Management Science Letters 9 (2019) 2201-2214

Contents lists available at GrowingScience

Management Science Letters

homepage: www.GrowingScience.com/msl

Investment opportunity set, institutional ownership, family ownership and funding policy

Khoirul Hikmah^a, Tulus Haryono^b, Djuminah^b and Rifqi Syarif Nasrulloh^{a*}

^aFaculty of Economic and Business, Universitas Pembangunan Nasional "Veteran" Yogyakarta, Indonesia ^bUniversitas Negeri Sebelas Maret, Solo, Indonesia

| CHRONICLE | A B S T R A C T |
|--|---|
| Article history: Received: June 5 2019 Received in revised format: July 8 2019 Accepted: July 17, 2019 Available online: July 18, 2019 Keywords: Investment Opportunity Set Institutional Ownership Family Ownership Funding Policy | This study aims to examine and analyze the effect of the Investment Opportunity Set (IOS) on the corporation funding policies and also finds out whether or not the institutional ownership moderates the role of family ownership on IOS and company funding policies. The population includes all go-public companies listed on the IDX over the period 2008-2016. The sampling technique used was purposive sampling method. The processing data used regression equations with panel data models and Eviews analysis tools. The results show that IOS had a negative effect on the funding policies. This makes the company with a lower debt to equity ratio on its capital structure policy to use the equity financing to reduce the agency problems. Institutional ownership balances need to replace the role of debt in monitoring the managers and reducing the agency problems in the company. The family ownership does not moderate the influence of IOS on the funding policies to take opportunities for the personal interests and form a weak ownership structure so that the agency problems rises and disrupts the company performance. |
| | © 2010 by the authors: licensee Grouping Science, Canada |

1. Introduction

The global crisis that occurred in 2008 in the United States affected the economy in Indonesia. However, the Indonesian government only took it seriously when the IHSG di BEI felt sharply to 10.38% on October 8, 2008. The impact of the global economic crisis was felt by the middle and upper classes of society, especially those who play stocks, foreign exchange and gold investments (Rai, 2011). The global economic crisis has caused companies to be careful in carrying out the company policies, both investment policies and funding policies. Some studies that form the basis of research related to the company investment policy (IOS) include Vogt (1997) who shows the companies' growth will be responded positively by markets, Smith and Watts (1992) find opportunities for corporate growth in the investment opportunities proxied by various combinations IOS. Funding policies are influenced by several factors, including the managerial ownership, institutional ownership, dividend policy, profitability and growth of the company (Indahningrum & Handayani, 2009; Pithaloka, 2009; Yeniati & Nicken, 2010). The company is in a position of financial pressure which is influenced by the ownership structure of the company. The ownership structure explains how the owner's commitment save the company (Reilly & Brown, 2000). The perspective of efficiency contracting companies will look for a good contracting solution in the

* Corresponding author. E-mail address: rifqinymph@gmail.com (R.S. Nasrulloh)

© 2019 by the authors; licensee Growing Science, Canada doi: 10.5267/j.msl.2019.7.032

2202

implementation of a set of funding policies and accounting procedures that can be accepted by the management and shareholders (Skinner, 1993). Companies that have the opportunity to grow bigger have a lower debt to equity ratio in their capital structure policies because the equity financing tends to reduce the agency problems that are potentially associated with the existence of risky debt in their capital structure (Smith & Watts, 1986).

Company policy is also influenced by the company's goals in managing its investment opportunities (IOS) (Alnajjar & Riahi-belkaoui, 2001; Pagalung, 2003). IOS has a negative effect on the funding policies. It means that if the opportunity for the company growth (IOS) is high, the company's (debt) funding policy is low (Abbott, 2001; Barclay et al., 2006; Gaver & Gaver, 1993, 1995a; Jones & Sharma, 2001; Kallapur & Trombley, 1999; Myers & Turnbull, 1977; Smith & Watts, 1992; Watts & Zimmerman, 1990). While other studies state that IOS has a positive effect on funding policies, it means that if the opportunity to grow (IOS) is high, the company's (debt) funding policy is high (Ardestani et al., 2013a; Chen & Zhao, 2006; Hartono, 1999; Hikmah, 2004, 2008; Ho, Lam, & Sami, 2004; Khanqah et al., 2013; Purnamasari et al., 2009; Sami et al., 1999; Ratnawati, 2007). Because there are differences in the results of the study, the researchers suspect that there are other variables that affect the independent variable (IOS) on the dependent variable (funding policy).

Researchers developed the use of IOS proxy by using 5 variables; namely MVABVA, PER, CAPMVA, CAPBVA, and Tobin Q, and included the ownership structure moderation variables by using 2 variables which are the institutional ownership and family ownership. The ownership structure is used as a moderating variable because in the case of management there is not only a relationship between independent variables and dependent variables, but also there are other variables that influence the relations between variables (Ghozali, 2006). This study hopes that the results of different empirical tests (research) can be explained further by the other factors that moderate the relationship of these two factors and are expected to contribute to the science based on the agency theory approach where the ownership structure is one way to reduce the conflict that occurs between shareholders and managers.

2. Literature review and hypothesis development

The phenomenon of agency problems in Indonesia can be explained in an agency theory especially in the ownership structure. Shleifer and Vishny (1997) explain that a manager will control the company and the agency problems that exist between the shareholders and managers. This problem is called as Agency Problem I (Villalonga et al., 2015; Villalonga et al., 2006) or Type I Agency Costs (Bozec & Laurin, 2008). Then, the shareholders classify themselves as the controlling shareholders to oversee the managers, so that managers run the company in the best interests of the shareholders. However, the controlling shareholders ask the managers to make decisions that benefit themselves such as special dividend distribution. It is detrimental to the non-controlling shareholders. Therefore, the agency problems arise between the controlling shareholders and non-controlling shareholders which is called as the Agency Problem II (Villalonga & Amit, 2006, 2015) or Type II Agency Costs (Bozec & Laurin, 2008). The managers in running the companies need funds both from the company itself and from the outside parties / banks or debtholder.

