Investment Opportunity Set (IOS) In Mediating Company Advantage to Funding Policies in Lq45-Indexed Companies

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ABSTRACT: This quantitative study aims to determine and analyze the effect of investment opportunity set (IOS) in mediating company advantage in the form of company size and profitability on funding policies in LQ45-indexed companies in 2019-2020. The population of this study is 54 companies. It involved 24 Samples selected using a purposive sampling technique. Data were collected from the documentation and data presentation using time series data. Data were analyzed using regression analysis, path analysis, and the Sobel test. The results showed that there is no effect of company size on funding policy and profitability has a negative effect on funding policy. Besides, IOS has a positive effect on funding policy and company size does not affect IOS. Profitability has a positive effect on IOS. IOS cannot mediate company size against funding policies. IOS can partially mediate profitability against funding policies. Companies use the opportunity to grow with the amount of debt to get more value with their investment. Companies positively respond to the extent of investment opportunities by turning their capital from internal and external companies for investment purposes.

KEYWORDS: Company Size, Funding Policy, Investment Opportunity Set, Profitability.

INTRODUCTION
Referring to CNBC Indonesia data, the Indonesian Composite Index (IHSG) was corrected quite badly, dropping by 20.56% from the beginning of 2020. Meanwhile, LQ45 Index which specifically becomes the reference index for the Indonesian capital market due to its constituent stocks with high liquidity and qualified business prospects, was corrected even more severely up to 24.67% from the beginning of the year. The amount of debt cannot be utilized effectively and efficiently for investment due to improper fund management. Good fund management is expected to provide long-term benefits in accordance with the expected investment objectives. To manage funds properly and efficiently, companies need to implement appropriate funding policies. [1] reveals that funding policy is a policy related to financial decisions where the source of funds to purchase assets comes from. [2] states that funding decisions are related to company decisions in seeking funds to finance investments and determine the number of funding sources used.

[3] explains some factors affecting the company's capital structure such as growth, sales stability, asset structure, management attitudes, lender attitudes, dividend policy, control, bankruptcy risk, profitability, company size, and business risk. [4] suggests consideration factors for financial managers in determining funding sources are growth rates, sales stability, asset structure, management attitudes, lender attitudes, profitability, competitive structure, and industry characteristics. [5] add other factors such as industry classification, company size, business risk, and operating leverage. Companies need to learn about potential investment failures such as the inability to maximize company advantages (company size, profitability, and multinational) and the inability to realize company limitations (leverage and systematic risk) [6]. Companies that are difficult to operate will generate minimal profits or suffer losses, while companies that are forced to be unable to operate can only survive without making a profit. They continue to depend on their capital reserves and debt [7].

[8] state that the company size can be determined based on total sales, total assets, average level of sales, and average total assets. This shows that the greater the debt, the higher the company's income. [9] [10] state that profitability will generate additional funds, which later can be included in retained earnings or can be invested by the company. Profitability can affect funding policies. [11] explains that companies need to increase net income so that companies can finance all debt through these profits and attract investors by looking at the company's ROA (Return On Assets). The company's ability to generate profits can be seen by its profitability. A company’s advantage can be measured by profitability and company size [7]. Studies on profitability and company size to funding
policies produce mixed and inconsistent findings. [12] [13] [14] [15] show that profitability has a negative and significant effect on capital structure. It means that if the profitability is high, the company’s debt is small. Besides, [16] [17] [18] found profitability to have a positive and significant effect on capital structure indicating that when profitability is high, debt will also be high. Studies by [19] [13] [14] [20] show that company size has a positive effect on capital structure. It means that the larger the size of a company, the greater the company's debt. On the other hand, [21] [22] found that company size had a negative effect on capital structure meaning that the larger the company, the smaller the debt. [23] states that company policy is strongly influenced by the company's objectives in managing its investment opportunity set (IOS). A growing company is a profitable prospect for investors because the investment they make is expected to be able to provide a high return. [24] proves that a company's opportunity to grow can be assessed using the investment opportunity set (IOS) and can be a mediating variable in some research models [25] [23] [7] [26]. Therefore, this study aims to determine and analyze the influence relationship between company size and company profitability on funding policies with investment opportunity set (IOS) as a mediating variable.

