



THE EFFECT OF COMPANIES' EXCELLENCE AND LIMITATIONS FACTORS ON THE INVESTMENT OPPORTUNITY SET: AGENCY THEORY APPROACH

Khoirul Hikmah¹, Prof. Dr. Tulus Haryono² and Dr. Djuminah²

¹PhD Student in PDIE, Universitas Negeri Sebelas Maret, Jl. Ir. Sutami 36A Kentingan
FE UPN "Veteran" Yogyakarta, Jl SWK 104 (Lingkar Utara) Condong Catur, Yk, 55283

²Universitas Negeri Sebelas Maret, Jl. Ir. Sutami 36A Kentingan, Solo, 57126

ABSTRACT: *This study aims to analyze the influence of factors of excellence and company limitations on the Investment Opportunity Set (IOS). The research population is all go public companies listed on the Indonesia Stock Exchange (IDX) in 2008-2016. The sampling technique uses a purposive sampling method. The data processing uses regression equations with a panel data models and it is analyzed by an analytical confirmatory factor analysis and evIEWS. The researchers develop the use of IOS proxy by using 8 variables, namely MVABVA, MVEBVE, PER, CAPBVA, CAPBVE, Tobins'Q, PPEFVA, INS. The 3 variables of the companies' advantages of the company are multinationality, size and profitability, while the 2 variables of the companies' limitations are leverage and systematic risk. The results of the study indicate that companies' multinationality has a positive effect on IOS, the research hypothesis is not supported. The size of the company has a positive effect on IOS, the research hypothesis is not supported. The profitability has a positive effect on IOS, the research hypotheses is supported. The companies' leverage has a negative effect on IOS, the research hypothesis is supported. The companies' systematic risk has a negative effect on IOS, the research hypotheses is supported.*

KEYWORDS: Multinationality, Size, Profitability, Companies' Excellence, Companies' Limitations, Investment Opportunity Set

INTRODUCTION

The 2008 global economic crisis affected the economy in Indonesia, both in the capital market and in the financial market. This had an impact on the trading of shares on the Indonesia Stock Exchange which caused the rupiah to slump with the fall of the IHSG at the opening of trade, which affected the exchange rate through IDR 14,040 per US dollar (Jatmiko 2015). Regarding to the rupiah currency, Bank Indonesia stated that it would remain on the money market for the exchange rate stabilization. This was done so that investors still wanted to invest in Indonesia. The investors' decisions through investments caused agency problems.

According to Jensen & Meckling (1976), the agency problems can be reduced by increasing the insider ownership. The investment options or growth choices of a company are inherent, non-observable so that IOS requires a proxy (Gaver & Gaver 1993). This research is interesting because in carrying out its operational activities, companies sometimes do not pay attention to the factors of excellence and limitations they have. Meanwhile, they are important in taking the investment policies by paying attention to the agency problems that arise in determining the investment policies.



The companies' superior factors include multinationality, size and profitability. Multinationality is able to provide an excellence in competing because the company has a mastery on the technology, information, management expertise, and mastery on the market share. The assets owned by larger companies can increase the value of their investment options so that it is easy to grow (Alnajjar & Riahi-belkaoui 2001; Pagalung 2003). The companies' ability to generate profits makes the company superior in getting opportunities to compete with similar companies (Pagalung 2003). The companies' limitations in the form of leverage are the obstacle because it relates to the opportunity to grow the company (Barclay, Morellec & Smith 2001; Gaver & Gaver 1993). The systematic risk which is described by beta size is also a limitation because it is related to the influence of the opportunity on the growth of the company so that it has a negative relationship (Alnajjar & Riahi-belkaoui 2001).

The company's excellence factor of multinationality, size and profitability have a positive effect on the opportunity to grow the company, it is supported by the findings got (Alnajjar & Riahi-belkaoui 2001; Pagalung 2003). The other empirical research proves that the leverage variable has a negative relationship to IOS (Barclay et al., 2001; Gaver & Gaver 1993; Jones & Sharma 2001a; Smith & Watts 1992b). The systematic risk is measured by beta, it indicates that there is a negative relationship between growth and systematic risk (Beaver, Kettler & Scholes 1970; Breen & Lerner 1973; Eskew 1979; Pettit & Westerfield 1972; Rosenberg & McKibben 1973; Thompson 1976) It is hoped that the research can contribute to the science and the economy in Indonesia based on the agency theory approach.

