THE INFLUENCE OF INVESTMENT OPPORTUNITY SET AND DIVIDEND POLICY ON CORPORATE VALUE: EVIDENCE FROM INDONESIA STOCK EXCHANGE

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Abstract

The purpose of this paper is to investigate influences the proxy of investment opportunity set and dividend policy on corporate value. This study is tested in Indonesia Stock Exchange as one of emerging market which is contained 201 companies covering a 3-years period from 2009 to 2011. Structural equation modelling with Partial Least Square (PLS) is used in this study. This paper found a significantly positive influence between the proxies of investment opportunity set on dividend policy. In addition, there is a significantly positive influence between the proxies of dividend policy on corporate value. The result had consistently with informational content of dividend that explained that dividend paid was considered to be companies prospect in the future. This result also supported signaling theory that emphasize dividend paid is a signal on the market. The result also revealed a significantly positive influence between the proxies of investment opportunity set on corporate value. This result has supporting and consistently with research result by Fama (1978). Direct effect from investment decision on corporate value is results obtained of investment activity itself.

Keywords: Investment Opportunity Set, Dividend Policy, Corporate Value, Emerging Market.
I. Introduction

The major goal of a company is to increase the corporate value in term of the stock price. Stock price is used as a proxy of corporate value, and it makes investor must pay to have it. Financial decisions have an important role in order to the continuity of company. To shareholders, long term investment goal becomes an interesting issue to be observed. Company must consider every strategic decision related to business activities because it will influence stock price and shareholders welfare. Therefore, management must be able to maintain resources effectively and efficiently for improving corporate value. When the company is in a good performance, management will tend to choose new investment than pay a high dividend. The fund which should be paid as cash dividend to shareholders will be used to purchase profitable investment, even to overcome underinvestment problem. Contrarily, the company in slowing growth tends to pay higher dividend for overcoming overinvestment problems. According to Jensen and Meckling (1976), managers tend to invest free cash flow into the investment opportunities and enlarge the company, although it is not profitable.

The growing companies would be responded positively by the market (Vogt, 1997). According to Smith and Watts (1992), the opportunity of company’s growth could be seen on investment opportunities as a proxy of the various combinations of investment opportunities set value (IOS). The growing companies are prospected by investors because the capital invested will provide high return accordance with their expectation. Myers (1977) stated that IOS could be used to predict future condition of the company. According to him, IOS gave extensive guidance where the corporate value as the main direction depended on the company’s expenditure in the future.

Various literatures assert that corporate value might be influenced by companies’ ability to pay dividend. Payment of dividend indicates that management's belief of the future income which will be acquired, so it can be said that payment of dividend was a positive signal or good news. This signal will be responded positively by investors. Thus, it will influence on corporate value, so investors will give high assessment to company which has paid dividend. Nowadays, dividend policy is one of topic in finance which is still in debates. Bhattacharyya (1997) stated that dividend policy was one of the difficult things and it was a challenge for finance economists. A study relating to dividend policy had much been done over the past few decades, but it is still not completely understood the factors affected by dividend policy and how these factors influence each other.

Several theories of dividend policy and its relationship with corporate value recently is still interesting to discuss. Dividend irrelevance theory by Miller and Modigliani (1961) explained that dividend policy was irrelevant, because it had no effect on corporate value or cost of capital. Corporate value depends on investment policy rather than profit which will be distributed for dividend and retained. Further, this theory asserts that corporate value determined by earnings power from company's assets which generate profit and also explain that the profit allocation as dividend does not effect on the corporate value. Bird in hand theory of Gordon and Lintner states the opposite. According to this theory investor prefers company which pays dividend because it lessens risk rather than capital gain. The theory expressed by Litzenberger and Ramaswamy is known as tax preference theory said that dividend which shareholders received would be imposed higher tax rather than tax on capital gain. Investor prefers profit acquired by company finally is used for investment which will generate capital gain in the future.

Researches on dividend policy and corporate value have been widely performed. Travlos et al. (2001) proved that dividend was relevant on corporate value and revealed that payments of dividend reduced asymmetry information between management and investor. Corporate value is important concept for investor, because corporate value is market indicator that describe how the market asses overall corporate value. It is caused in corporate value calculation exist of several factor that doesn’t include on calculation of company market capitalization.
Stock markets will reflect the corporate value through the share prices. Optimization of corporate value is the companies’ direction which can be achieved through the implementation of financial management function, where a financial decision taken will affect other financial decisions and has an impact on the corporate value (Fama and French, 1998). Shareholders welfare will expand along with increasing the company’s share price. Improvement can be achieved if the company is able to give a greater return on investment than capital costs invested. Therefore, the management must be able to manage the resources owned effectively and efficiently.