LITERATURE REVIEW

Effects of Company Size on Funding Policy
Studies by [14] [17] [18] [21] [16] [13] reveal that company size has a positive effect on capital structure. Besides, [20] show that company size has a positive effect on funding decisions. This means that the larger the company size, the higher the company's debt. On the other hand, [22], [12] show that company size has a negative effect on capital structure. [23] show that company size has a negative effect on funding policy. This means that the larger the company's size, the smaller the company's debt. This study aims to test whether company size has a positive effect on funding policy.

H1: Company size has a positive effect on funding policy.

Effects of Profitability on Funding Policy
Studies by [18] [22] [27] [21] [16] [12] show that profitability has a positive effect on capital structure. This means that the greater the profit generated by the company, the greater the use of funding sources from debt. [28] provide different results that profitability has a negative effect on funding decisions. [14] [13] show that profitability has a negative effect on capital structure which is in line with [23] that profitability has a negative effect on funding policy. This means that the greater the profit generated by the company, the smaller the use of funding sources from debt. This study examines whether profitability has a negative effect on funding policy.

H2: Profitability has a negative effect on funding policy.

Effects of IOS on Funding Policy
Studies by [29] [23] show that IOS has a positive effect on funding policy. It indicates that the greater the investment opportunities for the company, the more funding sources of debt are used. [30] shows that IOS has a positive effect on capital structure. [7] show that IOS has a negative effect on funding policy. This means that the greater the number of investment opportunities of a company, the more internal funding sources the company used. This study examines whether IOS has a positive effect on funding policy.

H3: IOS has a positive effect on funding policy.

Effects of Company Size and Profitability on IOS
Studies by [7] [23] show that company size and profitability have a positive effect on IOS. This means that the larger the company size, the more investment opportunities available. This study aims to test whether company size has a positive effect on IOS. The greater the profit generated by the company, the greater the available investment opportunities.

H4: Company size has a positive effect on IOS.

H5: Profitability has a positive effect on IOS.

The Role of IOS in Mediating Company’s Advantage to Funding Policy
Studies by [23] [26] show that IOS can mediate company advantage in the form of profitability and company size towards funding policy. [25] reveal that the IOS variable can be used as a mediating variable. This study aims to test whether IOS can mediate a company's advantage to funding policies. IOS is a representation of the company's growth. [31] state that a company's growth potential can be shown by the difference between the market value of the stock, the book value, and the existence of investment
opportunities that can generate profits. The higher the investment opportunity set in the future, the higher the company's opportunity to grow.

H6: IOS can mediate company size on funding policies.
H7: IOS can mediate company profitability on funding policies.

METHOD
This study used a quantitative approach with the subject of public companies whose shares are included in the LQ45 index on the Indonesia Stock Exchange (IDX). The Indonesian Stock Exchange was used as the object of the study because it is the largest stock exchange and one of the centers for selling shares that have gone public in Indonesia. The population in this study were 54 public companies listed on the Indonesia Stock Exchange (IDX) and their shares were included in the LQ45 Index for 2019-2020. The sample was determined based on the following criteria:

Table I. Purposive Sampling Criteria

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Companies that are regularly listed on the LQ45 index and have not experienced delisting from 2019 to 2020.</td>
</tr>
<tr>
<td>2</td>
<td>Non-government company, to avoid bias from government regulations</td>
</tr>
<tr>
<td>3</td>
<td>Not engaged in the financial sector, as it has a different financial structure.</td>
</tr>
<tr>
<td>4</td>
<td>Companies that issue annual financial reports.</td>
</tr>
<tr>
<td>5</td>
<td>Have positive profit and equity in 2019-2020.</td>
</tr>
<tr>
<td>6</td>
<td>Have the required data (ROA, Leverage, Size, Profitability, MVABVA).</td>
</tr>
</tbody>
</table>

A total of 24 companies meet the sample characteristics. This study used secondary data taken from the company's annual report and the Indonesia Capital Market Directory (ICMD) in 2019-2020. Presentation of data processing research using time series data.

