Corporate governance, capital structure, and performance in family and non-family firms

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Abstract
This study aimed to examine the effect of corporate governance and capital structure on the performance of family and non-family firms. Corporate governance is measured by independent boards of directors and commissioners. Capital structure was measured by debt-to-equity ratio and performance as proxied by return on equity. The data in this research was secondary data. The sampling method used the purposive sampling method. The samples were 11 family firms and 30 non-family firms. The data analysis used multiple regression to identify the effect of the dependent variable on the independent variable. The results of the research showed that the capital structure has a significant impact on the performance of family and non-family firms.

Keywords
corporate governance; capital structure; performance; family firms; non-family firms

INTRODUCTION

The financial performance of a firm is a significant factor to be considered by an investor in investing. Investors can see the financial performance of a firm from the financial statements it issues. Conflicts of interest between the agent and the principal that occur in a firm's operations. The firm's financial performance cannot be improved if there is a conflict of interest between the agent and the principal, often referred to as an agency conflict (Brigham and Ehrhardt, 2011). Agency problems in the firm can occur because of asymmetric information. This asymmetric information occurs between managers and shareholders when one party has information not owned by the other party (Brigham and Ehrhardt, 2011).

Corporate governance is a form of management carried out by a firm in its operations. The structure of good corporate governance can determine the success or failure of a company. The success of a firm is primarily determined by its strategic characteristics, which include the strategy of implementing a good corporate governance system. Good corporate governance can improve firm performance (Putri, 2020). The current state of the country is being hit by the Covid-19 pandemic, which has caused enormous losses. In order for the firms to survive, it requires consistency and optimization of the firms in implementing good corporate governance.

Firms in running their business need funds for operations and business development through debt and equity. Agency theory focuses on potential conflicts of interest that arise from information asymmetry between principals and agents (Jensen and Meckling, 1976). The use of debt in the firm is expected to reduce agency conflict (Crutchley and Hansen, 1989). According to the capital structure theory, the addition of debt made by the firm when the position of the capital structure is above the target of the optimal capital structure can cause a decrease in the value of the company. Previous research on the effect of capital structure on performance has not shown consistent results.

Research on the influence of corporate governance and capital structure on performance has been widely carried out both internationally and in Indonesia. Research related to corporate governance and capital structure on performance was conducted by Ahmed et al., (2019), Hamid et al., (2015), San dan Duran, (2015), Simões, (2014), and Vieira, (2016).... Research related to corporate governance, capital structure, and performance variables was conducted by Azis dan Hartono (2017), Budiman (2015), Rahmatin dan Kristanti (2020), Muawanah (2014), and Putri (2020). Research in Indonesia has not tested how the influence of corporate governance and capital structure on the performance of family and non-family firms listed on the
Indonesia Stock Exchange. Corporate governance in family firms in Indonesia is still mostly based on family relationship, and has not seen the implementation of good corporate governance that can improved company performance. The success of the enforcement of good corporate governance is largely determined by the quality of the management, namely the commissioners as supervisors and directors as executor. Based on the research gaps stated previously, this study intends to examine the effect of corporate governance and capital structure on firms' value. The samples in this study were grouped into family and non-family firms.

The urgency of this research looks at whether there are differences in company performance between family businesses and non-family businesses. Is the company that focuses more on the structure of the family business very different from the non-family business.

**LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

**Agency theory**

Agency theory discusses the relationship between agents and principals. The agent is the management of the company, while the principal is the shareholder. The agent and principal are bound by a contract that states their respective rights and obligations. Principals provide facilities and funds to run the company. This agency theory arises because of asymmetric information between principal and agent, asymmetric interest between principal and agent, due to unobservable behavior or bounded rationality. With these three things, the principal and agent will prioritize their respective welfare. The agent will try to maximize his prosperity by expecting a large compensation. Meanwhile, shareholders will maximize welfare through a maximum dividend distribution. The agency problem can arise because of the asymmetric information that occurs between managers and investors. The conflict occurs when one party has information that the other party does not have. Usually, the manager have more information than their investors. The manager will significantly influence the optimal firm capital structure (Brigham and Ehrhardt, 2011). Family firms in Indonesia tend to employ family members as agents in their firms. The involvement of the family as an agent will be able to trigger agency conflicts within the company.