Finally, it can improve the corporate value.

This research was inspired by market crash on the middle of 2008 which affected market sentiment. Whereas company condition showing good performance. This study has been conducted in 2009 till 2011 because Jakarta Composite Index (JCI) has increasing level dramatically at that time. The average year gain during 2005-2011 is 32.17%. In 2005, JCI level is 1162.64 and then became 3821.99 in the end of 2011. This fact showed that index increase 229% on that period and the record along market was established. Description of JCI movement in 2005-2011 as follows.

![JCI Historical Trend](source: www.idx.co.id)

Figure 1.1 Historical of Jakarta Composite Index Trend

Manurung (2002) classifying Indonesia Stock Exchange (ISE) as emerging market. The reason which supporting ISE as attractive market is continued rise in JCI level. International Monetary Fund (2012) was announced which is Indonesia as one of emerging market with good economy prospect in the future. The rising numbers of company and expanding market capitalization are proving that ISE was developed every year. Figure 1.2 presenting those market capitalizations improve from USD 81 Billion became USD 390 Billion. The number of listing company and greater market capitalization every year showed that the economy was growing up. Table 1.1 shows to us that JCI increasing was followed by the improving of market liquidity, such as on transaction value. Starts from 2005 we know that the number of volume is 401.87 million share and has increase dramatically more than two times become 1,203 million shares in year 2011. It means that the investment climate in Indonesia is bright and giving new opportunity to investor in order expanding their business and welfare. Based on the background explained, it is necessary to examine influence among investment opportunity set, dividend policy and corporate value.
**II. Literature Review**

Myers (1977) views the value of a firm as the total of the value of assets in place and the value of options to make future discretionary investments in positive net present value (NPV) projects. The component of firm value resulted from options to make future investments has been referred by Myers (1977), Smith and Watts (1992), and others as the investment opportunity set, or IOS. The value of firm’s IOS depends on many firm-specific and industry-specific factors. Christie (1989) as in Kallapur and Trombley (2001) argues that the primary determinant of the IOS is industry factors such as barriers to entry and product life-cycles. Based on Kallapur and Trombley (2001), Market to book value of equity (MVEBVE) is the most valid proxy which has been used. In addition, its proxy is the most widely used by researchers in US, particularly in finance field (Gaver and Gaver, 1995). Even Kallapur and Trombley (1999) as in Elloumi and Gueyie (2001) found that the proxy had higher correlation with company’s growth in the future, Elloumi and Gueyie (2001) also concluded that its proxy was better and can be reduced error level.

Dividend policy has strong bone of contention in the area of finance. This is proved by numerous studies on dividend policy. From Lintner (1956) to Miller and Modigliani (1961) to Bhattacharya (1979) to Rozeff (1982) to Easterbook (1984), and more recently DeAngelo et al. (1996), Fama and French (2001), Al-Malkawi (2007), and Al-Najjar and Hussainey (2009), dividend policy relates with using profit
which becomes rights of shareholders. Basically, profit can be shared as dividend or retained to reinvest. Bird in hand theory of Bhattarcarya (1979) explained that high dividend caused by dividend received as a bird on hand had lower risk if it was compared with dividend which were not distributed. Rozef (1982), and Easterbrook (1984) showed that an increasing of dividend willing to be paid by companies will give greater possibility in decreasing of retained earnings. As an impact, companies have to find external funding to conduct new investment. Then, payment of dividend will be expensive caused by increasing requirement to add external capital which is expensive. Rozef (1982) considers that dividend appeared has informational content of dividend or as gesture prospect of company.

Signalling is funding manager activities belief can reflects value of shares. Generally, financing with loan is considered as a positive signal so managers believe that shares undervalued. The theory was developed by Ross (1977). Ross advised companies with high leverage to be able to be used by manager as signal relating with companies in the future.

Stock market condition with their ability to give more information concerning net income, dividend and debt have effect on investor respond in the form of increasing or decreasing on company stock that will causing raise or lessen the stock price itself (Hayes, 2001). Improvement of company performances will be followed by the increasing of stock price in the stock exchange. It is caused investor has long term expectation concerning improvement information or declining performance through financial report.