Measurement of Research Variables

Funding Policy
[1] states that funding policy is a policy related to financial decisions where the source of funds is to purchase assets. [24] explain that funding policy can be measured by = Debt to Equity Ratio (DER).

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

Company Size
[32] states that company size can be seen from the total assets owned, the market value of the shares, and the average level of sales. [33] reveal that company size can be measured by the logarithm of total assets.

\[Size = \ln(Total\ Assets)\]

Profitability
[34] defines profitability as the company's ability to earn profits in relation to sales, total assets, and own capital. [35] states that profitability can be measured by Return on Assets (ROA).

\[ROA = \frac{Net\ profit}{Total\ Assets} \times 100\%\]

Investment Opportunity Set (IOS)
[36] explains that the Investment Opportunity Set (IOS) is a combination of assets in place and the selection of future investments with a positive net present value (NPV). IOS proxies have many forms. In this study, the measurement of IOS used an alternative proxy for Market Value to Book Value of Assets (MVABVA) with the following formulation according to [37].
International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 06 Issue 05 May 2023
DOI: 10.47191/ijcsrr/V6-i5-09, Impact Factor: 6.789
IJCSRR @ 2023

**Hypothesis Test**

This study used the SPSS data processing tool with some tests such as normality, multicollinearity, heteroscedasticity and autocorrelation tests [38]. The hypothesis test used a regression analysis model to empirically test whether the independent variable affects the dependent variable. The effect of mediating (intervening) variables was tested using the path analysis method. Path analysis is an extension of multiple linear regression analysis to estimate the causal relationship between variables (causal model) that has been previously determined [38]. Causality cannot be found by path analysis only. The equation model is formulated below:

\[
MVABVA = \frac{Total \ Asset - Total \ Equity \ + \ (Number \ of \ outstanding \ shares \times \ Market \ price)}{Total \ Asset}
\]

Notes:
- \(X_1\) = Company size
- \(X_2\) = Profitability
- \(Z\) = Investment opportunity set
- \(Y\) = Funding policy
- \(P_1, P_2, P_3, P_4, P_5\) = effect coefficient
- \(e\) = Standard error = \(\sqrt{1 - R^2}\)

**Sobel Test**

The Sobel test is to determine the effect of the mediating variable (IOS). [39] state that a variable is called intervening/mediating if the variable influences the relationship between the independent variable and the dependent variable. The Sobel test is test the strength of the indirect influence of the independent variable (X) on the dependent variable (Y) through the intervening variable (Z). By multiplying the path \(X \rightarrow Z\) (a) with the path \(Z \rightarrow Y\) (b) or \(ab\) [38].

**RESULT**

**Descriptive Analysis**

**Table II. Results of Descriptive Statistical Analysis**

<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>Funding policy</td>
<td>48</td>
<td>14.47</td>
<td>315.90</td>
<td>85.7458</td>
<td>68.70378</td>
</tr>
<tr>
<td>Company size</td>
<td>48</td>
<td>6.72E12</td>
<td>3.52E14</td>
<td>6.0525E13</td>
<td>7.00660E13</td>
</tr>
<tr>
<td>Profitability</td>
<td>48</td>
<td>.55</td>
<td>35.80</td>
<td>8.8242</td>
<td>7.63114</td>
</tr>
<tr>
<td>IOS</td>
<td>48</td>
<td>82.15</td>
<td>1626.33</td>
<td>231.9018</td>
<td>297.79614</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 2 above, N or the number of data is 48.