In deciding the funding policies, the managers must think about the consequences that arise or risks that occur if the funding is obtained from the parties outside the company. If the funding comes from the debtholder, the agency problems will arise which occur between the shareholders and debtholders which is called Type III Agency Costs (Bozec & Laurin, 2008). Agency problems occur because the agents have a different purpose than the principal ones (Jensen & Meckling, 1976). The premise of the agency theory is that the agents are self-interested, risk averse, rational actors who always try less effort (moral hazard) and adverse selection. The agency theory seeks to solve two problems related to the agency problems, namely (1) monitoring problems that arise because the principal cannot prove whether the agent has behaved appropriately; (2) risk sharing problems, especially in the cases of the outcome control

that arise when the principals and agents behave differently regarding the risk (Eisenhardt, 1989). The funding policy is the way the companies in using the external funding facilities (debt) so that their use can minimize the amount of risk that must be borne by the company (Sartono, 2001). The increasing amount of debt for controlling agency conflict will increase the risk of bankruptcy and business risk (earnings volatility). This risk has an impact on the shareholders in the company, including the management who owns shares in the company because the stock prices fluctuate (Cruthley et al., 1989). The agency problems due to the corporate debt encourage the benefits for the managerial behavior including (1) Debt becomes an incentive tool for the managers to give the free cash flow (FCF) up to the shareholders to repay the debt obligations / reinvestments (Jensen, 1986), and (3) Debt plays a role in reducing the manager's incentives to carry out the excessive consumption (Megginson, 1997). The ownership structure is used to show that the variables that are important in the capital structure are not only determined by the amount of debt and equity but also determined by the percentage of share ownership by the inside shareholders and outside shareholders (Jensen & Meckling, 1976).

The problem that occurs in a concentrated ownership structure is that the majority shareholders tend to be less diversified so that they must be willing to take the big risks (Demsetz & Lehn, 1985). Brous and Kini (1994) state that the tight supervision carried out by institutional investors depends on the amount of investment made. Bathala et al. (1994) found that the institutional ownership can replace the management decisions in controlling the agency cost. Andres (2011) classifies the family companies as companies whose shares are at least 25% owned by a particular family or whose family members have positions on the board of directors or board of commissioners of the company if it is less than 25%, while the research of Setiawan et al. (2016) classifies the family companies as companies whose shares are at least 20% owned by certain families.

Myers and Majluf (1984) reported a study of the capital formation (pecking order) sequence and Jensen and Meckling (1976) regards the agency issues regarding to the free cash flow. Both theories raise the same issue that the managers prefer to use internal capital to finance investments, but both theories have opposite explanations. Siallagan and Machfoedz (2006) state that leverage can reduce the conflicts of interest between the managers and lenders (bondholders). Fama and French (2002) find that there is a negative relationship between the profits and corporate debt, namely companies that use profitable debtless and there is a positive relationship between IOS and company debt where when the company has a large IOS, the debt used is large. Khanqah et al. (2013) show that IOS has a positive influence on the funding policies in both poor economic conditions and good economic conditions. Based on previous research, hypothesis 1 is as follows:

H1: IOS has a negative effect on the company funding policies.

The increased share ownership by institutional ownership can offset the need for the debt use. This means that the institutional ownership can replace the role of debt in monitoring the managers and reducing the agency problems in the company. It shows that the institutional investors have greater authority than the shareholders to choose projects that are riskier by gaining high profits (Susilawati et al., 2012). So, hypothesis 2 is as follows:

H₂: The institutional ownership structures moderate the influence of IOS on corporate funding policies.

Large family share ownership has a negative influence on the company performance. It happens because the family tends to take personal benefits from the company. The more value the shares are invested, the easier it is to control the company (Cucculelli & Micucci, 2008). Anderson et al. (2003) also found it, because the legal protection of the investors in ownership structures is weak so that the agency problems arise that can disrupt the company's performance. According to La Porta et al. (1999), the family ownership is defined as the ownership of individuals and ownership of closed companies (above 5%), which are not public, state, or financial institutions. So that hypothesis 3 can be drawn as follows:

H3: Family ownership moderates the influence of IOS through dept to equity ratio.

3. Research method

3.1 Population and sample

The population in this study were all go public companies listed on the Indonesia Stock Exchange (IDX) from 2008 to 2016. The samples were conducted based on a purposive sampling method. The data sourced from the annual financial reports published on the Indonesia Stock Exchange, obtained from Indonesian Capital Market Directory and annual report for 2008-2016.

3.2. Operational definition

Debt is another mechanism that can be used to reduce or control the agency conflict. According to Kallapur & Trombley (1999); Sartono (2001); Smith & Watts (1992) funding policy is measured by the formula of DER / Debt to equity Ratio = Total Debt / Total Equity. Investment Opportunity Set (IOS) can be measured by using several proxies. There are 5 proxies used in this study, namely MVABVA, PER, CAPMVA, CAPBVA, and Tobin's Q. Here is a table of variables to form an IOS proxy:

Table 1

Variables to form IOS proxy

| No | IOS proxy | Measurement | Researcher |
|----|---|--|--|
| 1 | Market Value Asset to Book value of assets (MVABVA) | MVABVA = [total assets – total equity + Number of shares outstanding x Stock closing price] : Total assets | (Abbott, 2001; Adam & Goyal, 2003; Alnajjar & Riahi-belkaoui, 2001; Anam, Arfan, & Shabri, 2016; Baker, 1993; Cahan & Hossain, 1996; S. S. Chen, Chung, & Chung, 2001; Nisa et al., 2017; Fama & French, 2015; Giriati, 2016; Gul & Kealey, 1999; Ho et al., 2004; Jones & Sharma, 2001; Kallapur & Trombley, 1999; Mira, T. dan Ho, 2002; Pratiwi dan Dewi, 2012; Putra & Subowo, 2016; Rosdini, 2011; Sami, Heibatollah & Lam, 1999; Skinner, 1993; Smith & Watts, 1992; Yusuf & Firdauz, 2005; Akhtaruddin & Hossian (2008) |
| 2 | Earnings to price ratios (PER) | PER = [Stock closing price per share : Earnings per share (EPS)] | (Adam & Goyal, 2003; Alnajjar & Riahi-belkaoui, 2001; Cahan & Hossain, 1996; Chung & Charoenwong, 1991; Gaver & Gaver, 1993, 1995; Gul & Kealey, 1999; Hartono, 1999; Hossain, Cahan, & Adams, 2000; Jones & Sharma, 2001; Kallapur & Trombley, 1999; Pratiwi dan Dewi, 2012; Rosdini, 2011; Sami, Heibatollah & Lam, 1999; Skinner, 1993; Smith & Watts, 1992; Yusuf dan Firdauz, 2005; Akhtaruddin & Hossian, 2008; Khangah et al., 2013) |
| 3 | Ratio capital expenditure to market of assets (CAPMVA) | (Book value of fixed assets _t - Book value of fixed as- sets _{t-1}): [Total Asset - Total Equity + (Number of shares outstanding x Stock closing price)] | (Jones & Sharma, 2001; Yusuf & Firdauz, 2005) |
| 4 | Ratio of capital expendi- ture to book value of as- sets (CAPBVA) | [Book value of fixed assets _t - Book value of fixed as- sets _{t-1}] : [Total assets] | (Jones & Sharma, 2001; Adam & Goyal, 2003; Murwaningsari & Rachmawati, 2017; Novianti & Simu, 2016; Yusuf & Firdauz, 2005) |
| 5 | Tobin's Q (TOBIN'Q) | {[Number of shares out- standing × Stock closing price] + Total debt + stock] - Amount of current assets } / total assets | (Chung & Charoenwong, 1991; Kallapur & Trombley, 1999; Narayanan & Uzmanoglu, 2018; Skinner, 1993; Yusuf & Firdauz, 2005; Ardestani et al., 2013b) |

2204

The institutional ownership variable as a dummy is represented by numbers 0 and 1. Number 0 indicates that the company does not have any institutional ownership while number 1 indicates that the company has an institutional ownership. Likewise, for family ownership variables, 0 indicates that the company does not have a minimum family ownership of 20% while 1 shows the company has a minimum family ownership of 20% (Anderson et al., 2003; Andres, 2011; Claessens et al., 2000; La Porta et al., 1999; Setiawan et al., 2016).

3.3. Factor Analysis (Confirmatory Factor Analysis)

Factor analysis is used to form a joint proxy of five single proxy investment opportunity sets. The purpose of factor analysis is to define the structure of a matrix of data and analyze the relationship (correlation) between a number of variables. The factor analysis stages are KMO and Bartlett's Test of Sphericity, Communalities, Extraction, and Rotation (Hair et al., 1998).

3.4. Hypothesis testing

The hypothesis model in this study used a regression model used by Keasey and McGuinness (1992) and Keasey and Short (1997). The testing hypothesis 1 used a regression model with panel data with a regression equation:

$$DER_{it} = a + \beta_I IOS_{it} + e_{it} \,. \tag{1}$$

To test hypotheses 2 and 3, a regression equation can be performed with the panel data model as follows:

$$DER_{it} = a + \beta_1 IOS_{it} + \beta_2 KEP INST_{it} + \beta_3 IOS_{it} * KEP INST_{it} + e_{it,}$$
(2)
$$DER_{it} = a + \beta_1 IOS_{it} + \beta_2 KEP KLRG_{it} + \beta_3 IOS_{it} * KEP KLRG_{it} + e_{it.}$$
(3)

3.4. Panel data regression model testing

There are three tests to determine the most appropriate technique for estimating the panel data regression, namely: The F statistical test is used to choose between the PLS method (common) and the Fixed Effect technique. Both Lagrange Multiplier (LM) tests are used to choose between PLS (common) techniques and Random Effect techniques. The last to choose between the Fixed Effect or Random Effect techniques is the Hausmann Test (Gujarati, 2012; Widarjono, 2009).

4. Results

In this study, the purposive sampling method was used and 216 companies went public per year which were listed on the Indonesia Stock Exchange (IDX) in 2008 to 2016. With a sample of 216 companies per year, the data collected showed that each company had a number of observations that are not the same and it is characteristic of panel data that is not balanced (Gujarati, 2012).

4.1. IOS Factor Analysis

The main objective of the factor analysis is to define the structure of a matrix of data and analyze the interrelated structure of relationships (correlation) between a large number of variables by defining a set of similarities of variables or dimensions. There are 4 stages in factor analysis:

4.2. KMO and Bartlett's test of Sphericity

Based on the factor analysis in Table 2, it can be seen that the KMO value is 0.501 and Bartlett's test is 831.194 with a significance level of 0.000. Because the number is above 0.5 and the level of significance is far below 0.05 (0.000 < 0.05), the variables and samples variable can be further analyzed.

Table 2

| Results of Factor Analysis | | |
|----------------------------|---------|--|
| Factor Analysis | Value | |
| KMO MSA | 0.501 | |
| BTS Chi Square | 831.194 | |
| df | 28 | |
| Sig | 0.000 | |
| Variable | MSA | |
| MVABVA | 0.501 | |
| PER | 0.520 | |
| CAPBVA | 0.484 | |
| CAPMVA | 0.479 | |
| TOBIN'O | 0.500 | |

MVABVA = Market Value Asset to Book Value of Assets, PER = Price Earnings Ratio, CAPBVA = Ratio of capital expenditure to book value of assets, CAPMVA = Ratio capital expenditure to market of assets, Tobin's Q (TOBIN'Q)

4.3. Communalities

Based on Table 3, the communal values range from 0.000 to 0.807. The results show that only the MVABVA variable has high communality so that the variable reflects IOS.