III. Methodology

3.1 Data

Data used in this study was based on annual report in 2009 until 2011, journal and other publication containing information which is relevant to the topic. Sources of research data are obtained through secondary data. Several data that used are obtained from Indonesia Stock Exchange (www.idx.co.id). The samples are all companies listing on Indonesia Stock Exchange except banking, financial institutions and insurance companies. The reason is supported by Jensen and Meckling (1976) and Gaver (1993) as in Subramaniam et al. (2011) that highly regulated industries such as public utilities or bank will have higher debt equity ratios for equivalent levels of risk than the average non-regulated firm. Table 3.1 showed the criteria mentioned above are acquired 67 unit analysis and total samples for three years 201 unit analysis.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Procedures</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Companies listed on Indonesia Stock Exchange</td>
<td>2009 - 2011</td>
</tr>
<tr>
<td>2</td>
<td>Delete companies not announcing their financial report</td>
<td>(14)</td>
</tr>
<tr>
<td>3</td>
<td>Delete companies have not distributing dividend consistently</td>
<td>(296)</td>
</tr>
<tr>
<td>4</td>
<td>Delete banking, financial institution and insurance</td>
<td>(73)</td>
</tr>
<tr>
<td></td>
<td>Number of unit analysis</td>
<td>67</td>
</tr>
</tbody>
</table>

Table 3.1 Steps in Determining Sample

The variables used in this research are exogenous variable or independent variable, namely, investment opportunity set and endogenous variables or dependent variables, namely, dividend policy and corporate value. Recapitulation of operational definition as follow:
Table 3.2 Operational Definition

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Formulas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Opportunity Set / IOS (X)</td>
<td>1. Market to book value of asset / MVABVA (X₁)</td>
<td>1. Total Asset-Total Equity+(Number of outstanding share x closing share prices) / Total Asset</td>
</tr>
<tr>
<td></td>
<td>2. Market to book value of equity / MVEBVE (X₂)</td>
<td>2. (Number of outstanding share x closing share prices) / Total Equity</td>
</tr>
<tr>
<td></td>
<td>3. Capital expenditure to market value of assets ratio / CAPMVA (X₃)</td>
<td>3. Book value of fixed asset t – Book value of fixed asset t-1 / Total Asset – Total Equity + (Number of outstanding share x closing share prices)</td>
</tr>
<tr>
<td></td>
<td>4. Firm value to book value of property, plant and equipment / VPPE (X₄)</td>
<td>4. Total Asset-Total Equity+(Number of outstanding share x closing share prices) / Net fixed asset</td>
</tr>
<tr>
<td>Dividend policy (Y₁)</td>
<td>1. Dividend Payout Ratio (Y₁,1)</td>
<td>1. Dividend per share / Earnings per share</td>
</tr>
<tr>
<td></td>
<td>2. Dividend yield (Y₁,2)</td>
<td>2. Dividend per share / Closing prices of common stock</td>
</tr>
<tr>
<td></td>
<td>3. Dividend Per Share (Y₁,3)</td>
<td>3. Dividend / Number of outstanding share</td>
</tr>
<tr>
<td>Corporate value (Y₂)</td>
<td>1. PBV (Y₂,1)</td>
<td>1. Closing prices of common stock / Equity per share</td>
</tr>
<tr>
<td></td>
<td>2. Stock price (Y₂,2)</td>
<td>2. Annual closing price</td>
</tr>
<tr>
<td></td>
<td>3. Price Earning Ratio (Y₂,3)</td>
<td>3. Market price per share / Earning per share</td>
</tr>
</tbody>
</table>

3.2 Model Specification and Hypothesis

Technique of data analysis in this research is Structural Equation Modeling (SEM) analysis. SEM is a statistical procedure used to describe the relationship among multiple variables simultaneously (Hair et al., 1995). SEM is relatively less used, especially in finance field. The considerations as foundation of using SEM statistics procedures are: 1) providing the method which handles directly multiple relationships simultaneously with providing statistical efficiency, and 2) SEM investigates dependent relationship among various variables or constructs simultaneously. It gives advantage significantly, particularly when dependent variable changes into independent variable in simultaneous equation.

