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The Influence of Capital Structure Determinant Variables Toward Corporate Debt Ratio Which Mediated by Agency Cost

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***Abstract*—This research purposes to explore the mediating effect of agency cost towards the capital structure differences between the industrial companies of the manufacturing sector and non-manufacturing sector which listed in the Indonesian Stock Exchange. This research employed quantitative approach by applying path analysis to analyze the mediating effect of agency cost toward the influences of capital structure determinant variables toward debt ratio. These findings revealed that growth opportunity and insider ownership significantly affected agency cost. The agency cost significant positively effected debt ratio. Debt ratio in both sectors have no significant differences. The agency cost in both sectors mediated the effect of capital structure determinant variables on corporate debt ratio. Finally, the mediating effect of agency cost on debt ratio in industrial companies of the manufacturing sector was higher than the companies of the non-manufacturing sector.**

Keywords—insider ownership; growth opportunity; agency conflict; manufacturing; debt ratioo

I. INTRODUCTION

Managers often behave as opportunistic agents for making risky decisions by creating debt that causes high financial leverage for the company. Jensen and Meckling expressed that the distribution of ownership among insiders affects the value of the firm [1]. Increasing of insider ownership will reduce debt financing and agency conflict. Lumbantobing [2-4] showed that firm size of assets and growth opportunities positively affects corporate debt policy. The larger firm size of assets and growth opportunities there will be more funds used to execute the investment projects and realize the growth opportunities of investment through external financing. Increasing external financing when firm size and investment growth are higher will increase the agency conflict between shareholders and managers. Crutchley and Hansen argued that to reduce the agency conflict, companies commonly pay a dividend [5]. Based on theories and empirical findings from various studies of capital structure, the proposed problem statement in this study is as follows the agency cost mediates the influence of capital structure determinant variables towards corporate debt ratios in manufacturing and non-manufacturing companies listed in the Indonesia Stock Exchange during the years of 2013-2015.

A. Purpose of the Study

The purpose of this study is to examine the influence of capital structure determinant variables towards corporate debt ratio mediated by agency cost between industrial companies of the manufacturing sector and the non-manufacturing sector listed in the Indonesia Stock Exchange.

B. Theoretical Framework

Agency problem arises because of the separation between the owner as a shareholder with the manager as an agent (5). Agency problems incur costs which called as agency cost. To motivate the managers perform their functions properly, the managers should be given incentives and adequate supervision. Agency cost can be reduced if managers has shares ownership in company (1). Shares ownership by the managers is needed for all decisions taken by the managers do not only responsible to the owner of the company, but also by themselves. Furthermore expressed that the greater insider ownership, the differences of interest between shareholders and company managers will be lower, they are acting more cautious in taking a decision [1]. As shown in the previous findings result [6,7] revealed that insider ownership has a positive relationship with the capital structure, which impacts on the efficiency of the debt ratio. Jensen et at.[8] argued that agency conflict can be supressed by increasing debt. The use of debt makes the company obliged to pay interest and principal periodically, so that reduce the managers willingness to use free cash flow of existing funds to finance nonprofit activities. Firm size of assets indicates the number of total assets, sales and market capitalization. To obtain additional funding from the creditors, the managers raise the political costs on the disclosure of financial statements. It led to increasing agency costs. Firms with high investment opportunities tend to have a high growth rate, active investing, have a lower free cash flow and low assets [8, 9]. In such condition the company will tend to use high debt to reduce its agency cost, as described in the pecking order theory [10]. Dividend plays an important role in determining the market value of the company, as shown in the previous study [11]. The dividend payments will reduce the

sources of funds controlled by managers, thereby reducing agency costs. Based on the above expressions can be constructed the model of empirical research as shown in figure 1, with research hypotheses are postulated as below:

- H1: Agency cost mediates the positive effect of growth opportunity on debt ratio
- H2: Agency cost mediates the positive effect of firm size of assets on debt ratio
- H3: Agency cost mediates the negative effect of insider ownership on debt ratio
- H4: Agency cost mediates the positive effect of dividend on debt ratio
- H5: The mediating effect of agency cost on the effects of capital structure determinants on debt ratio in the industrial companies of both sectors are different.