Table 3

Communalities (Extraction Method Principal Component Analysis)

| | Initial | Extraction |
|---------|---------|------------|
| MVABVA | 1.000 | .805 |
| PER | 1.000 | .001 |
| CAPBVA | 1.000 | .000 |
| CAPBVE | 1.000 | .001 |
| TOBIN'Q | 1.000 | .008 |

MVABVA = Market Value Asset to Book Value of Assets, PER = Price Earning Ratio, CAPBVA = Ratio of capital expenditure to book value of assets, CAPMVA = Ratio of capital expenditure to market of assets, Tobin's Q (TOBIN'Q)

4.4. Extraction

Based on Table 4, the extraction factor produces 4 factors that can be used. Factor 1 has an eigenvalues value of 1.638, with a variance of 20.476%; factor 2 has eigenvalues value of 1.194 with variance of 14.921%, factor 3 has eigenvalues value of 1.082 with variance of 13.530%, and factor 4 has eigenvalues value of 1.010 with variance of 12.629%, so that all factors have a variance value of 61.556% of the total variance.

Table 4

Total Variance Explained

| Component | | Initial Eigenvalues | | Extra | ction Sums of Square L | oading |
|-----------|-------|---------------------|--------------|-------|------------------------|--------------|
| _ | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.638 | 20.476 | 20.476 | 1.638 | 20.476 | 20.476 |
| 2 | 1.194 | 14.921 | 35.398 | | | |
| 3 | 1.082 | 13.530 | 48.927 | | | |
| 4 | 1.010 | 12.629 | 61.556 | | | |
| 5 | .992 | 12.405 | 73.961 | | | |
| 6 | .907 | 11.342 | 85.303 | | | |
| 7 | .805 | 10.065 | 95.369 | | | |
| 8 | .371 | 4.631 | 100.000 | | | |

4.5. Rotation

The results of testing Table 5 show that the MVABVA variable is an IOS factor constructor variable with the greatest value of 0.897.

2206

Table 5Results of Matrix Component Factor Analysis

| | Component |
|---------|-----------|
| MVABVA | .897 |
| PER | 038 |
| CAPBVA | 019 |
| CAPBVE | .033 |
| TOBIN'Q | 087 |

Extraction Method Principal Component Analysis

MVABVA = Market Value Asset to Book Value of Assets, PER = Price Earning Ratio, CAPBVA = Ratio of capital expenditure to book value of assets, CAPMVA = Ratio of capital expenditure to market of assets, Tobin's Q (TOBIN'Q)

4.6. Hypothesis Testing 1 IOS Influence on Funding Policies

Table 6 shows that MVABVA in the Chow Test shows significant results, but the Hausman Test shows insignificant results, so the fixed technique is the most appropriate technique. The fixed MVABVA technique has a value of -0.092 with a significance level of 0.001 smaller than α (0.01). It shows that IOS (MVABVA) has a negative effect on the funding policy (DER) is proven.

Table 6

IOS Influence (MVABVA) on DER

| Chow Test | 40.784*** |
|--------------|-----------|
| | (-2.971) |
| Hausman Test | 0.198 |
| | (-0.091) |
| Fixed Effect | -0.092*** |
| | (-3.191) |
| | |

Source: Regression analysis

4.7. Testing Hypothesis 2 and Hypothesis 3 IOS Influence (MVABVA) and ownership structure on funding policy (DER)

Based on Table 7 it can be seen that the Chow Test (LM Test) and Hausman Test both on institutional ownership and family ownership yield significant results.

Table 7

| IOS Influence | MVABVA |) and share | ownershi | p on DER |
|---------------|--------|--------------|----------|------------|
| 105 mmaenee (| | , and binare | o merom | p on D Dit |

| | MVABVA | MVABVA |
|-----------------------|-------------------------|---------------------|
| | Institutional Ownership | Family Ownership |
| Chow Test | 43.890*** | 48.228*** |
| Hausman Test | 42.758*** | 9.338** |
| Random Effect | | |
| Constant | 2.329*** (5.328) | 2.330*** (5.173) |
| MVABVA | -0.107*** (-3.196) | -0.108**** (-3.040) |
| Institutional | 0.264* (1.932) | |
| Family | | 0.092 (1.324) |
| MVABVA× Institutional | -0.087 (-6.636) | |
| MVABVA× Family | | 0.030 (1.389) |
| R-Square | 0.034 | 0.010 |
| Adjusted R-Square | 0.032 | 0.008 |
| F-statistics | 16.920 (0.000) | 4.934 (0.002) |

Source: Regression analysis

It means that the random technique is the right technique. The effect of the MVABVA variable and institutional ownership variables on DER shows that F account of 16.920 with a significance level of

0.00 that is smaller than α (0.05), it means that IOS (MVABVA) and institutional ownership simultaneously have a significant effect on DER. Partially IOS (MVABVA) has a negative and significant effect on DER, while the institutional ownership has a significant effect on DER at $\alpha = 10\%$. It shows that Hypothesis 2 of the Institutional ownership moderates the influence of IOS (MVABVA) is proven DER. The effect of MVABVA variable and family ownership variable on DER shows F account of 4.94 with a significance level of 0.002 is smaller than α (0.05), which means that IOS (MVABVA) and family share ownership simultaneously have a significant effect on DER. Partially, only IOS (MVABVA) has a significant effect on DER. It shows that hypothesis 3 of Family ownership moderates the influence of IOS (MVABVA) on DER is not proven.

