The Effect of Capital Structure, Profitability and Dividend Policy on Intrinsic Value of Firm

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Abstract

Objectives: To investigate the effect of capital structure, profitability and dividend policy to intrinsic value of firm on property and real estate companies listed in Indonesia Stock Exchange. Method/Analysis: The data of this study are analyzed using path analysis at alpha 5%. The population of this study are the property and real estate sector companies listed on Indonesia Stock Exchange from period 2013 to 2015 and the sample are 51 companies. Capital structure and profitability as independent variable, dividend policy as intervening variable and intrinsic value of firm as dependent variable which is the present value of projected free cash flow to firm. Findings: The result of the study finds that capital structure and profitability have significant effect on intrinsic value of firm. Dividend policy have no significant effect on intrinsic value of firm. The results also show that dividend policy is not a mediating variable between capital structure and profitability to intrinsic value of firm.

Keywords: Capital Structure, Profitability, Dividend Policy, Intrinsic Value of Firm, Free Cash Flow to Firm

1. Introduction

Property and real estate is one of the important sector that support the economic growth in Indonesia. Indonesia as one of the most attractive emerging commercial real estate market for commercial investment in Asia Pacific is supported with a large population providing the high demand for residency, as well as office and shopping center. Growth in this sector may affect the economy of other industrial sectors such as cement and banking industry. The increasing in this sector also supported by its performance in stock exchange market which attract many investors. Based on the data of Indonesia Stock Exchange as of November 2014, property stocks got the highest performance where the property index recorded growth up to 48.72 percent. All firms always try to make a financial decisions that can increase its value in the future by determining its capital structure, profitability and dividend policy.

The Progress of a firm is always followed by increasing capital needs to support of its business activities. Gunawan (2011) refers capital structure as a combination of debt and own capital. Hermuningsih (2013) states that the theory of capital structure explains that the firm’s policy in determining the capital structure aims to optimize the value of firm. Based on the capital structure irrelevance theory by Modigliani and Miller (1958), capital structure has no influence on firm value under the assumption of perfect market and without tax. However Modigliani and Miller (1963) started to consider the influence of tax on firm value and state that issuing debt will increase firm value. Ehrhardt and Brigham (2011) states about the trade off theory where the optimal capital structure can be obtained by balancing the benefits of debt with the cost of financial distress and agency costs. According to pecking order theory, Murhadi (2011) states that companies prefer to use internal funds rather than external funds in order to finance the development of its business.

Aside from funding decisions, dividend policy remains one of the most important financial policies for a firm. Dividend policy brings information about firm’s prospects for profit growth in future where such information may invite a response from investors thus it will affect firm value (Rizqia et al., 2013). According to the irrelevance dividend theory with two basic assumptions perfect capital market and rational investors proposed by Modigliani and Miller in 1961, Priya and Mohanasundari (2016) state that the decision of whether to pay or not pay dividends has no impact on the value of the firm. Based on Birth-in-the-hand theory by Gordon and Lintner in 1963, Baker and Powell (2013) state that investors prefer cash in the hand rather than a future promise of capital gains due to lower risk. According to signalling theory, Wahyuni et al. (2013) state that dividend payment by a firm is a signal to outside investors based on asymmetric information. From the agency theory introduced by Jensen and Meckling in 1976, Ramadhani et al. (2015) conclude that dividends can reduce agency costs due to a conflict of interest between agent and shareholder.