**Corporate governance and performance**

Corporate governance can be defined as a set of laws, rules, and procedures that affect a firm operations and the decisions made by its managers (Brigham and Ehrhardt, 2011). According to Lukviarman (2004), experts agree that the corporate governance system adopted by Indonesia follows the pattern of the Continental European system.

Shleifer and Vishny (1997) explain that corporate governance can protect minority parties in a firm from exploitation by managers and controlling or majority shareholders in the company. Good corporate governance in a firm is expected to improve firm performance. The quality of the firm’s management, in which the commissioner is the supervisor and the director is the executor, will determine good corporate governance. The existence of an independent board of directors and commissioners is a vital governance role in the company. An independent commissioner in a firm is a commissioner who is not an employee of the company, is not a relative or family member, is not a majority shareholder, and has no serious business interest/interest in the company. Putri (2020) found that corporate governance has a positive effect on firm performance. The family firm is a company whose main shareholder is a family, and the manager of the position is controlled by family members. The characteristics of a company owned by a family will be different from a company that is not owned by a family.

Based on the results of these previous studies, the following hypotheses are formulated:

H1a: The board of directors has a positive effect on the performance of family firms

H1b: The board of directors has a positive effect on the performance of non-family firms

H1c: Independent Commissioner has a positive effect on the performance of family firms
H1a: Independent Commissioner has a positive effect on the performance of non-family firms

H2a: Capital structure has a positive effect on the performance of non-family firms

**Capital structure and performance**

Several theories explain the choice of capital structure. Trade-Off Theory says that the firms will use the benefits of tax deductions on the cost of debt in connection with the leverage of the capital structure. The level of corporate leverage lies in the capital structure. Therefore, it is used to balance the capital structure with the cost of debt. The Pecking Order theory states that financial decisions follow a hierarchy in which funding sources from within the firms take precedence over funding sources from outside the company. In the event that the firms use external funding, loans are prioritized over funding with additional capital from new shareholders. Jensen and Meckling (1976) say that using debt in the firms can reduce agency conflict because the agent in the firms cannot take actions that harm the shareholders. After all, the free cash flow in the firms is used to pay the firms debt interest obligations.

The theory proposed by Modigliani and Miller (1963) adds an element of tax to their capital structure analysis. Modigliani and Miller (1963) suggest that firms with debt have a higher value than firms that do not have debt. The financial performance of firms that have debt will also be better when compared to firms that do not have debt. Firms that are in debt have an interest expense that can be used as a tax deduction. High-risk, high return firms that have high debt also have a high risk because of the interest costs. Optimal capital structure can improve firm performance. The firm needs to determine the optimal capital structure. According to pecking order theory, firms prefer to use internal cash funds first in an optimal capital structure. The firms will issue securities if it requires external funding. The results of research conducted by Nugrajah (2013) and Mai and Setiawan (2020) found that capital structure has a positive effect on firm performance. Based on the results of these previous studies, the following hypotheses were formulated as follows:

H2b: Capital structure has a positive effect on the performance of family firms

**METHODS**

**Data description**

The type of data used is secondary data, quantitative data taken from the Indonesia Stock Exchange website. The population in this study are manufacturing firms listed on the Indonesia Stock Exchange from 2016 to 2019 were 170 firms. The sample taken in this study was using purposive sampling which was conducted by selecting samples with previously known population characteristics. Sample used 11 family firms and 30 non family firms.

**Dependent variable**

The dependent variable used in this study is the return on equity (ROE). The firm performance reflects how and how many financial resources are available to carry out the firm production activities. Firms show their performance through the firm’s annual financial reports. This study uses the calculation of return on equity using the ratio of net profit to total equity.

**Independent variable**

**Corporate governance**

The independent variables in this study follow the study of Henry (2010) for the proxies used. The proxy for corporate governance uses the size and composition of the board of directors and the percentage of independent commissioners. Size of the board of directors using the number of board of directors in the company. Then this study uses the ratio of number of independent commissioners to total board of commissioner to measuring independent commissioner variable.