5. Analysis

The results of hypothesis 1 research show that the Investment Opportunity Set / IOS (MVABVA) has a negative and significant effect on the funding policy so that hypothesis 1 is proven. Consistently with the predictions of the contracting theory which implies that companies that have the option to grow larger will have less debt because the company prioritizes solutions to the problems related to its debt (Barclay et al., 2006). The results of hypothesis 2 research show that the institutional ownership moderates the effect of IOS (MVABVA) on DER so that the formulation of hypothesis 2 is proven. The institutional ownership is able to moderate the influence of IOS on the funding policies because the presence of ownership by institutional investors will encourage an increase in more optimal supervision of management performance (Indahningrum & Handayani, 2009; Murni, 2007). Bathala et al. (1994) find that the institutional ownership can replace the management decisions in controlling the agency cost. The greater the institutional ownership, the greater the power of voice to oversee the management so that it gives a big boost to optimize the value of the company then it improves the management performance. Therefore, the institutional ownership can reduce agency cost because the existence of effective monitoring by the institutional parties causes the use of debt to decrease (Cruthley et al., 1989). In addition, Tehranian et al., (2006) suggest that these supervisory actions can encourage management to give more attention on the company performance, thereby reducing the opportunistic behavior or selfish behavior.

The results of hypothesis 3 study show that the family ownership does not moderate the influence of IOS (MVABVA) on DER so that the formulation of hypothesis 3 is not proven. The family ownership in Indonesia that does not moderate the influence of IOS on the funding policy is possible because the share ownership in Indonesia tends to be owned by the owner, founder or offspring. Therefore, when a company carries out its investment policies and funding policies, the family-owned companies tend to avoid things that are risky. Since the family-owned companies do not want to bear big risks related to the business they run, they prefer activities that have a small or low risk.

6. Discussion

This study finds that the Investment Opportunity Set / IOS (MVABVA) has a negative and significant effect on the funding policy. The results of this study consistently support previous studies (Abbott, 2001; Barclay et al., 2006; Gaver & Gaver, 1993, 1995; Gul & Kealey, 1999; Jones & Sharma, 2001; Kallapur & Trombley, 1999; Myers & Turnbull, 1977; Saputro, 2003; Smith & Watts, 1992; Watts & Zimmerman, 1990). It shows that IOS has a negative effect on the funding policies and means that if the opportunity for growth (IOS) of the company is high, the company's funding (debt) policy is low. However, this study does not support the other findings in the lierature (Ardestani et al., 2013a; Chen & Zhao, 2006; Hartono, 1999; Hikmah, 2004, 2008; Ho et al., 2004; Khanqah et al., 2013; López-Iturriaga & Crisóstomo, 2007; Purnamasari et al., 2009; Rosdini, 2011; Sami et al., 1999; Tri Ratnawati, 2007) because their research results in IOS had a positive effect on the funding policies.

The results of this study still indicate a difference because the companies that have the opportunity to grow bigger have a lower debt to equity ratio in their capital structure policies. The companies that use

. . . .

2209

equity capital are able to reduce the agency problems that are potentially associated with the existence of debt at risk in their capital structure (Smith & Watts, 1992). The findings of Smith and Watts (1992) are followed up by Gaver and Gaver (1993) by conducting a research in two ways. First, it uses a specific company, that is towards industrial level companies. Second, it uses a variety of growth measurements, including the frequency of stock investments made by the growing stock mutual funds, and it identifies one IOS measurement by using factor analysis.

In addition, the company management's behavior in taking policies to respond to the economic conditions that occur results in different findings of several studies. It shows that the investment policies and funding policies carried out by each company in the country and different economic conditions will produce different influences. According to Arifin (2003) the difference is likely due to the differences in the level of asymmetric information between the companies in the United States and the companies going public in Indonesia. Therefore, there are still opportunities for further research to develop a research with different variables, objects and years and economic conditions.

The results of Hypothesis 2 show that the institutional ownership moderates the influence of IOS (MVABVA) on DER. The results of this study consistently support previous studies (Bathala et al., 1994; Brous & Kini, 1994; Cruthley et al., 1989; Indahningrum & Handayani, 2009; Megginson, 1997; Mitton, 2002; Pithaloka, 2009; Susilawati et al., 2012; Tarjo, 2008; Tehranian et al., 2006; Yeniati. & Nicken, 2010). The other studies (Junaidi, 2006; Listyani, 2003; Masdupi, 2005; Wahidahwati, 2002; Yeniati & Nicken, 2010) find the institutional ownership has a negative effect on the funding policies. Whereas the studies of Indahningrum and Handayani (20090 and Murni (2007) show that the institutional ownership has a positive and significant influence on the funding policies.

Shleifer and Vishny (1986) state that the majority shareholders can overcome the agency problems came from the separation of control and ownership through a better supervision and takeover bids. The institutional ownership is able to moderate the influence of IOS on the funding policies because the ownership by the institutional investors will encourage increased optimal supervision of the management performance. Brous and Kini (1994) states that the tight supervision of the institutional investors depends on the amount of the investment made. Bathala et al. (1994) find that the institutional ownership can replace the management decisions in controlling the agency cost. The greater the institutional ownership, the greater the power to oversee the management and be able to optimize the value of the company so it improves the management performance. Cruthley et al. (1989) suggest that the institutional ownership can reduce the agency cost because the effective institutional monitoring decreases the use of debt. It is due to the role of debt as one of the monitoring tools that has been taken over by the institutional ownership. The third hypothesis shows that the family ownership does not moderate the influence of IOS (MVABVA) on DER. The results of this study consistently support the previous studies (Anderson et al., 2003; Claessens et al., 2000; Cucculelli & Micucci, 2008; La Porta et al., 1999; Setiawan et al., 2016). The research of Chen and Zhao (2006) in some companies in Hong Kong shows that there is no positive relationship between the family ownership and the return on assets, return on equity or market-to-book ratio. While Claessens et al. (2000) show that there was a negative influence of family ownership on the performance of companies in Asia, including Indonesia. The family ownership in Indonesia that does not moderate the influence of IOS on the funding policy is possible because the share ownership in Indonesia tends to be owned by the owner, founder or offspring. Therefore, when the companies carry out the investment policies and funding policies, the companies owned by families tend to avoid things that are risky. Since the family-owned companies do not want to bear big risks related to the business they run, they prefer activities that have small or low risk. Cucculelli and Micucci (2008) find that large family shareholdings have a negative influence on the company performance. It happens because the family tends to take personal benefits from the company. The more value of the shares invested, the easier it is to control the company. Anderson et al. (2003) find that the family ownership negatively affects the company's financial performance due to the legal protection of investors in a weak ownership structure resulting in the agency problems that could disrupt the company's performance.