The use of debt in the capital structure of a company can generate interest expense which can reduce the company's profit. The dividend policy is the determination of the portion of the profits to be given to the shareholders. The relationship between capital structure and dividend policy have been documented by several researcher such as Jannati (2012) who found that the higher the leverage will show the greater debt owned by the company which can affect the level of net income that are available to shareholders. Similarly, Asad and Yousaf (2014) found that the capital structure has negative effect on dividend policy which means the higher the debt of company will reduce the company's ability in paying dividend. While the results study of...
Sulistyowati et al. (2014) and Tania (2014) show that capital structure has positive effect on dividend policy based on agency theory. It is important for firms to use a capital structure that can maximize its value. The management of the firm should decide whether they will use internal or external sources of financing, whether they will choose debt or equity (Xhaferi and Xhaferi, 2015). Debt and equity are two components of capital structure. Based on the trade-off theory, firm should use the amount of debt in its capital structure that maximizes the value of firm. Capital structure of a firm will determine its cost of capital. Thus, a firm will try to obtain an optimal capital structure that can minimize its weighted average cost of capital (WACC) which will increase the value of firm (Gardner et al., 2010; Nurhikmah, 2013). Hamidy et al. (2015) investigate the effect of capital structure on firm value found that capital structure has a positive effect on firm value. While Wardani and Hermuningsih (2011) found that debt policy has no effect on firm value.

Profitability becomes one of the indicators that can be used for measuring the performance of a firm. Profitability is the ability of a firm to generate profits in using its assets effectively. The ability of a firm to generate its profits will determine the decision to pay dividends (Sandy and Asiyik, 2013). According to signalling theory, dividend reduce asymmetry information by acting as a good signal from management to shareholders about the firm's future. Setiawan and Lian (2013) investigate the effect of profitability on dividend policy, found that profitability are positively associated with the dividend policy. Thus the higher the profitability, the higher the dividend distributed to investors. Similarly, Abor and Bokpin (2010) found positive relationship between profitability and dividend payout ratio, wherea highly profitable firm is more likely to declare and pay high dividends to their shareholders. However the result study of Aditya (2015) show that profitability has no significant influence to dividend policy. Firms that are able to generate stable and increasing profits can be seen as a positive signal by investors related to firm's performance (Rizqia et al., 2013). Sofyaningsih and Hardiningsih (2011) found that profitability has positive and significant effect on firm value, it means that higher profitability can increase the value of firm. However the result study by Dinata and Yadnya (2014) found that profitability has no significant effect to firm value.

Every policy made by firms will reflects its condition and performance. The dividend payout of firm’s is not only the source of cash flow to the shareholders but it also offers information relating to firm’s current and future performance (Ajanthan, 2013). Setiawan and Lian (2013) state that dividend payment is a signal from firms that they believe they have a good prospect in the future. Thus the dividend policy has an influence on the value of firm. The result study of Rizqia et al. (2013) indicate that dividend policy has a positive and significant impact on firm value which is based on asymmetric information in which the investor does not have all the information about firm’s management. A survey evidence from executives made by Baker and Powell (2012) show that managers of Indonesian firms perceive that dividend policy affect firm value. Muktiadji and Felicia (2013) also found that there is positive significant influence between the dividend policy and the intrinsic value of the firm. However Sofyaningsih and Hardiningsih (2011) found that dividend policy could not effect the value of the company. This means that a company’s value is not determined by the size of dividend payment which based on the theory of Modigliani and Miller (Majid and Benazir, 2015).

The increased of debt in capital structure can lead to agency costs and the threat of bankruptcy. Firm that distributes the dividend provides a positive signal to eliminate investor's doubt about the firm's performance because of the risk of using debt on its capital structure. The study that investigate the relationship between capital structure and firm value using dividend policy as intervening variable such as Mardasari (2014) show that there were indirect effect between capital structure and firm value through dividend policy and it means that dividend policy does mediate the relationship between capital structure and firm value. The higher profit earned by firm usually followed by the its ability to pay dividend that can affect the value of firm. Dinata and Yadnya (2014) investigate the relationship between profitability and value of firm using dividend policy as intervening variable, the result show that there were indirect effect between profitability and firm value through dividend policy and it means that dividend policy does mediate the relationship between profitability and firm value.