Partial Least Square (PLS) will be used as method of analysis in this research. The main reason using PLS method is variable that used including latent variable which is cannot measure directly and only through indicator to measure. PLS is an alternative method in structural equation model. PLS has been chosen based on research consideration, namely, this research has three latent variables which established with formative indicator (not reflective). This study assumes that indicators are not correlated, so internal consistency reliability measurement (cronbach alpha) not required as reliability test on formative construct (Ghozali, 2006). Basically, formative construct is regression analysis from indicator to construct thus coefficient of regression and coefficient significance are using to assess it. When all the indicator weights are significant, there is empirical support to keep all the indicators. PLS-SEM is the preferred method when the research objective is theory development and prediction.
(Hair et al., 2011). PLS analysis has steps as follows.

1. Outer model test
   Formative indicator is used as dependent variable (endogenous variable) and independent variable (exogenous variable). This study assumes that indicators are not correlated, so internal consistency reliability measurement (cronbach alpha) not required as reliability test on formative construct (Ghozali, 2006). This is different with reflective indicator which using criteria, they are, convergent validity, composite reliability and discriminant validity. Basically, formative construct is regression analysis from indicator to construct thus coefficient of regression and coefficient significance are using to assess it. When all the indicator weights are significant, there is empirical support to keep all the indicators. If both the weight and loading are non-significant, there is no empirical support to retain the indicator and its theoretical relevance should be questioned (Hair et al., 2011).

2. Inner model test
   Inner model testing or structural model is used to know relationship among construct, significance value and R2 from research model. Structural model will be evaluated using R2 for dependent construct (endogenous variable) and t-test and also significance of path coefficient on structural model. R² values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model can be described as substantial, moderate, or weak, respectively (Hair et al., 2011). In addition, PLS model also will be evaluated with using Q2 or predictive relevance for constructive model. Q2 will measure observation value based on result in the model and also it parameter estimation.

Meanwhile, accepted and rejected hypothesis criteria as follows.

1. Assess significance value and outer weight each indicators. Weight value which suggested are positive and t-statistic greater 1.645 (p-value < 0.10); 1.960 (p-value < 0.05); and 2.576 (p-value < 0.01) for two tailed. Indicator which has value less than this requirement should be dropped out from model and then re-analysis.

2. Assess inner weight from relationship on latent variable. Weight value should be showed positive with t-statistic greater 1.645 (p-value < 0.10); 1.960 (p-value < 0.05); and 2.576 (p-value < 0.01) for two tailed.

3. Alternative hypothesis (Ha) has accepted if weight value from relationship on each latent variable showing positive value with t-statistic greater 1.645 (p-value < 0.10); 1.960 (p-value < 0.05); and 2.576 (p-value < 0.01) for two tailed. Contrarily, H0 failed to rejected if weight value from relationship on each latent variable showing negative value with t-statistic greater 1.645 (p-value < 0.10); 1.960 (p-value < 0.05); and 2.576 (p-value < 0.01) for two tailed.

T-table value which decided in this study is 1.960 with significance level 0.05 (two-tailed). Further, it will used as cut-off value to accepting or rejecting hypothesis. General form and research model as follows.

**Outer model:**

- MVABVA (X₁) : \( \lambda_{X_{11}} \xi_1 + \delta_1 \)
- MVEBVE (X₂) : \( \lambda_{X_{22}} \xi_1 + \delta_2 \)
- CAPMVA (X₃) : \( \lambda_{X_{33}} \xi_1 + \delta_3 \)
- VPPE (X₄) : \( \lambda_{X_{44}} \xi_1 + \delta_4 \)
- DPR (Y₁₁) : \( \lambda_{Y_{111}} \eta_1 + \varepsilon_1 \)
- Div. Yield (Y₁₂) : \( \lambda_{Y_{212}} \eta_1 + \varepsilon_2 \)
- DPS (Y₁₃) : \( \lambda_{Y_{313}} \eta_1 + \varepsilon_3 \)
- PBV (Y₂₁) : \( \lambda_{Y_{421}} \eta_2 + \varepsilon_4 \)
- Stock Price (Y₂₂) : \( \lambda_{Y_{522}} \eta_2 + \varepsilon_5 \)
- PER (Y₂₃) : \( \lambda_{Y_{623}} \eta_2 + \varepsilon_6 \)