LITERATURE

Investment Opportunity Set (IOS)

Fama (1978) says that the value of a company is determined by the investment decisions. IOS is the availability of alternative investment in the future for the company (Hartono 1999). The company's growth potential as measured by IOS was first stated by Myers & Turnbull (1977), which is an investment decision in the form of a combination of assets held in the future that can affect the value of the company. Furthermore, IOS was developed by Collins and Kothari (1989); Chung & Charoenwong (1991); Gaver & Gaver (1993, 1995a); Cahan & Hossain (1996); Gul (1999); Hartono (1999); Jaggi & Gul (1999); Jones & Sharma (2001b); Abbott (2001); Alnajjar & Riahi-belkaoui (2001); Kallapur & Trombley (1999); Adam & Goyal (2008a); Hikmah (2004 2008); Mira & Ho (2002); Heibatollah & Lam (1999); Skinner (1993); Smith & Watts (1992); Akhtaruddin & Hossian (2008); Subramaniam & Shaiban (2011); Khanqah, Vahid & Ahmadnia 2013; Rosdini 2011; & San Martín Reyna 2017). The researchers updated the use of the IOS proxy in this study by using 8 variables (novelty of research) such as MVABVA, MVEBVE, PER, CAPMVA, CAPBVA, Tobin's Q, PPEFVA, INS.

Collins & Kothari 1989; Abbott (2001); Adam & Goyal (2003); Alnajjar & Riahi-belkaoui (2001); Cahan & Hossain (1996); Chung & Charoenwong (1991); Collins & Kothari (1989); Smith & Watts 1992; Skinner 1993; Fama & French (1998); Gaver & Gaver (1993, 1995); Gul (1999); Gul, Leung & Srinidhi (2000); Hartono (1999); Jaggi and Gul 1999; Hikmah (2004, 2008); Jones & Sharma (2001); Kallapur & Trombley (1999); Khanqah, Vahid & Ahmadnia (2013); Mira & Ho (2002); Pagalung (2003); Sami Heibatollah & Lam (1999); Skinner (1993); Smith & Watts (1992), found that the investments generated from the dividend and leverage



policies have positive information about the company in the future, funds have a positive impact on company value. According to Chung & Charoenwong (1991); Gaver & Gaver (1993), the differences in the companies' investment decisions in dealing with the other competing companies which are willing to get into the market as well as the variations in the companies' strategy choices in order to gain competitive advantages result in a varied IOS cross-sectional among the companies.

Table 1: Variables Used by Previous Researchers to Form IOS Proxy

NO	RESEARCHERS	MVEBVE	MVABVA	PER	TOBINS'Q	CAPBVA	CAPMVA	PPEFVA	INS
1	(Collins & Kothari 1989)	v							
2	(Chung & Charoenwong 1991)	v		v	v				
3	(Smith & Watts 1992a)	v	v	v					
4	(Gaver & Gaver 1993, 1995b)	v		v					
5	(Skinner 1993)	v	v	v	v			v	
6	(Baker 1993)		v						
7	(Cahan & Hossain 1996)	v	v	v					
8	(Gul & Kealey 1999)	v	v	v					
9	(Hartono 1999)	v		v					v
10	(Kallapur & Trombley 1999)	v	v	v	v			v	v
11	(Sami, Heibatollah & Lam 1999)	v	v	v				v	
12	(Hossain Cahan & Adams 2000)			v					
13	(Abbott 2001)	v	v					v	
14	(Alnajjar & Riahi-belkaoui 2001)	v	v	v					
15	(Jones & Sharma 2001b)	v	v	v		v	V	v	
16	(Chen, Chung & Chung, 2001)		v						
17	(Mira & Ho 2002)	v	v						
18	(Adam & Goyal 2003)	v	v	v		v		v	
19	(Yusuf & Firdaus 2005)	v	v	v	v	v	v		v
20	(Akhtaruddin & Hossian 2008)	v	v	v					
21	(Rosdini 2011)	v	v	v					
22	(Subramaniam & Shaiban 2011)		v						
23	(Pratiwi & Dewi 2012)	v	v	v					
24	(Ardestani, Rasid, Basiruddin & Mehri 2013)				v				
25	(Khanqah, Vahid dan Ahmadnia, 2013)			v					
26	(Rahmiati & Huda 2015)	v							
27	(Fama & French 2015)		v						
28	(Bonacchi & Parthenope 2015)	v							
29	(Giriati 2016)		v						