In this study we try to investigate the effect of capital structure and profitability to intrinsic value of firm through dividend policy as intervening variable. The intrinsic value of a firm reflects its fundamental. The tool to estimate intrinsic value is the discounted cash flow model. Theoretically, the discounted cash flow model is considered more accurate to value a firm because this model has taken into account the time value of money. Damodaran (2002) state that the value of the firm is obtained by discounting expected cashflows to the firm. Free cash flow to firm (FCFF) represents a cash flow available to shareholders and creditors after all investments in net working capital and fixed assets are conducted. We use discounted free cash flow to firm model for intrinsic firm valuation which is the present value of the expected future cash flow on the asset discounted at weighted average cost of capital that reflects the risk of the cash flow.
2. Research Methods

2.1 Research Data and Sample

This study used the secondary data of annual financial statement from property and real estate companies listed on Indonesia Stock Exchange from 2013 to 2015. Property and real estate companies listed on Indonesia Stock Exchange consist of two subsector which is property and real estate sector and building construction sector. Sample of 51 companies were chosen with purposive sampling technique where the criteria required the positive operating income of the companies and the complete data that related to the variables used in this study.

2.2 Research Variables and Hypothesis

This study use Independent and dependent variable. Independent variables were capital structure (X1) and profitability (X2). Dependent variable were dividend policy (Y1) and intrinsic value of firm (Y2).

a. Intrinsic Value of Firm

Discounted cashflow valuation is based upon expected future cashflows and discount rates (Damodaran, 2002). The intrinsic value of firm is the present value of the firm’s free cash flow which is discounted at the Weighted Average Cost of Capital (Ehrhardt and Brigham, 2011).

\[
\text{Intrinsic value of firm} = \left( \sum_{t=1}^{\infty} \frac{FCFF_t}{(1+WACC)^t} \right) + \left( \frac{TV}{(1+WACC)^n} \right)
\]

Where,

\[
FCFF_t = EBIT (1-\text{tax}) \times (1-\text{Reinvestment Rate})
\]

\[
\text{Net Capital Expenditure} + \text{Non - Cash WC} \]

\[
\text{EBIT (1 - tax)}
\]

\[
\text{Terminal Value (TV)} = \frac{FCFF_n (1 + \text{Stable Growth})}{WACC - \text{Stable Growth}}
\]

b. Dividend Policy

The dividend policy is the determination of the portion of the profits to be given to the shareholders. The dividend policy was measured using Dividend Payout Ratio (DPR) which is the ratio of dividend per share to earnings per share (Bukit, 2012).

\[
\text{DPR} = \frac{\text{Dividend per Share}}{\text{Earning per Share}}
\]

c. Capital Structure

Capital structure is the comparison between the total debt held by the firm and the total equity of the firm. The level of debt use by a firm can be measured by the ratio of total debt to total equity (Wardani and Hermuningsih, 2011).

\[
\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}
\]

d. Profitability

Profitability is the ability of a company to generate profits based on the effectiveness and efficiency of the use of company assets. Profitability was measured by Return on Assets (ROA) which is the comparison of net income to total assets (Ehrhardt and Brigham, 2011).

\[
\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}
\]

This study used path analysis to test the effect of capital structure and profitability on dividend policy and intrinsic value of firm. The hypothesis of this study can be described as follow:

H1: Capital structure has a negative and significant effect on dividend policy at property and real estate companies in Indonesia Stock Exchange.

H2: Profitability has a positive and significant effect on dividend policy at property and real estate companies in Indonesia Stock Exchange.

H3: Capital structure has a positive and significant effect on intrinsic value of firm at property and real estate companies in Indonesia Stock Exchange.

H4: Profitability has a positive and significant effect on intrinsic value of firm at property and real estate companies in Indonesia Stock Exchange.

H5: Dividend policy has a positive and significant effect on intrinsic value of firm at property and real estate companies in Indonesia Stock Exchange.

H6: Capital structure has indirect effect on intrinsic value of firms through dividend policy as intervening variable at property and real estate companies in Indonesia Stock Exchange.

H7: Profitability has indirect effect on intrinsic value of firms through dividend policy as intervening variable at
property and real estate companies in Indonesia Stock Exchange.