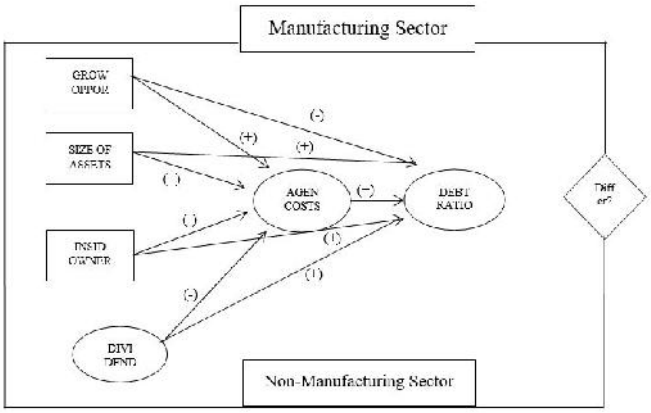

Fig. 1. The proposed empirical research model

II. METHOD

The objects of this study are the manufacturing and non-manufacturing companies which listed in the Indonesia Stock Exchange, during period of years 2013-2015. The independent variables: (a) Dividend yield (DIV) expresses ratio of dividend to price per share, (b) Firm Size (SIZE) expresses as size of assets be measured by logarithm natural of total assets, (c) Insider Ownership (IO) is the number of shareholders, directors or executive officers who have significant proportion of the company's shares, and (d) Growth opportunity (GO) describes the growth of assets year to year. An intervening variable is agency costs (AC) measured by asset utilization ratio that describes the productivity achieved by management in acquiring the company's sales. Variable dummy for industry (D = 1 manufacturing, D = 0 non-manufacturing). Dependent variable is debt ratio (DAR) the ratio of total debt to total of assets.

A. Data Analysis Techniques

Modeling using multiple linear regression analysis which expressed as follows:

Model (1): $AC = \alpha_1 GO + \alpha_2 SIZE + \alpha_3 IO + \alpha_4 DIV + \alpha_5 D + \alpha_{15} GO.D + \alpha_{25} SIZE.D + \alpha_{35} IO.D + \alpha_{45} DIV.D + \varepsilon_1$

Model (2): $DAR = \beta_1 GO + \beta_2 SIZE + \beta_3 IO + \beta_4 DIV + \beta_5 AC + \beta_6 D + \beta_{16} GO.D + \beta_{26} SIZE.D + \beta_{36} IO.D + \beta_{46} DIV.D + \beta_{56} AC.D + \varepsilon_2$

To analyze direct and indirect effects of determinants of capital structure towards debt ratio through intervening variable, expressed by path analysis as shown in Table 1 (*see in tables caption*).

TABLE I. DIRECT AND INDIRECT EFFECT OF DETERMINATS OF DEBT RATIO THROUGH AGENCY COST AS INTERVENING VARIABLE

EFFECT	GO→AC→ DAR	SIZE→AC →DAR	IO→AC→ DAR	DIV→AC →DAR
Direct	γ1	γ2	γ3	γ4
Indirect	δ1 γ5	δ2 γ5	δ3 γ5	δ4 γ5
Total	γ1 + δ1 γ5	γ2 + δ2 γ5	γ3 + δ3 γ5	γ4 + δ4 γ5

III. RESULT AND DISCUSSION

Estimate equation agency cost model (1) based on industry different:

$AC = 0{,}071GO - 0{,}088SIZE - 0{,}138IO - 0{,}037DIV + 0{,}130D_1 - 0{,}316GO.D_1 - 0{,}095SIZE.D - 0{,}128IO.D_1 - 0{,}092DIV.D_1$

Estimate equation debt ratio model (2) based on industry different:

$DAR = -0{,}041GO - 0{,}111SIZE + 0{,}385IO + 0{,}006DIV + 0{,}308AC - 0{,}027D_1 - 0{,}161GO.D_1 + 0{,}263SIZE.D_1 + 0{,}434IO.D_1 + 0{,}111DIV.D_1 + 0{,}294AC.D_1$

The effect of growth opportunity, firm size of assets, insider ownership, and dividend to debt ratio which mediated by agency cost (path analysis) as shown in Table 2.

TABLE II. THE EFFECT OF AGENCY COST AS INTERVENING VARIABLE (PATH ANALYSIS)

EFFECT	GO→AC→ DAR	SIZE→AC →DAR	IO→AC →DAR	DIV→AC→DAR
Direct	-0,0410**	-0,1110	0,3850**	0,0060**
Indirect	0,0219	-0,0271	-0,0425	-0,0114
Total	-0,0191	-0,1381	0,3425	-0,0054

A. Growth Opportunity

Testing the two models showed that growth opportunity significantly positive affects the agency cost, and otherwise growth opportunity has a significant negative effect on debt ratio. The result supported the findings which reported that company with high growth opportunity tends to use lower debt ratio to reduce their agency costs [8, 9].