**Inner model:**

- \( \eta_1 \) (Dividend Policy) : \( \gamma_{11} \xi_1 + \zeta_1 \)
- \( \eta_2 \) (Corporate Value) : \( \beta_{21} \eta_1 + \gamma_{21} \xi_3 + \zeta_2 \)
\[ \eta \text{ (eta)} = \text{latent endogenous variable}; \xi \text{ (Xi)} = \text{latent exogenous (i.e., independent) variable}; \zeta \text{ (zeta)} = \text{random disturbance term}; \gamma \text{ (gamma)} = \text{path coefficient}; \ Y_i = \text{indicators of endogenous variables}; \epsilon_i \text{ (epsilon)} = \text{measurement errors for indicators of endogenous variable}; \lambda_{yi} \text{ (lambda y)} = \text{loadings of indicators of endogenous variable}; \]

**3.2.1 Investment Opportunity set and Dividend Policy**

Smith and Watts (1992) explained that companies with great investment opportunity would prefer applying a policy of lower dividend paid ratio to optimize the internal fund utilization. Further, research held by Gul and Kealey (1999), which took South Korea companies as the sample found the appropriating of the argument of contracting cost which had negative relation between IOS with funding and dividend policy. The same results also implied from research of Abor and Bokpin (2010) and Subramaniam et al. (2011). According to them, there was negative relation between IOS and dividend policy. Aivazian and Booth (2001), however, found a positive relationship between market-to-book value ratio and dividend payments. The hypothesis is:

**H1:** The proxy of IOS has negative influence on dividend policy
3.2.2 Dividend Policy and Corporate Value

Increasing dividend payment will be viewed as signal that company has a good prospect. In Contrast, decreasing dividend payment will be viewed as signal that company has a bad prospect. Dividend policy has significant influence on corporate value. Gordon (1962) as in Brigham and Gapenski (1996) regarding bird in the hand theory stated that shareholder preferred a high dividend payment. It causing having higher certainty than capital gain, and then the hypothesis is:

\( H_2: \text{The proxy of dividend policy has positive influence on corporate value} \)

3.2.3 Investment Opportunity set and Corporate Value

Myers (1977) introduced IOS related with the purpose of companies. According to him, IOS gives direct guidance where the corporate value as the main purpose depends on companies’ expenditure in the future. Kallapur and Trombley (2001) revealed that the company investment opportunity was an important component from its market value. This was caused by the IOS of a firm was an important characteristic and had great influence on the way how the firm was viewed by managers, owners, investors and creditors. Then the hypothesis is:

\( H_3: \text{The proxy of IOS has positive influence on corporate value} \)

IV. Results and discussions

4.1 Measurement Model (Outer Model Test)

Formative indicators are not expected to be correlated with each other. Therefore, traditional measures of validity are not appropriate. However, validity of formative constructs can be evaluated by looking at the size and significance of their weights. Table 4 shows the weights of formative indicators in their respective constructs. These results can be examined to identify the relevance of these indicators for the research model in general and for each formative construct, in particular.

Table 4.1 Weights of Formative Indicators

| Variable                      | Original Sample (O) | Sample Mean (M) | Standard Deviation | T Statistic (|O/STE RR) |
|-------------------------------|---------------------|-----------------|--------------------|-----------------|
| **Investment Opportunity Set**|                     |                 |                    |                 |
| X1 (MVABVA)                  | 0.641795            | 0.667202        | 0.218057           | 2.943244        |
| X2 (MVEBVE)                  | 0.079456            | 0.081300        | 0.163627           | 0.485593        |
| X3 (CAPMVA)                  | -0.140171           | 0.030895        | 2.212133           | 0.063365        |
| X4 (VPPE)                    | -0.117573           | -0.116735       | 0.119842           | 0.981062        |
| **Dividend Policy**          |                     |                 |                    |                 |
| Y1.1 (DPR)                   | 0.133977            | 0.302683        | 0.405195           | 0.330649        |
| Y1.2 (Div Yield)             | -13.87699           | -16.882459      | 6.80978            | 2.022553        |
| Y1.3 (DPS)                   | 0.576380            | 0.571063        | 0.050240           | 11.472545       |
| **Corporate Value**          |                     |                 |                    |                 |
| Y2.1 (PBV)                   | 0.607752            | 0.604689        | 0.095524           | 6.362298        |
| Y2.2 (Stock Price)           | 0.397709            | 0.403938        | 0.056458           | 7.044353        |
| Y2.3 (PER)                   | 0.039042            | 0.054535        | 0.135408           | 0.288326        |