30	(Putra & Subowo 2016)		v					
31	(Anagnostopoulou & Drakos 2016)	v						
32	(Anam, Arfan & Shabri 2016)		v					
33	(Novianti & Simu 2016)					v		
34	(Dewenter, Hess & Brogaard 2017)	v						
35	(Djalil, Saputra & Munandar 2017)		v					
36	(Murwaningsari & Rachmawati 2017)					v		
37	(Fazilla 2018)	v						
38	(Narayanan & Uzmanoglu 2018)				v			
39	(Prihatini, Rahmiat & Susanti 2018)	v						

Agency Theory Related to IOS

Kathleen Eisenhardt (1989) states that the agency theory uses three assumptions of human nature, namely: (1) humans are generally selfish, (2) humans have limited thinking about future perceptions, (3) humans always avoid risk. In the context of the company, the agency problems faced by investors refer to the investors' difficulties in ensuring that funds are not misused by the company management to fund the unfavorable activities (Wulandari & Aris 2018). This study uses a type 1 approach (Villalonga, Amit, Trujillo & Guzmán 2015; Villalonga et al. 2006) or type 1 agency costs (Bozec & Laurin 2008) where problems arise between shareholders and managers.

The Effect of Company's Multinationality on IOS

The multinational company is a collection of choices that have value and generate profits that can create the company's value (Tsetsekos 1991). The benefits of arbitration are obtained from a). Exploitation of various institutions; b). Choice of time; c). Technology choice; d). Choice of position (Baldwin 1986; Kogut 1983). Alnajjar & Riahi-belkaoui's research (2001) shows that Multinationality has a positive effect on IOS, so hypothesis 1 can be drawn as:

H1: Multinationallity companies have a positive effect on IOS

The Influence of Company's Size on IOS

The size of the company reflects that the company is large and can compete with its competitors because it has relatively large assets. Large companies can increase their investment value by making different investment decisions in facing the obstacles that can stop and delay the competitive factors in calculating the return on the investment projects with the concept of opportunity costs (Alnajjar & Riahi-belkaoui 2001).

Investors who don't like risk like investing in large companies because the risk is smaller. The company size is a scale to group companies with various measurements such as total assets,



log size, stock market value, and sales stability (Soebiantoro 2007). Large and established companies have an advantage over their peer companies or smaller companies in their ability to exploit the company growth opportunities (Gaver & Gaver 1993). It proves that large and profitable companies will occupy a dominant position in their industry (Mueller 1986).

Large companies are better in the ability to increase the value of investment by making various investments in creating the barriers to entry which hinder the competition factors that are able to drive the project's return on investment towards the opportunity cost of the company. Economies of scale, product differentiation, brand loyalty, or patent rights are some examples of these activities (Chung & Charoenwong 1991). There is an evidence that large companies will occupy dominant positions in the industry (Mueller 1986). Researches by Alnajjar & Riahi-belkaoui (2001); Pagalung (2003) shows that Size has a positive effect on IOS, then the second hypothesis can be drawn as :

H2: The size of the company has a positive effect on IOS

The Effect of Company's Profitability on IOS

Profitability is the company's ability to earn profits related to sales, total assets, and individual capital. Profitability shows an overview of company's earnings to finance investments. Profitability is the amount of investor's funds invested compared to the total amount of assets to generate profits. Companies that have high income for their investments will reduce their debt because the company can finance itself with the internal funds of the company (retained earnings) before deciding to have debt (Myers & Majluf 1984)

The profitability ratios can provide useful clues in operating the company effectively. Researches by Alnajjar and Riahi-belkaoui (2001); Pagalung (2003) shows that profitability has a positive effect on IOS. The profitability ratio is measured by Return on Assets. If ROA increases, the opportunity for companies to grow is greater (Brigham, C.Gapenski & Daves 2010), then the third hypothesis can be drawn as :

H3: Profitability has a positive effect on IOS.