7. Conclusion

Based on the results of the study, it can be concluded that IOS (MVABVA) which has a negative effect on the company's funding policy is proven. It makes a company that has a lower debt to equity ratio in its capital structure policy because of using equity financing can reduce the agency problems. The institutional ownership moderates the influence of IOS (MVABVA) on DER, the institutional ownership offsets the need for debt use so that it can replace the role of debt in monitoring the managers and reducing the agency problems in the company. The family ownership does not moderate the influence of IOS (MVABVA) on DER because the family ownership tends to take opportunities for the personal interests and form a weak ownership structures so that the agency problems arise that can disrupt the company performance.

References

- Abbott, L. J. (2001). Financing, dividend and compensation policies subsequent to a shift in the investment opportunity set. *Managerial Finance*, 27(3), 31-47.
- Adam, T., & Goyal, V. K. (2008). The investment opportunity set and its proxy variables. *Journal of Financial Research*, 31(1), 41-63.
- Akhtaruddin, M., & Hossian, M. (2008). The influence of investment opportunity set and corporate governance to earnings quality and firm value. *Journal of Administration and Governance*, 3(2), 25–35.
- Alnajjar, F. K., & Riahi-belkaoui, A. (2001). Empirical validation of a general model of growth opportunities. *Managerial Finance*, 27(3), 72–90.
- Anam, B. S., Arfan, M., & Shabri, M. (2016). Pengaruh Profitabilitas dan Set Kesempatan Investasi terhadap Kebijakan Dividen Tunai pada Perusahaan Manufaktur di Indonesia. Jurnal Administrasi Akuntansi: Program Pascasarjana Unsyiah, 5(3).
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2003). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68(2), 263–285.
- Andres, C. (2011). Family ownership, financing constraints and investment decisions. *Applied Financial Economics*, 21(22), 1641-1659.
- Ardestani, H. S., Rasid, S. Z. A., & Mehri, R. B. M. (2013a). Dividend payout policy, investment opportunity set and corporate financing in the industrial products sector of Malaysia. *Journal of applied finance and banking*, 3(1), 123.
- Ardestani, H. S., Rasid, S. Z. A., Basiruddin, R., & Mehri, M. (2013b). Dividend Payout Policy, Investment Opportunity Set and Corporate Financing in the Industrial Products Sector of Malasyia. *Journal* of Applied Finance & Banking, 3(1), 123–136.
- Baker, G. P. (1993). Growth, corporate policies, and the investment opportunity set. *Journal of Accounting and Economics*, 16(1–3), 161–165.
- Barclay, M. J., Clifford W. Smith, J., & Morellec, E. (2006). On the debt capacity of growth options. The *Journal of Business*, 79(1), 37–60.
- Bathala, C. T., Moon, K. P., & Rao, R. P. (1994). Managerial ownership, debt policy, and the impact of institutional holdings: An agency perspective. *Financial Management*, 23(3), 38–50.
- Bozec, Y., & Laurin, C. (2008). Large shareholder entrenchment and performance: Empirical evidence from Canada. *Journal of Business Finance & Accounting*, 35(1–2), 25–49.
- Brous, P., & Kini, O. (1994). The valuation effects of equity issues and the level of institutional ownership: Evidence from analysts' earnings forecasts. *Financial Management*, 23(1), 33–46.
- Cahan, S. F., & Hossain, M. (1996). The investment opportunity set and disclosure policy choice: Some Malaysian evidence. Asia Pacific Journal of Management, 13(1), 65–85.
- Chen, L., & Zhao, X. (2006). On the relation between the market-to-book ratio, growth opportunity, and leverage ratio. *Finance Research Letters*, *3*(4), 253-266.
- Chen, S. S., Chung, T. Y., & Chung, L. I. (2001). Investment opportunities, free cash flow and stock valuation effects of corporate investments: The case of Taiwanese investments in China. *Review of Quantitative Finance and Accounting*, 16(4), 299–310.