The data of this study were analyzed by SPSS program with the level significance of 5%. Analytical technique used path analysis. Path analysis is used to explain the direct and indirect effect between variables by divide it into two model structure. The first substructure model analyzes the relationship between capital structure and profitability on dividend policy. The model 1 equations as follow:

\[ DPR = \alpha + \beta_1 DER + \beta_2 ROA + \varepsilon_1 \]

The second substructure model analyzes the relationship between capital structure and profitability on intrinsic value of firm with dividend policy as intervening. The model 2 equations as follow:

\[ \text{Intrinsic Value of Firm} = \alpha + \beta_1 DER + \beta_2 ROA + \beta_3 DPR + \varepsilon_2 \]

### 3. Result and Discussion

#### Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER</td>
<td>51</td>
<td>0.0577</td>
<td>2.7368</td>
<td>0.951302</td>
<td>0.6756746</td>
</tr>
<tr>
<td>ROA</td>
<td>51</td>
<td>-0.0634</td>
<td>0.2743</td>
<td>0.0671</td>
<td>0.064226</td>
</tr>
<tr>
<td>DPR</td>
<td>51</td>
<td>0.0000</td>
<td>0.7776</td>
<td>0.122855</td>
<td>0.1771354</td>
</tr>
<tr>
<td>VALUE</td>
<td>51</td>
<td>30.000</td>
<td>18398.00</td>
<td>4702.6275</td>
<td>4813.78826</td>
</tr>
</tbody>
</table>

Valid N (listwise) 51

Table 1 present the summary statistics of the variable used in the analysis. The average of capital structure in property and real estate company is 0.95 with the maximum is 2.74. This indicate that almost all the companies used a big portion of debt in their funding. The minimum of profitability ratio is -0.06 or below zero where the average also indicate the profit is small, showing that the company have difficulties using their asset effectively. The minimum of dividend policy figure zero basically shows the absence of dividend payment while the mean is 0.12 where it also indicate that the dividend payout is relatively small in property and real estate companies.

#### Table 2. Result of First Substructure

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct Coeff.</th>
<th>Indirect Coeff.</th>
<th>Total Coeff.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER (X1) → DPR (Y1)</td>
<td>0.365</td>
<td>0.062</td>
<td>0.427</td>
<td>0.010</td>
</tr>
<tr>
<td>ROA (X2) → DPR (Y1)</td>
<td>0.270</td>
<td>0.046</td>
<td>0.316</td>
<td>0.054</td>
</tr>
</tbody>
</table>

Table 2 shows significance of capital structure on dividend policy was 0.010 and coefficient of 0.365. These result show that capital structure has positive effect on dividend policy thus hypothesis 1 was rejected. This result based on agency theory, where the decision of using debt on capital structure was a result of owner efforts to control the manager's decision from funding the unprofitable investment. The positive effect of capital structure on dividend policy also indicates that managers are becoming more focused in their efforts to improve the company's performance by generating profits to pay the interest and to distribute dividends to the shareholders. Rizqia et al. (2013) state that financial leverage can be used as firm monitoring tool to lower agency problems. The result of this study are in line with the research of Sulistyowati et al. (2014) and Tania (2014) that capital structure has a positive effect on dividend policy based on agency theory.

Table 2 shows significance of profitability on dividend policy was 0.054 and coefficient of 0.270. These result show that profitability has positive and insignificant effect on dividend policy thus hypothesis 2 was rejected. Profitability reflects the company's ability to generate profits. The dividend distribution is closely related to the ability of the company to make a profit. However, profitability has insignificant effect on dividend policy. The decision of some companies that choose not to distribute the dividend is indicated that the company needs more funding in the business development. Arilaha (2009) states that the characteristics of ownership structure in most companies in Asia such as in Indonesia are concentrated in control by majority shareholders who are usually family companies, so that majority shareholders have the ability to take strategic decisions that tend to exploit the interests of minority shareholders such as delaying dividend payout. This result are in line with Aditya (2015) who found that profitability has no effect on dividend policy because the company allocate its profit for expansion.