**Capital structure**

Capital structure is measured by dividing total debt by total equity. Jensen and Meckling (1976) stated that debt is a mechanism to unite the interests of managers and shareholders. This study uses debt to equity ratio within the ratio between total debt to total equity.
Control variable

The control variable used in this study refers to research conducted by Vieira (2016). A control variable in the analysis used firm size that measured from the total asset of the sample firms. Another control variable is the age of the firm since it listed in the Indonesia Stock Exchange until the research period. The linear regression model used to test the research hypothesis is as follows:

Model 1
\[
\text{ROE}(\text{FF})_{i,t} = \beta_0 + \beta_1 \text{DIR}_{i,t} + \beta_2 \text{KOMIN}_{i,t} + \beta_3 \text{DER} + \beta_4 \text{SIZE}_{i,t} + \beta_5 \text{AGE}_{i,t} + \epsilon_{i,t}
\]

Model 2
\[
\text{ROE(NFF)}_{i,t} = \beta_0 + \beta_1 \text{DIR}_{i,t} + \beta_2 \text{KOMIN}_{i,t} + \beta_3 \text{DER} + \beta_4 \text{SIZE}_{i,t} + \beta_5 \text{AGE}_{i,t} + \epsilon_{i,t}
\]

In model 1 revealed that model ROE(FF)\text{i,t} was used to measure performance of family firms (i) in the period (t) that measured by return on equity proxy. Furthermore, model ROE(NFF)\text{i,t} that presented by model 2 expose to measure performance of non-family firms (i) in the period (t) that used return on equity proxy. Model from the study used several proxies to measure corporate governance, such as the board of directors of firms in period (i) used term DIR\text{i,t}, independent commissioner of company in period (i) used term KOMIN\text{i,t}, size of company in period (i) used term SIZE\text{i,t}, and the age of company in period (i) used AGE\text{i,t}.

Data analysis method

The study examines the effect of corporate governance, capital structure on firms performance. Based on the research objectives, the analytical method used is multiple linear regressions. The analysis procedure begins by cleaning the data from outliers and classical assumptions consisting of four assumptions: normality, multicollinearity, autocorrelation, linearity, and heteroscedasticity. To answer the hypothesis, multiple linear analysis was used by taking into account the F statistic, R squared, and the significance value.

Data analysis technique

Panel Data Regression Model Selection Test

In estimating the regression model with panel data. To estimate model parameters with panel data, there are three techniques (models) that are often used, as follows: (a) common effects models to estimates the parameter of the panel data model by combining cross-section and time series data as a single unit without looking at differences in time and entities (individual); (b) fixed effect model assumes the intercept from the differences of each individual while the slope between individuals are similar; and (c) random effect model that used in random effects its assumed that each firm has the difference intercept, whereas the intercept is a random or stochastic variable.

RESULTS AND DISCUSSION

Family firms

The descriptive statistical analysis results that shown at table 1 revealed that the maximum value of ROE was 0.279, and the minimum value was 0.011. The average value was 0.117 with a standard deviation of 0.068.

<table>
<thead>
<tr>
<th>Descriptions</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Max</th>
<th>Min</th>
<th>Std. dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE(%)</td>
<td>44</td>
<td>0.117</td>
<td>0.097</td>
<td>0.279</td>
<td>0.117</td>
<td>0.068</td>
</tr>
<tr>
<td>DIR\text{i,t}</td>
<td>44</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>1.570</td>
</tr>
<tr>
<td>KOMIN\text{i,t}</td>
<td>44</td>
<td>0.356</td>
<td>0.333</td>
<td>0.5</td>
<td>0.25</td>
<td>0.070</td>
</tr>
<tr>
<td>DER(%)</td>
<td>44</td>
<td>0.874</td>
<td>0.586</td>
<td>3.569</td>
<td>0.109</td>
<td>0.716</td>
</tr>
<tr>
<td>SIZE\text{i,t}</td>
<td>44</td>
<td>24.392</td>
<td>26.379</td>
<td>30.577</td>
<td>17.002</td>
<td>4.564</td>
</tr>
<tr>
<td>AGE\text{i,t}</td>
<td>44</td>
<td>25.5</td>
<td>27</td>
<td>37</td>
<td>6</td>
<td>6.708</td>
</tr>
</tbody>
</table>

Source: data processed (2021)
A classical assumption test is needed to test the hypothesis by using multiple regression analysis. Accordingly, the classical assumption tests included the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. To test the normality of the data, the Jarque-Bera Test (JB test) was applied. The test results show that the probability is 0.151 > 0.05. Based on these results, it can be stated that the data is normally distributed or the assumption of normality has been met.

Multicollinearity test is done by calculating the correlation coefficient of each variable. From the results, it can be concluded that there is no multicollinearity between the independent variables. A heteroscedasticity test was carried out using the White test. The results of White’s test show that the probability value is 0.153 > 0.05, so it can be concluded that the regression model used in this study does not contain heteroscedasticity disorders. The autocorrelation test was carried out by calculating the Durbin Watson value (DW Test). The test results show the DW value of 2.071, so it can be concluded that there is no autocorrelation in the regression model in this study.