- Chung, K. H., & Charoenwong, C. (1991). Investment options, assets in place, and the risk of stocks. *Financial Management*, 20(3), 21–33.
- Claessens, S., Djankov, S., & Lang, L. H. P. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1–2), 81–112.
- Cruthley, Claire, E., and Robert, S. (1989). A test of the agency theory of managerial ownership, corporate leverage, and corporate dividends. *Financial Management*, 18, 36–46.
- Cucculelli, M., & Micucci, G. (2008). Family succession and firm performance: Evidence from Italian family firms. *Journal of Corporate Finance*, 14(1), 17–31.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. Journal of Political Economy, 93(6), 1155–1177.
- Nisa, K., Arfan, M., & Saputra, M. (2018). Influence of Investment Opportunity Set, Financial Leverage, and Voluntary Disclosure on Real Activities Manipulation of Manufacturing Companies Listed on Indonesia Stock Exchange. *International Journal of Academic Research in Business and Social Sciences*, 8(4), 553-565.
- Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, 15(1), 1–33.
- Fama, E. F., & French, K. R. (2015). Incremental variables and the investment opportunity set. *Journal* of *Financial Economics*, 117(3), 470–488.
- Gaver, J. J., & Gaver, K. M. (1993). Additional evidence on the association between the investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Accounting and economics*, 16(1-3), 125-160.
- Gaver, J. J., & Gaver, K. M. (1995). Compensation policy and the investment opportunity set. *Financial Management*, 24(1), 19–32.
- Ghozali, I. (2006). Aplikasi analisis multivariate dengan program SPSS. Badan Penerbit Universitas Diponegoro.
- Giriati (2016). Free cash flow, dividend policy, investment opportunity set, opportunistic behavior and firm's vValue: (A study about agency theory). *Procedia Social and Behavioral Sciences, 219*, 248-254.
- Grossman, S. J., & Hart, O. D. (1986). The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy*, 94(4), 691–719.
- Gujarati, D. N. (2012). Basic Econometrics (5th ed.). New York: Tata McGraw-Hill Education.
- Gul, F. A., & Kealey, B. T. (1999). Chaebol, investment opportunity set and corporate debt and dividend policies of Korean companies. *Review of Quantitative Finance and Accounting*, 13(4), 401–416.
- Hair, J. F., Rolph E. Anderson, R. L. T., & Black, W. C. (1998). Multivariate Data Analysis; With Reading (5th ed.). McMillan Publishing Company.
- Hartono, J. (1999). An Agency-Cost Explanation for Dividend Payments. Yogyakarta: Universitas Gadjah Mada.
- Hikmah, K. (2004). *Hubungan Investment Opportunity Set terhadap kebijakan pendanaan, dividen dan kompensasi*(Doctoral dissertation, Universitas Gadjah Mada).
- Hikmah, K. (2008). Pengaruh Investment Opportunity Set Terhadap Kebijakan Pendanaan dan Dividen Dengan Free Cash Flow Sebagai Variabel Kontrol (pp. 517–544). Yogyakarta: FE UPN"Veteran" Yogyakarta.
- Ho, S. S. M., Lam, K. C. K., & Sami, H. (2004). The investment opportunity set, director ownership, and corporate policies: Evidence from an emerging market. *Journal of Corporate Finance*, 10(3), 383– 408.
- Hossain, M., Cahan, S. F., & Adams, M. B. (2000). *The Investment Opportunity Set and the Voluntary Use of Outside Directors: New Zealand Evidence.*
- Indahningrum, R. P., & Handayani, R. (2009). Pengaruh kepemilikan manajerial, kepemilikan institusional, dividen, pertumbuhan perusahaan, free cash flow dan profitabilitas terhadap kebijakan hutang perusahaan. *Jurnal Bisnis dan Akuntansi*, 11(3), 189-207.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323–329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.

- Jones, S., & Sharma, R. (2001). The association between the investment opportunity set and corporate financing and dividend decisions: Some Australian evidence. *Managerial Finance*, 27(3), 48–64.
- Junaidi. (2006). Pengaruh Kepemilikan Manajerial dan Kepemilikan Institusional terhadap Kebijakan pendanaan Perusahaan: Sebuah Perspektif Agency Theory dengan Variabel Kontrol Dividend Payout Ratio, Ukuran Perusahaan, Aset Structure dan Risiko Bisnis (Studi pada Perusahaan yang Go Publik di Bursa Efek Jakarta). Jurnal Ilmiah Bidang Manajemen dan Akuntansi, 3(2), 214-228
- Kallapur, S., & Trombley, M. A. (1999). The association between investment opportunity set proxies and realized growth. *Journal of Business Finance and Accounting*, 26(3–4), 505–519.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. Academy of Management Review, 14(1), 57-74.
- Keasey, K., & McGuinness, P. (1992). An empirical investigation of the role of signalling in the valuation of unseasoned equity issues. *Accounting and Business Research*, 22(86), 133-142.
- Keasey, K., & Short, H. (1997). Equity retention and initial public offerings: the influence of signalling and entrenchment effects. *Applied Financial Economics*, 7(1), 75-85.
- Khanqah, Vahid T., & Ahmadnia, L. (2013). The relationship between investment decisions and financing decisions: Iran evidence. *Basic and Applied Scientific Research*, 3(3), 144–150.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517.
- Listyani, T. T. (2003). Kepemilikan Manajerial, Kebijakan pendanaan, dan Pengaruhnya terhadap Kepemilikan Saham Institusional (Studi pada Perusahaan Manufaktur di Bursa Efek Jakarta). Jurnal Manajemen, Akuntansi dan Sistem Informasi, 9, 98–114.
- López-Iturriaga, F. J., & Crisóstomo, V. L. (2010). Financial decisions, ownership structure and growth opportunities: An analysis of Brazilian firms. *Emerging Markets Finance and Trade, 46*(3).
- Masdupi, E. (2005). Analisis Dampak Struktur Kepemilikan pada Kebijakan pendanaan dalam Mengontrol Konflik Keagenan. Jurnal Ekonomi Dan Bisnis Indonesia, 20(1), 57–69.
- Megginson, W. L. (1997). Corporate finance theory. Reading, Mass.: Addison-Wesley.
- Mira, T., Yap, C. M., & Ho, Y. K. (2002). The impact of firm size, concentration and financial leverage on the effectiveness of R&D investment in generating growth opportunities for firm. Working paper.
- Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics*, 64(2), 215–241.
- Murni, S., & Andriana, A. (2012). Pengaruh Insider Ownership, Institutional Investor, Dividend Payments, dan Firm Growth terhadap Kebijakan Hutang Perusahaan (Studi Kasus pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Jakarta). Jurnal Akuntansi dan Bisnis, 7(1).
- Murwaningsari, E., & Rachmawati, S. (2017). The influence of capital intensity and investment opportunity set toward conservatism with managerial ownership as moderating variable. *Journal of Advanced Management Science*, 5(6), 445–451.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13(2), 187-221.
- Myers, S. C., & Turnbull, S. M. (1977). Capital budgeting and the capital asset pricing model: Good news and bad news. *The Journal of Finance*, 32(2), 321–333.
- Narayanan, R., & Uzmanoglu, C. (2018). Credit default swaps and firm value. *Journal of Financial and Quantitative Analysis*, 53(3), 1–33.
- Novianti, A., & Simu, N. (2016). Kebijakan Hutang, Kebijakan Dividen, Dan Profitabilitas, Serta Dampaknya Terhadap Investment Opportunity Set (IOS). *Jurnal Manajemen Teori dan Terapan Journal of Theory and Applied Management*, 9(1).
- Pagalung, G. (2003). Pengaruh Kombinasi Keunggulan dan Keterbatasan Perusahaan terhadap Set Kesempatan Investasi (IOS). *The Indonesian Journal of Accounting Research*, 6(3).
- Pratiwi, M. W. (2016). Pengaruh Ukuran Perusahaan Terhadap Reaksi Pasar Yang Dimoderasi Investment Opportunity Set. *Media Ekonomi dan Manajemen, 25*(1), 58–71.