**Classic Assumption Test**

**Normality Test**

**Table III. Results of Regression Normality Test for Model 1 and Model 2**

<table>
<thead>
<tr>
<th></th>
<th>Unstandardize Residual Model 1</th>
<th>Unstandardize Residual Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Normal Parameters</td>
<td>(a-b) Mean</td>
<td>.0000000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>71468474</td>
<td>.48306864</td>
</tr>
</tbody>
</table>
Based on the table above, the significance value is higher than 0.05, namely 0.964 and 0.521, meaning that the residual data are normally distributed.

**Multicolinearity Test**

**Table IV. Results of Regression Multicolinearity Test for Model 1 and Model 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics Model 1</th>
<th>Collinearity Statistics Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
<td>VIF</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LN_X1</td>
<td>.884</td>
</tr>
<tr>
<td></td>
<td>LN_X2</td>
<td>.497</td>
</tr>
<tr>
<td></td>
<td>LN_Z</td>
<td>.471</td>
</tr>
</tbody>
</table>

Based on the table above, the tolerance value is higher than 0.10 and the VIF value is less than 10.00 in model 1 and model 2. Thus, it can be concluded that the data in this study are free from symptoms of multicollinearity.

**Heteroscedasticity Test**

**Table V. Results of Regression Heteroscedasticity Test for Model 1 and Model 2**

<table>
<thead>
<tr>
<th>Spearman's rho</th>
<th>LN_X1</th>
<th>Correlation (2-tailed)</th>
<th>Coefficient Sig.</th>
<th>Unstandardized Residual Model 1</th>
<th>Unstandardized Residual Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.016</td>
<td>.063</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.913</td>
<td>.672</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>LN_X2</td>
<td>Correlation (2-tailed)</td>
<td>Coefficient Sig.</td>
<td>-177</td>
<td>.059</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
<td></td>
<td>.229</td>
<td>.688</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>LN_Z</td>
<td>Correlation (2-tailed)</td>
<td>Coefficient Sig.</td>
<td>-.272</td>
<td>.310</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

Based on the result above, the value of the company size (X1), profitability (X2), and IOS (Z) is higher than 0.05. Therefore, it can be concluded that there are no symptoms of heteroscedasticity in regression model 1 and model 2.
Autocorrelation Test
Table VI. Results of Regression Autocorrelation Test for Model 1 and Model 2

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.312&lt;sup&gt;a&lt;/sup&gt; 0.097</td>
<td>0.035</td>
<td>.73865</td>
<td>1.805</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.727&lt;sup&gt;a&lt;/sup&gt; 0.529</td>
<td>0.508</td>
<td>.49369</td>
<td>2.159</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LN_Z, LN_X1, LN_X2
b. Dependent Variable: LN_Y

Based on the table above, in model 1, the value of the two tables is 1.6708. The DW value of 1.805 is higher than du which is 1.6708 and lower than 4-du or 4-1.6708 = 2.3292. In Model 2, the value of two tables is 1.6231. The DW value of 2.159 is higher than du which is 1.6231 and lower than 4-du or 4-1.6231 = 2.3769. Therefore, it can be said that there is no autocorrelation in the regression model 1 and Model 2.

Hypothesis Test
Table VII. Results of Regression Analysis Model 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-350.073</td>
<td>284.621</td>
<td>-1.230</td>
<td>.225</td>
</tr>
<tr>
<td></td>
<td>Company size</td>
<td>13.850</td>
<td>9.009</td>
<td>1.537</td>
<td>.131</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>-7.598</td>
<td>2.176</td>
<td>-3.491</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>IOS</td>
<td>298</td>
<td>.056</td>
<td>1.292</td>
<td>5.353</td>
</tr>
</tbody>
</table>

Dependent Variable: Funding Policy

The regression equation that can be compiled after determining the results of multiple linear regression model 1 is Y = -350.073 + 13.850X1 - 7.598X2 + 0.298Z. Based on the table above, hypothesis 1 is rejected so there is no effect of company size on funding policy. Hypothesis 2 is accepted so that there is a negative effect of profitability on funding policy. Hypothesis 3 is accepted so that there is a positive effect of IOS on funding policy.