Model selection test results

Based on the model test results, the Chow Test results were used, which compare the Common Effect with the Fixed Effect, obtained a chi-square probability value of 0.000 which means that the Chow Test prefers Fixed Effect as the best model. Furthermore, the Hausman Test model that compares the Fixed Effect with the Random Effect obtained a chi-square profitability value of 0.029, which means that the Hausman Test prefers Fixed Effect as the best model because the probability value is <0.05. Therefore, for this research, Fixed Effect is used as the appropriate model.

Hypothesis testing results

After all research variables were normally distributed and free from classical assumptions, which include multicollinearity, autocorrelation, and heteroscedasticity, the multiple linear regression testing stages can be carried out immediately.

Table 3.
<table>
<thead>
<tr>
<th>Descriptive statistics of research variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>CONSTANT A</td>
</tr>
<tr>
<td>DIR it</td>
</tr>
<tr>
<td>KOMIN it</td>
</tr>
<tr>
<td>DER</td>
</tr>
<tr>
<td>SIZE it</td>
</tr>
<tr>
<td>AGE it</td>
</tr>
</tbody>
</table>

Source: data processed (2021)
Table 4. Hypothesis testing results

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficient</th>
<th>Probability</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANTA</td>
<td>-3.142</td>
<td>0.079</td>
<td></td>
</tr>
<tr>
<td>DIR\textsuperscript{t}</td>
<td>-0.466</td>
<td>0.156</td>
<td>Not Significant</td>
</tr>
<tr>
<td>KOMIN\textsuperscript{t}</td>
<td>0.507</td>
<td>0.076</td>
<td>Not Significant</td>
</tr>
<tr>
<td>DER</td>
<td>0.397</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>SIZE\textsuperscript{t}</td>
<td>2.671</td>
<td>0.041</td>
<td>Significant</td>
</tr>
<tr>
<td>AGE\textsuperscript{t}</td>
<td>-0.617</td>
<td>0.005</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Source: data processed (2021)

From the table 2, the variables of the director boards number, independent commissioners, capital structure, firms size, and firms age have no effect on performance as proxied by return on equity (ROE). This result can be seen from the probability value > 0.05.

Non-family firms

Table 3 shown that The descriptive statistical analysis results for non-family firms show that the maximum value of ROE is 1.399, and the minimum value is 0.008. The average value is 0.211 with a standard deviation of 0.288.

Classic assumption test

To test the normality of non-family firms, the Jarque-Bera Test (JB test) was applied. The test results show that the probability is 0.118 > 0.05. Based on these results, it can be stated that the data is normally distributed or the assumption of normality has been met. Multicollinearity test is done by calculating the correlation coefficient of each variable. From the results, it can be concluded that there is no multicollinearity between the independent variables. A heteroscedasticity test was carried out using the White test. The results of White’s test show that the probability value was 0.277 > 0.05, the regression model used in this study does not have symptoms of heteroscedasticity. The autocorrelation test was carried out by calculating the Durbin Watson value (DW Test). The test results showed the DW value of 2.334. Therefore, there is no autocorrelation in the regression model in this study.

Model selection test results

Based on the results of the model test, the Chow Test results were used, which compare the Common Effect with the Fixed Effect, and obtained a chi-square probability value of 0.000. Furthermore, the Hausman Test model test was carried out, which compared the Fixed Effect with Random Effects. The chi-square probability value was obtained at 0.029, and the Hausman Test prefers Fixed Effect was suitable due to the probability value of<0.05. Therefore, for this study, Fixed Effect was used.

Hypothesis testing results

Table 4 revealed that the variable number of independent directors and commissioners has no effect on performance as proxied by return on equity (ROE). This result can be seen from the probability value > 0.05. Meanwhile, debt to equity ratio, firm size, and firms age have a positive and significant effect on return on equity.

Discussion

The effect of corporate governance on performance in family firms

Based on the results of testing hypothesis 1a, the regression coefficient for the number of the board of directors is -9.47E-05 with a probability of 0.9945. These results indicate a greater probability value of 0.5860 > alpha 0.05. From these results, it can be concluded that the number of directors has no effect on the performance of family firms. The results of this study are in line with the research of Buallay et al. (2017) and Putri (2020). The board of directors in a family firm has not
been able to improve the performance of the family company.