- Purnamasari, L., Kurniawati, S. L., & Silvi, M. (2009). Interdependensi Antara Keputusan Investasi, Keputusan Pendanaan dan Keputusan Dividen. Jurnal Keuangan Dan Perbankan, 13(1), 106– 119.
- Putra, N. Y., & Subowo. (2016). The effect of accounting conservatism, investment opportunity set, leverage and company size on earnings quality. *Accounting Analysis Journal*, 5(4), 299–306.
- Rai, A. (2011). Dampak Perekonomian Indonesia Pasca Krisis Ekonomi Global. Working Paper.
- Reilly, F. K., & dan Brown, K. C. (2000). *Investment Analysis and Portofolio Management*. (T. D. Press, Ed.) (6th ed.). New York: Harcourt College Publisher.
- Rosdini, D. (2011). The influence of investment opportunity set and corporate governance to earnings quality and firm value. *In World Business and Economics research Conference* (pp. 1–33).
- Sami, H., Ho, S. S., & Lam, C. K. (1999). Association between the investment opportunity set and corporate financing, dividend, leasing, and compensation policies: Some evidence from the emerging market. Working Paper.
- Saputro, J. A. (2003). Analisis Hubungan antara Gabungan Proksi Investment Opportunity Set dan Real Growth dengan Menggunakan Pendekatan Confimatory Factor Analysis. *The Indonesian Journal of Accounting Research*, 6(1).
- Sartono, A. (2001). Kepemilikan Orang Dalam (Insider Ownership), Utang dan Kebijakan Dividen: Pengujian Empirik Teori Keagenan (Agency Theory). *Jurnal Siasat Bisnis*, 2(6), 107–119.
- Setiawan, D., Bandi, B., Kee Phua, L., & Trinugroho, I. (2016). Ownership structure and dividend policy in Indonesia. *Journal of Asia Business Studies*, 10(3), 230–252.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, *52*(2), 737-783.
- Siallagan, H., & Machfoedz, M. (2006). Mekanisme corporate governance, kualitas laba dan nilai perusahaan. Simposium Nasional Akuntansi IX. Padang, 23–26.
- Skinner, D. J. (1993). The investment opportunity set and accounting procedure choice. Preliminary evidence. *Journal of Accounting and Economics*, 16(4), 407–445.
- Smith, C. W., & Watts, R. L. (1986). The Investment Opportunity Set and Corporate Policy Choices.
- Smith Jr, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of financial Economics*, *32*(3), 263-292.
- Susilawati, C. D. K., Agustina, L., & Tin, S. (2012). Faktor-Faktor Yang Memengaruhi Kebijakan Utang Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Keuangan dan Perbankan, 16(2), 1778-187.
- Tarjo. (2008). Pengaruh Konsentrasi Kepemilikan Institusional dan Leverage terhadap Manajemen Laba, Nilai Pemegang Saham serta Cost of Equity Capital. In Proceeding Simposium Nasional Akuntansi XI. Pontianak.
- Tehranian, H., Cornett, M. M., Marcus, A. J., & Saunders, A. (2006). Earnings management, corporate governance, and true financial performance. *Corporate Governance, and True Financial Performance (January 2006)*.
- Ratnawati, T. (2007). Pengaruh Langsung dan Tidak Langsung Faktor Ekstern, Kesempatan Investasi dan Pertumbuhan Assets Terhadap Keputusan Pendanaan Perusahaan yang Terdaftar Pada Bursa Efek Jakarta (Studi pada Industri Manufaktur Masa Sebelum Krisis dan Saat Krisis). *Jurnal Akuntansi Dan Keuangan, 9*(2), 65–75.
- Villalonga, B., Amit, R., Trujillo, M. A., & Guzmán, A. (2015). Governance of family firms. Annual Review of Financial Economics, 7, 635-654.
- Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value?. *Journal of financial Economics*, 80(2), 385-417.
- Vogt, S. C. (1997). Cash Flow and Capital Spending: Evidence from Capital Expenditure Announcements. *Financial Management*, 26(2), 44–57.
- Wahidahwati. (2002). Kepemilikan Manajerial dan Agency Conflict: Analisis Persamaan Simultan Non Linier dari Kepemilikan Manajerial, Penerimaan Risiko (Risk Taking), Kebijakan pendanaan dan kebijakan Dividen. Simposium Nasional Akuntansi V Ikatan Akuntan Indonesia.

2214

- Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: A ten year perspective. *The Accounting Review*, 65(1), 131–156.
- Widarjono, A. (2009). Ekonometrika pengantar dan aplikasinya. Yogyakarta: Ekonisia.
- Yeniati., & Nicken, D. (2010). Faktor-Faktor Yang Mempengaruhi Hutang pada Perusahaan Nonkeuangan Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Bisnis Dan Akuntansi, 12(1), 1–16.
- Yusuf, M., & Firdauz, E. (2005). Analisis Hubungan antara Berbagai Model Gabungan Proksi Investment Opportunity Set dan Real Growth dengan Menggunakan Pendekatan Confirmatory Factor Analysis. Jurnal Akuntansi Dan Investasi, 6(1), 168–186.



 \odot 2019 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).