The Influence Of company's Leverage on IOS

Myers & Turnbull (1977) argue that companies with growth opportunities are more at risk of debt. Companies grow tend to reduce the debt compared to companies that have no growth opportunities. Companies with high amounts of debt will experience poor financial conditions and are threatened with bankruptcy. Higher growth opportunities for companies will have low market leverage (Jones & Sharma 2001a). Researches show that leverage has a negative effect on IOS (Alnajjar & Riahi-belkaoui, 2001; Barclay et al. 2001; Gaver & Gaver 1993; Jones & Sharma 2001a; Smith & Watts 1992b), but Pagalung (2003) shows that its direction is positive. Then, the 4th hypothesis can be drawn as :

H4: company leverage has a negative effect on IOS.

The Influence of the Company's Systematic Risk on IOS

The influence of the company's growth opportunities with systematic risk depends on the definition of growth. The definition of growth as an expansion is negatively related to growth with systematic risk (Beaver et al. 1970; Breen & Lerner 1973; Eskew 1979; Pettit &

Westerfield 1972; Rosenberg & McKibben 1973; Thompson 1976). The definition of growth as a monopoly power in market factors or output results in greater economic strength and negative relations. The definition of growth as a real option is positively related between growth and systematic risk. (Christie 1989; Chung & Charoenwong 1991). Conine Jr. (1983); McMahon, Playforth & Booth (1981) argue that the relationship between growth and beta can be positive or negative depending on the relative value of the parameters in the model. Researches shows that systematic risk has a negative effect on IOS (Alnajjar & Riahi-belkaoui, 2001; Beaver et al. 1970; Breen & Lerner 1973; Eskew 1979; Pettit & Westerfield 1972; Rosenberg & McKibben 1973; Thompson 1976), while Pagalung (2003) shows its positive direction. Then the 5th hypothesis can be drawn as :

H5: companies' Systematic risk have a negative effect on IOS.

Research Conceptual Framework

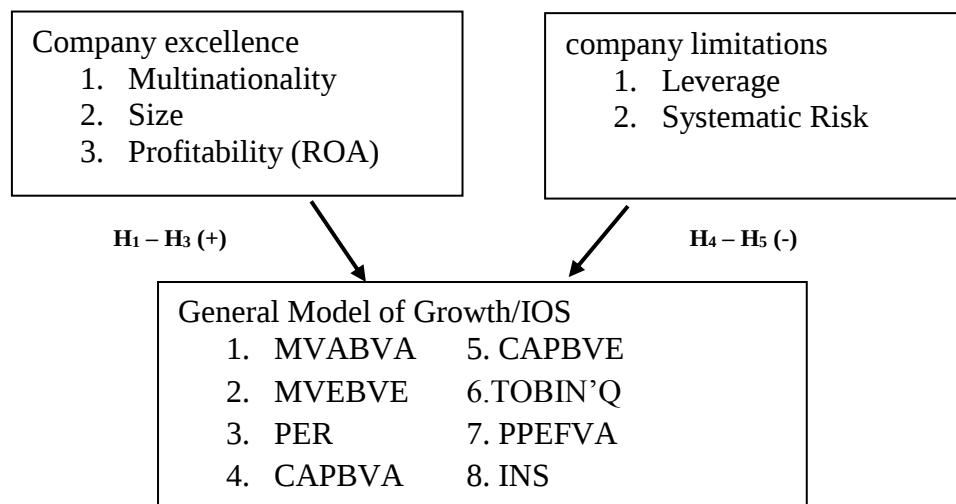


Figure 1: Conceptual Framework

METHODOLOGY

Population and sample

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

Operational definition

Variable advantages and limitations of the company:

- a. Multinationality = foreign sales / total sales (FSTS)
- b. Size = logarithm of total assets



- c. Profitability is measured by Return on Assets (ROA) = $EAT / \text{Total Assets or net income} / \text{total assets}$
- d. Leverage = $\text{total debt} / \text{total assets}$ or $LTD / \text{total assets}$
- e. Systematic Risk = $E(R_i) - E(R_F) = E[(R_m) - E(R_F)] \beta_i$

$E(R_F)$ = risk free rate, $E(R_m)$ = expected return on a market factor, $\beta_i = \text{cov}(R_i, R_m) / \text{var}(R_m)$

Investment Opportunity Set (IOS) has several proxies in measuring it. There are 8 proxies used in this study, namely MVEBVE, MVABVA, Tobin'Q, PER, PPEFVA, CAPBVA, CAPMVA and INS. Here is a table of variables to form an IOS proxy:

Table 2. Variables to form IOS Proxy

No	Variable	Formulas	Previous Researchers
1	Market Value Equity to book value of equity (MVEBVE)	$MVEBVE = [\text{Outstanding stock} \times \text{Closing price}] / \text{Total Equity}$	(Abbott 2001; Adam dan Goyal 2008b; Adam dan Goyal 2003; Alnajjar dan Riahi-belkaoui 2001; Anagnostopoulou dan Drakos 2016; Bonacchi dan Parthenope 2015; Cahan dan Hossain 1996; Chung dan Charoenwong 1991; Collins dan Kothari 1989; Dewenter, Hess, dan Brogaard 2017; Fazilla 2018; Gaver & Gaver 1993; Gul & Kealey 1999; Hartono 1999; Ho, Lam & Sami 2004; Hossain et al. 2000; Jones dan Sharma 2001b; Kallapur dan Trombley 1999; Mira, dan Ho 2002; Pratiwi dan Dewi 2012; Prihatini, Rahmiat dan Susanti 2018; Rahmiati dan Huda 2015; Rosdini 2011; Sami, Heibatollah dan Lam 1999; Skinner 1993; Smith dan Watts 1992; Yusuf dan Firdaus 2005; Akhtaruddin dan Hossian 2008; Subramaniam dan Shaiban 2011)
2	Market Value Asset to Book value of assets (MVABVA)	$MVABVA = [\text{Tot. Aktiva} - \text{Tot. Equity} + (\text{Outstanding stock} \times \text{Closing price})] / \text{Total Aktiva}$	(Abbott 2001; Adam dan Goyal 2003; Alnajjar dan Riahi-belkaoui 2001; Anam, Arfan, dan Shabri 2016; Baker 1993; Cahan dan Hossain 1996; Chen, Chung, dan Chung 2001; Djalil et al. 2017; Fama dan French 2015; Giriati 2016; Gul dan Kealey 1999; Ho et al. 2004; Jones dan Sharma 2001a;