Table VIII. Results of Regression Analysis Model 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>231.015</td>
<td>760.902</td>
<td>.304</td>
<td>.763</td>
</tr>
<tr>
<td></td>
<td>Company size</td>
<td>-9.615</td>
<td>24.067</td>
<td>-.029</td>
<td>-.400</td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>34.221</td>
<td>2.810</td>
<td>8.77</td>
<td>12.179</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IOS

The regression equation that can be compiled after determining the results of multiple linear regression model 2 is Z = 231.015 - 9.615X1 + 34.221X2. It can be concluded that there is no effect of company size on IOS so Hypothesis 4 is rejected. Hypothesis 5 is accepted so that there is a positive effect on the profitability on IOS.
The direct effect of company size on funding policy is not significant and then after being mediated by the IOS variable (indirect effect), the effect of company size on funding policy remains not significant. Thus, can be concluded that the IOS variable cannot mediate company size on funding policy (hypothesis 6 is rejected).

The direct effect of profitability on funding policy is significant and after being mediated by the IOS variable (indirect effect), the effect of profitability on funding policy remains significant with an increasing coefficient value. Therefore, it can be concluded that IOS can mediate profitability on funding policy (hypothesis 7 is accepted).

**DISCUSSION**

The results of this study support previous studies by [17] [27] [40], that company size does not affect the company's capital structure. On the other hand, it contradicts other studies by [14] [17] [18] [21] [16] [13] that company size has a positive and significant effect on capital structure. The chaotic economy makes small to large companies not dare to take funds to finance companies from debt due to its high risks. During the chaotic economy, it is difficult for companies to find income, while debt will increase the risk of bankruptcy. The lack of effect on company size on funding policy can also be caused by inappropriate returns on funding decisions so that company management is unable to manage the company's capital structure optimally.

Besides, this study is in line with [14] [13] [23] that profitability has a negative effect on funding policy. On the other hand, it does not support other studies by [18] [22] [27] [21] [16] [12] that profitability has a positive effect on capital structure. Companies that generate profits can show adequate liquidity for their financial needs so that they do not depend on debt. The better the company's ability to generate profits, the less dependence on the use of external sources of funds. Companies have a tendency to first use internal funds and if the internal funds are insufficient, the company uses external funds.

The greater the available investment opportunities, the higher the tendency of companies to use sources of funds from debt. The company does it to take advantage of the debt to become an added value to its investment. Companies respond to investment opportunities positively by turning their internal and external capital for investment purposes [23] [26]. Many small companies that are just starting a business have greater growth opportunities as they have better performance than large companies. Large assets do not guarantee that a company will be able to grow better as when the economy is chaotic, it is difficult to circulate capital properly. The company's growth can be seen from its ability to generate profits, which will result in a high investment. Companies that generate large profits cannot just leave these profits as savings. They look for ways to make these profits have more added value. The better the company in generating profits, the greater the investment opportunities so that these profits can be used effectively and efficiently to generate added value. The results of this study support a previous study by [23] that IOS can mediate the profitability of funding policies. The emergence of investment opportunities affects the company's funding policy. Companies try to meet investment opportunities by utilizing their external funding sources, namely debt.

**CONCLUSION**

This study reveals that there is a profitability effect on funding policies mediated by IOS in LQ45-indexed companies in 2019-2020. This means that IOS can partially mediate profitability on funding policies as the influence of profitability on funding policies which was previously significant remains significant after using IOS. However, it is different from the company size variable on funding policies mediated by IOS. If profitability increases, IOS increases which will have an impact on increasing funding policies, and
vice versa. The greater the available investment opportunities, the higher the tendency of companies to use sources of funds from debt. The company does it to take advantage of the debt to become an added value to its investment. The use of IOS proxies maybe influences why company size does not have a significant effect on IOS. The more varied IOS proxies used, the more accurately they will describe IOS in current conditions.

REFERENCES