Assess significance value and outer weight each indicators. Weight value which suggested are positive and t-statistic greater 1.645 (p-value < 0.10); 1.960 (p-value < 0.05); and 2.576 (p-value < 0.01) for two tailed. Indicator which has value less than this requirement should be dropped out from model and then re-analysis. T-table value which decided in this study is 1.960 with significance level 0.05 (two-tailed). Further, it will used as cut-off value to accepting or rejecting hypothesis. Table 4.2 showed MVABVA had path coefficient 0.7585 and t-statistic greater 1.96 with significant level is 6.4040 (p-value < 0.05). This indicated that indicator has been valid and significant in measuring variable investment opportunity set variable. DPS had path coefficient 0.5616 t-statistic greater 1.96 with significant level 13.1444 (p-value < 0.05). This is indicated that indicator has been valid and significant in measuring dividend policy variable.
Table 4.2 Weights of Formative Indicators after Re-analysis

| Variable                  | Original Sample (O) | Sample Mean (M) | Standard Deviation | T Statistic (|O/STERR) |
|---------------------------|---------------------|-----------------|--------------------|-------------|
| Investment Opportunity Set|                     |                 |                    |             |
| X1 (MVABVA)               | 0.758563            | 0.794171        | 0.118450           | 6.404094    |
| Dividend Policy           |                     |                 |                    |             |
| Y1.3 (DPS)                | 0.561613            | 0.568868        | 0.042726           | 13.144409   |
| Corporate Value           |                     |                 |                    |             |
| Y2.1 (PBV)                | 0.529100            | 0.535471        | 0.094910           | 5.574746    |
| Y2.2 (Stock Price)        | 0.440845            | 0.441181        | 0.058044           | 7.594978    |

PBV and stock price had path coefficient 0.5291 and 0.4408 and t-statistic greater 1.96 with significant level 5.5747 and 7.5949, respectively (p-value < 0.05). This is indicated that indicators have been valid and significant in measuring corporate value variable.

4.2 Structural Model (Inner Model Test)

Table 4.3 Hypothesis testing of Inner Model

| Statement | Original Sample (O) | Sample Mean (M) | Standard Deviation | T Statistics (|O/STERR) | Statement |
|-----------|---------------------|-----------------|--------------------|-------------|-----------|
| DP -> CV  | 0.486250            | 0.487977        | 0.059674           | 8.148446    | Significant |
| IOS -> CV | 0.548450            | 0.550231        | 0.058427           | 9.386910    | Significant |
| IOS -> DP | 0.443143            | 0.452099        | 0.068786           | 6.442307    | Significant |

Figure 4.2 Path Diagram

Table 4.3 and Figure 4.1 showed the result of hypothesis testing from this research. Then the explanations are as follows.

1. The result revealed a statistically significant positive influence between investment opportunity set and dividend policy. Based on PLS analysis has been known that path coefficient 0.4431 and t-statistic 6.4423 are greater 1.96 (p-value < 0.05). Positive path coefficient revealed that greater of MVABVA requires raise of DPS (as dividend policy indicator).

2. Dividend policy and corporate value have a significantly positive influence. Based from (based on) PLS analysis has been known that
path coefficient 0.4862 and t-statistic 8.1484, are greater 1.96 (p-value < 0.05). Positive path coefficients assert that greater of DPS will increase PBV and stock price (as corporate value indicator).

3. The result also revealed significantly positive influence between investment opportunity set and corporate value. Based on PLS analysis shows that path coefficient 0.5484 and t-statistic 9.3869 are greater 1.96 (p-value < 0.05). Positive path coefficient reveals that greater of MVABVA will increase PBV and stock price.

Goodness and fit structural model in PLS analysis is value of predictive relevance ($Q^2$). Those value calculated based on $R^2$ from endogenous variables, they were:

1. Dividend policy variable obtained $R^2$ 0.1963.
2. Corporate value variable obtained $R^2$ 0.7735.

Predictive relevance formula as follows:

\[
Q^2 = 1 - (1 - R_1^2)(1 - R_2^2)
\]
\[
Q^2 = 1 - (1 - 0.1963)(1 - 0.7735)
\]
\[
Q^2 = 1 - (0.8037)(0.2265)
\]
\[
Q^2 = 0.1820
\]
\[
Q^2 = 0.8179
\]

Predictive relevance value is 0.8179 or 81.79%. This indicated that the diversity of data can be explained on model is 81.79%, or in other word, information which contained on the data is 81.79% and can be explained by model. While remaining 18.21% explained by another variable (which is not contained in the model) and error. Thus, this result can be used to hypothesis testing.