			Kallapur dan Trombley 1999; Mira, dan Ho 2002; Pratiwi dan Dewi 2012; Putra dan Subowo 2016; Rosdini 2011; Sami, Heibatollah dan Lam 1999; Skinner 1993; Smith dan Watts 1992; Yusuf dan Firdauz 2005; Akhtaruddin dan Hossian (2008)
3	Tobin's Q (TOBIN'Q)	$\text{Tobin's Q} = \{ [\text{Outstanding stock} \times \text{Closing price}] + \text{Total debt} + \text{inventories} \} - \text{Total current asset} / \text{total aktiva.}$	(Chung & Charoenwong 1991; Kallapur & Trombley 1999; Narayanan & Uzmanoglu 2018; Skinner 1993; Yusuf dan Firdauz 2005; Ardestani <i>et al.</i> , 2013b)
4	Earnings to price ratios (PER)	$\text{PER} = \text{Closing price per share} / \text{Earning per Share}$	(Adam & Goyal 2003; Alnajjar & Riahi-belkaoui 2001; Cahan & Hossain 1996; Chung & Charoenwong 1991; Gaver & Gaver 1993; Gul & Kealey 1999; Hartono 1999; Hossain, Cahan & Adams 2000; Jones & Sharma 2001b; Kallapur & Trombley 1999; Pratiwi dan Dewi 2012; Rosdini 2011; Sami, Heibatollah & Lam 1999; Skinner 1993; Smith & Watts 1992; Yusuf dan Firdauz 2005; Akhtaruddin dan Hossian 2008; Khanqah Vahid, dan Ahmadnia 2013)
5	Ratio of property, plant, dan equipment to firm value of the assets (PPEFVA)	$\text{PPEFVA} = [\text{Total Asset} - \text{Total Equity} + (\text{Outstanding stock} \times \text{Closing Price})] / \text{Fixed assets.}$	(Adam dan Goyal 2003; Jones dan Sharma 2001b; Kallapur dan Trombley 1999; Sami, Heibatollah dan Lam 1999; Skinner 1993)
6	Ratio of capital expenditure to book value of assets (CAPBVA)	$\text{CAPBVA} = [\text{Book value of Fixed assets}_t - \text{Book value of Fixed assets}_{t-1}] / \text{Total Aktiva}$	(Jones dan Sharma 2001b; Adam dan Goyal 2003; Murwaningsari dan Rachmawati 2017; Novianti dan Simu 2016; Yusuf dan Firdauz 2005)
7	Rasio capital expenditure to market of assets (CAPMVA)	$\text{CAPMVA} = [\text{Book value of Fixed assets}_t - \text{Book value of Fixed assets}_{t-1}] / [\text{Total Asset} - \text{Total Equity} + (\text{Outstanding stock} \times \text{Closing Price})]$	(Jones dan Sharma 2001b; Yusuf dan Firdauz 2005)



8	Rasio Investment to Net Sales (INS)	$INS = Investment / Net Sales$	(Hartono 1999; Kallapur dan Trombley 1999; Yusuf dan Firdauz 2005)
---	-------------------------------------	--------------------------------	--

Factor Analysis (Confirmatory Factor Analysis)

The purpose of factor analysis is to define the structure of a matrix of data and analyze the structure of mutual relations between a large number of variables by defining a set of similarities of variables or dimensions. The stages of factor analysis (Hair, Rolph Anderson & Black 1998): a. Kaiser-Meyer Olkin Measure of Sampling (KMO) and Bartlett's Test of Sphericity, b. Communalities, c. Extraction, d. Rotation

Hypothesis Testing

The hypothesis testing model in the study uses a regression model used by Keasey & McGuinness, (1992); Keasey & Short, (1997) as follows:

$$IOS_{it} = a + \beta_1 MULTY_{it} + \beta_2 ROA_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 BETA_{it} + e_{it}$$

where IOS = Investment Opportunity Set, a = Constant, MULTY = Multinationality, ROA = Return on Assets / Profitability, SIZE = Company Size, LEV = Leverage,

BETA = Systematic Risk, $\beta_1 - \beta_5$ = Regression coefficient, e = standard error, i = Cross-Section (company), t = Time Series (year)

The advantages obtained by using the combined data are first, there are more numbers of observations held for the sake of population parameter estimation which has a positive effect with the greater degree of freedom and it decreases the possibility of collinearity between independent variables. Second, it is possible to estimate each individual characteristic and characteristic according to time separately (Hsiao, 2014). Thus, the analysis of the estimation results will be more comprehensive and include things that are closer to the reality the hypothesis testing and the testing criteria in the study are as follows: 1. F Test (F-test), 2. t-test, 3. Determinant Coefficient Test (R²).

Panel Data Regression Estimation Techniques

In the panel data regression model estimation technique, there are three techniques that can be used, namely the model with the PLS method (common), the Fixed Effect and Random Effect models. To choose which technique to use in panel data regression, there are three tests to determine the most appropriate technique for estimating panel data regression, namely: the F statistical test is used to choose between the PLS method (common) or the Fixed Effect technique. Second, Langrange Multiplier (LM) test is used to choose between PLS (common) techniques or Random Effect techniques. The last, Hausmann test is used to choose between the Fixed Effect or Random Effect technique (Gujarati 2012; Widarjono 2009).