Hypothesis 1c obtained a regression coefficient for the independent commissioner variable of 0.051 with a probability of 0.834. From these results, it can be concluded that independent commissioners have no effect on the performance of family firms. The results of this study are in line with the research conducted by Dervish (2009). However, these results are not in line with research conducted by Putri (2020), Prasinta (2012), and Widyati (2013). The existence of independent commissioners in family firms has not been able to monitor the running of the firms so that supervision by independent commissioners in family firms has not been able to improve firms performance. An independent commissioner in a family firms is a formality. Therefore, the existence of independent commissioners in the family firms has not been able to carry out a good monitoring function. Independent commissioners do not use their independence to oversee the policies of directors in the firms.

Effect of capital structure on performance in family firms

The regression coefficient of the debt to equity ratio variable is 0.051 with a probability of 0.058. This indicates that the capital structure as proxied by the debt to equity ratio does not affect the performance of family firms, and it shows that the larger or smaller debt to equity ratio does not affect the volatility from the firm's financial performance. Thus, the debt to equity ratio does not affect the firm's financial performance. These results align with research conducted by Azis& Hartono (2017) and Fachrudin (2011).

The effect of firms size and firms age on performance in family firms

Based on the results of hypothesis testing, the regression coefficient for the firms size variable is -0.001 with a probability value of 0.8296. The probability value is 0.8296 > 0.05. These results indicate that the age of the firms does not affect the performance of family firms. This shows that whether or not the firms has been in existence for a long time does not affect the performance of the family firms.

The effect of corporate governance on performance in non-family firms

The regression coefficient for the number of boards of directors is -0.466, with a probability of 0.15. These results indicate a greater probability value of 0.586 > alpha 0.05. The number of directors has no effect on the performance of family firms. The results of this study are not in line with the results of research conducted by Widyati (2013). The number of the board of directors in the firms has not been able to improve the firms performance.

The results of the independent commissioner variable regression coefficient were 0.507 with a probability of 0.07. From these results, it can be concluded that independent commissioners have no effect on the performance of family firms. Independent commissioners in non-family firms have not been able to monitor the running of the company. Supervision carried out by independent commissioners has not been able to influence the behavior of managers in an effort to improve firms’ performance. The greater the independent commissioner, the supervision of the firm’s management has not been able to improve the firm’s financial performance. The results of this study are in line with the research conducted by Buallay et al. (2017).

Effect of capital structure on performance in non-family firms

The regression coefficient of the debt to equity ratio variable is 0.972 with a probability of 0.05. The probability value is 0.04 < 0.05. This indicates that the capital structure as proxied by the debt to equity ratio has a positive and significant effect on the performance of family firms. The higher the debt to the firms equity value indicates that the composition of the firm’s debt is higher than the composition of its capital owned. The higher the level of debt, the greater the burden of paying debt and
interest borne by the company. In line with the Trade-Off Theory, the firms will use the benefits of a tax reduction on the cost of debt in connection with the leverage of the capital structure. The use of non-family firms debt will be able to reduce the amount of taxes borne by the firms so that reducing the amount of taxes borne by family firms will increase the firms performance in terms of profitability. The results of this study are in line with research conducted by Nugraha (2013), Kristianti (2016), and Mai and Setiawan (2020).

The effect of firms size and firms age on performance in non-family firms

Based on the results of hypothesis testing, the regression coefficient for the firms size variable was 2.671, with a probability of 0.041. These results indicate that the size of the firms has a positive and significant effect on firms performance.

The regression coefficient for the firms age variable is -0.617, with a probability value of 0.005. The probability value is 0.829 > 0.05. These results indicate that the firms age has a negative and significant effect on the performance of family firms.

CONCLUSION

This study separates the sample into groups of family firms and non-family firms. Based on the results for the family firms, it was concluded that corporate governance as proxied by independent boards of directors and commissioners, capital structure proxied by debt to equity ratio, firms size, and firms age did not affect the performance of family firms. Meanwhile, for the group of non-family firms, the number of independent directors and commissioners does not affect the firms.

This research has several limitations including the year of observation and the variables used. Further research is suggested to be able to extend the research time so that the results obtained are more accurate. Researchers also use other proxies of the variables used that can improve the performance of family and non-family companies. This research is useful for practitioners in providing information related to company performance for family companies and non-family companies.

REFERENCES