#### Table 3. Result of Second Substructure

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct Coeff.</th>
<th>Indirect Coeff.</th>
<th>Total Coeff.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER (X1) → Intrinsic value of firm (Y2)</td>
<td>0.471</td>
<td>0.062</td>
<td>0.533</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA (X2) → Intrinsic value of firm (Y2)</td>
<td>0.479</td>
<td>0.046</td>
<td>0.525</td>
<td>0.000</td>
</tr>
<tr>
<td>DPR (Y1) → Intrinsic value of firm (Y2)</td>
<td>0.170</td>
<td>0.170</td>
<td>0.158</td>
<td>0.158</td>
</tr>
</tbody>
</table>

Table 3 shows significance of capital structure on intrinsic value of firm was 0.000 and coefficient of 0.471. These result show that capital structure has positive effect on intrinsic value of firm thus hypothesis 3 was accepted. The use of debt on capital structure can affect the cost of capital. Firms' value can be maximized when the cost of capital is minimized. According to trade off theory, the company needs to determine the optimal
capital structure to increase the intrinsic value of firm. Khireta et al. (2014) found that the highest value of firms occurs when the firm's capital costs are minimal in line with the optimizing of capital structure. This study are in line with Gardner et al. (2010), Nurhikmah (2013) and Hamidy et al. (2015).

Table 3 shows significance of profitability on intrinsic value of firm was 0.000 and coefficient of 0.479. These result show that profitability has positive effect on intrinsic value of firm thus hypothesis 4 was accepted. The ability of companies to generate substantial profits in the future will increase cash flow which is also increase the intrinsic value of firm due to a positive relationship between the company's net cash flow flows and its profitability (Ravichandra and Mahendra, 2015). The result of this study are in line with the research of Rizqia et al. (2013) who found there is a positive relationship between profitability and firm value where the companies that are able to generate high profits can be a positive signal for investors about corporate performance.

Table 3 shows significance of dividend policy on intrinsic value of firm was 0.159 and coefficient of 0.170. These result show that dividend policy has no effect on intrinsic value of firm thus hypothesis 5 was rejected. The result of this study are in line with the research of Efni et al. (2012) who found that dividend policy has positive and insignificant effect on firm value. Mardiyanti et al. (2012) finds that the dividend payout is not always followed by an increase in firm value because the firm's value is also determined by the ability of the firm to generate profits from its assets and investment policies. Thus the dividends that are not distributed can be used to make investments that generate greater profits. This result is in line with Sofyaningsih and Hardiningisih (2011) and Majid and Benazir (2015) who found that dividend policy has insignificant effect on firms value confirming the irrelevance dividend theory.

Table 3 show that the direct effect of capital structure on the intrinsic value of firm is greater than the indirect effect of capital structure on the intrinsic value of firm through dividend policy, thus hypothesis 6 was rejected. The result of this study are in line with Aditya (2015) who found the effect of profitability on firm value through dividend policy is not significant.

4. Conclusion
This study examined the effect of capital structure and profitability on dividend policy and intrinsic value of firm in property and real estate companies on Indonesian Stock Exchange. Our study show that capital structure has positively effect on dividend policy and this finding support the agency theory. Meanwhile profitability has insignificant effect on dividend policy. This result indicated that profitable firms have more opportunities for growth and choose to allocate its cash into expansion. Capital structure and profitability has a positive effect on intrinsic value of firm while dividend policy has insignificant effect on intrinsic value of firm. The effect of capital structure on intrinsic value of firm support the trade off theory. This indicate that firm which have an optimal capital structure will produce the lowest cost of capital and create the highest value of firm. Profitability has significant effect on intrinsic value of firm. This showed firms manage their assets effectively by generating profit.

The insignificant effect of dividend policy to intrinsic value of firm show that dividend payout is not always increase the value of firm, however firms pay low dividend indicate that the firm finance their growth by making an investment that generate more profit in the future for the shareholders. Moreover dividend policy was not a mediating variable. It was because the direct effect between capital structure and profitability to intrinsic value of firm were greater and significant than the indirect effect through dividend policy. Future research is necessary to futher understanding on this issue and other variables may be identified to build more findings.

References


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