B. Firm Size of Assets

Testing the agency cost model (model 1) showed that firm size of assets does not significant positively affect agency cost. The results testing of debt ratio model (model 2) showed that the firm size of assets does not significant positively affect the

debt ratio. These results did not support the findings of Lumbantobing [3, 4] who stated that the large companies that have the ability to pay off the debt to issue debt in large quantities.

C. Insider Ownership

There was enough evidence showing that the shares manager will decrease the agency cost. The results testing of model (2) depicted that insider ownership has a significant positive effect on debt ratio. These findings provided evidence to support the argument of Jensen and Meckling who argued that greater insider ownership would be lower the difference between the interests of shareholders with the managers. The results supported the findings of previous studies which proved that insider ownership significantly positive effects on debt ratio [3, 6, 7].

D. Dividend

Testing of model (1) depicted that the findings did not confirm the opinions which stated that dividend is used to reduce the agency conflict between managers and shareholders [1, 12]. Also demonstrated that dividend has a significant positive effect on debt ratio (see model 2). These findings confirmed the results of the previous studies which revealed that dividend policy positively affects debt ratio [2, 7]. Additional debt is used for monitoring costs to discipline the managers.

E. Agency Cost

Testing model (2) showed that the agency cost significant positively affects debt ratio. These findings are consistent to the studies of Jensen et al. and Lumbantobing [2, 8]. Debt makes the company obliged to pay interest and principal periodically, so that reduce the managers willingness to use free cash flow of existing funds to finance nonprofit activities. These findings explained indication of companies in Indonesia with high agency costs using high debt to reduce its agency conflict [2].

Testing the agency cost mediates the effect of capital structure determinants on debt ratio

Table 2 depicted that agency cost significantly plays to mediate the negative effect of the growth opportunity towards debt ratio. The negative effect of growth opportunity towards debt ratio would be positive when the agency cost increases. These findings supported the study which explained that companies with a high growth rate of investment opportunities tend to use external funding sources in the form of high debt when agency cost increases [13]. As for the indirect effect of the firm size of assets on debt ratio through the agency cost indicated that the agency cost was not significantly mediate the effect of the firm size of assets towards debt ratios. For insider ownership variables, the results showed that the agency cost significant mediates the positive effect of insider ownership towards debt ratio. The increase insider ownership would decrease the agency conflict in which lower differences of interest between shareholders and managers. The managers will act more cautiously in making decisions, including the use of debt. The results also showed that the agency cost plays important role to mediate the positive effect of dividend towards debt ratio. The positive effect of dividend on debt ratio would be negative when the agency cost decreases. This result supported the findings of previous studies which mentioned that dividend payout will reduce the sources of funds controlled by managers, thereby reducing agency costs [1, 12].

F. Dummy

Testing of agency cost model showed a significant effect on agency cost manufacturing than non-manufacturing companies. Testing of debt ratio model (2) by industry showed there were not enough evidence to depict the differences of corporate debt ratios between the industrial companies of both sectors. But there were significant differences in the effect of agency costs towards the debt ratios between both sectors. The influence of agency cost to the debt ratio in manufacturing companies is higher than the non-manufacturing companies.

IV. CONCLUSION

The findings concluded that greater insider ownership would be lower the conflict of interests between shareholders and managers. The increase of capital structure determinant variables such as insider ownership and dividend payments could reduce corporate debt ratios when the agency costs decrease, vice versa. Otherwise, the increase of growth opportunity could increase corporate debt ratios when the agency costs increase, vice versa.

Finally, this research concluded that the agency cost in both sectors mediated the effect of capital structure determinant variables on corporate debt ratio. The mediating effect of agency cost towards debt ratio in industrial companies of the manufacturing sector was higher than the industrial companies of the non-manufacturing sector. Agency costs more significant effect on debt ratios of manufacturing sector than the non-manufacturing sector. This research did not prove any evidence indicating a significant difference between corporate debt ratios of both sectors.

The results of this research revealed that the negative effect of growth opportunity on debt ratio would be positive when agency cost increases. Moreover, the others revealed that the positive effects of insider ownership and dividend towards debt ratio would be negative when agency cost decreases. So these findings recommended for high growth companies of manufacturing and non-manufacturing sectors that want to lower their debt ratios should reduce their agency costs, such as increasing shares ownership by their managers or dividend payout ratios. Maximizing the value of the company through optimization of excellent capital structure based on the agency theory can be realized.

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