4.3 Hypothesis Testing

The research result has been obtained significantly positive influence between IOS and dividend policy. PLS analysis showed path coefficient is 0.4431 and t-statistic is 6.4423, greater 1.96 (p-value < 0.05). This indicated that dividend policy (DPS as indicator of dividend policy) will affect corporate value. Positive path coefficient showed that there was positive influence between dividend policy and corporate value. The greater dividend that will be paid to shareholder has impact on increasing of corporate value. Basically, if companies increasing dividend will be seen by investor as signal that companies will be growing in the future to earn profit and maximize shareholder value. The result had consistently with informational content of dividend that explained that dividend paid was considered to be companies prospect in the future. This result also supported signalling theory that emphasize dividend paid is a signal on the market and describes companies growth and prospect in the future, thus dividend payment will improve market appreciation on companies stock, thereby dividend payment gives positive implication on the corporate value. In addition, this result generally support
existing literature and research on dividend policy and corporate value as Gordon (1963), Bhattacharya (1979), Myers and Majluf (1984), and Nishat and Irfan (2003) and Hussainey et al. (2011) which reveals that there are significant positive relationship between dividend and corporate value.

The third hypothesis result has been obtained significantly positive influence between IOS and corporate value. PLS analysis showed path coefficient is 0.5484 and t-statistic is 9.3869, greater 1.96 (p-value < 0.05). Positive path coefficient presented that there was positive influence between IOS and corporate value. It means that the increasing of IOS will effect on improving companies corporate value. Significantly result means that company with high level of IOS will overview on investor if company has prospect in the future to earn higher profit. The conclusion based on maximum of corporate value assumption will be obtained through selecting investment which gives positive net present value. It means, those investments have been considered and analysis through the chosen method. Thereby, investment expenditure will give positive signal regarding company growth in the future, then increasing stock price. The result presents that investment decision has influence on corporate value. This result has supporting and consistently with research result by Fama (1978). Direct effect from investment decision on corporate value is results obtained of investment activity itself through selecting project or another policy as create new product, machine replacement, improvement of research and development and merger (Myers, 1977). In addition, deciding investment decision, public company will able to control business risk that they face. Implication from conclusion is that corporate value has been established through market value of stock strongly influenced by investment opportunities and discretionary expenditure in the future (Myers, 1977; Myeong dan Hyeon, 1998). This result also supports signaling theory. Capital expenditure has important role in order to improve corporate value. Because, this investment will give signal related companies growth and expected return in the future and also will increasing market value with stock return as proxy (Fama dan French, 1998). The result generally support existing literature and research on IOS and corporate value as research by Myeong and Hyeon (1998), Belkaoui and Picur (2001) which found significant positive relationship between IOS and corporate value.

V. Conclusions and Recommendation

This paper used structural equation modelling to examine the relationship among investment investment opportunity set, dividend policy and corporate value on listing companies of Indonesia Stock Exchange using Partial Least Square. The study concluded that there is statistically significant positive influence of investment opportunity set on dividend policy. In addition, dividend policy has a significantly positive influence on corporate value. The result also revealed a significantly positive influence of investment opportunity set on corporate value. Limitation of this research is that we used relative a short period of time of 3 years. This period could be developed longer so will obtain greater sample and diversity. It will effect on result within estimating influence of research variable.

Future research is suggested to include some other variable which have influence on corporate value as macro economy, capital structure or financing decision or even different indicator in the same variable. Additional variable will give comprehensive description and result concerning investment opportunity set, dividend policy and corporate value. Those variables have linkages with company condition, prospect, growth, and corporate value.

Suggestion for the investor, before decide the type of investment, investor should assess the number of Price to Book Value (PBV) and companies stock price. Furthermore, assessment on the number of dividend payment and other information regarding companies investment through asset power, could become a consideration. So, it will provide investor with accurate information. Then, before doing stock transaction investor should consider investment opportunity set (IOS) as company classification, namely growing company and not growing
company, due to their classification will determine company policy which will have effect on investor return. Suggestion for the company, Investments selection on asset in place need to use an indicator in terms investment opportunity set (IOS). So, positive net present value (NPV) should serve as a reference before making decisions then affecting companies’ prospect and profit in the future.

References


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