax paid by the firm, the higher debt ratio. Lastly, the more inside-owned the firm, the less the debt ratio. The  $R^2$  shows that 49.38 percent of the variation in the dependent variable is explained by the variation in the independent variables; 50.62 percent of the variation is explained by the variation of other factors such as market interest rate, inflation rate and foreign exchange rate. These external factors are uncontrollable by the manager of the firm. The interest rate and foreign exchange rate are determined by market mechanisms. The level of debt usually will be lower if market interest rate is high and will be higher if market interest is low. It is also affected by foreign exchange rate. If the firm has foreign currency-denominated debt, then if the exchange rate is high, it will use lower debt, but if the exchange rate is low, it will use higher debt.



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