RESULT

The study is adapted (Hair Rolph Anderson & Black 1998) four-step of factor analysis.

Table 3. Results of Factor Analysis

Analisis Faktor	Nilai
KMO MSA	0.501
BTS Chi Square	831.194
df	28
Sig	0.000
Variabel	MSA
MVEBVE	0.501
MVABVA	0.501
PER	0.520
CAPBVA	0.484
CAPMVA	0.501
PPEFVA	0.479
TOBIN'Q	0.500
INS	0.559

Based on table 3, the KMO value is 0.501, Bartlett's test is 831,194 and is significant at the 0,000 level, so the data meets the sample adequacy so that the variables and samples available can be analyzed further.

Table 4. Communalities

Initial	Extraction	Component
1,000	.807	.898
1,000	.805	.897
1,000	.001	-.038
1,000	.000	-.019
1,000	.001	.033
1,000	.002	-.045
1,000	.008	-.875
1,000	.014	-.118

The calculation of communalities value in table 4 shows that the MVEBVE variable is an IOS factor constructor variable with the highest value reaching 0.898 and the MVABVA variable of 0.897. Both of these variables are used to measure IOS because they have a dominant value.

Table 5. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Square Loading		
	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			

Source: confirmatory factor analysis

Table 5 shows that the value of extraction factor produces 4 factors that can be used with a variance value of 61.556%.

The results of hypothesis testing are as follows:

Table 6. Results of Regression of Excellence in the Company

IOS	Metode	Multinationality	Size	Profitability
MVABVA	Common	-2.661*** (0.008)	3.996*** (0.000)	10.797*** (0.000)
	Fixed	-5.545*** (0.000)	0.494 (0.620)	9.078*** (0.000)
	Random	-0.157 (0.875)	2.866*** (0.004)	1.378 (0.168)
	Uji Chow	25.712*** (0.000)	486.343*** (0.000)	24.776*** (0.000)
	Uji	0.080	0.357	0.276
	Hausman	(0.777)	(0.549)	(0.598)
MVEBVE	Common	-0.535 (0.592)	3.622*** (0.000)	6.582*** (0.000)
	Fixed	0.228 (0.819)	0.374 (0.708)	3.298*** (0.001)
	Random	1.423 (0.155)	2.056** (0.039)	3.929*** (0.000)
	Uji Chow	25.712*** (0.000)	816.322*** (0.000)	787.689*** (0.000)
	Uji	0.459	0.471	7.275***
	Hausman	(0.497)	(0.492)	(0.007)

Source: confirmatory factor analysis



Based on table 6, the chow test shows significant results, but the Hausman test shows insignificant results. It means that the fixed effect technique is the most appropriate technique. In the fixed effect technique, the effect of multinationality on IOS (MVABVA) has a count of -5,545 with a significance level of 0,000 which is smaller than $\alpha = 0.05$ while the effect of multinationality on IOS (MVEBVE) has no significant effect. In the random effect technique, the effect of multinationality on IOS (MVABVA) has a t count of 0.228 with a significance level of 0.819 greater than $\alpha = 0.05$. Thus, hypothesis 1 which states that the multinationality of the company has a positive effect on IOS is not supported.

In testing hypothesis 2, on the fixed effect technique, the effect of Size on IOS (MVABVA) has a t count of 0.494 with a significance level of 0.620 greater than $\alpha = 0.05$ and the effect of size on IOS (MVEBVE) has a t count of 0.374 with a significance level of 0.708 more greater than $\alpha = 0.05$. In the random effect technique, the effect of size on IOS (MVABVA) has a t count of 2,866 with a significance level of 0.004 smaller than $\alpha = 0.05$ while the effect of size on IOS (MVEBVE) has a t count of 2,056 with a significance level of 0.039 smaller than $\alpha = 0.05$. So, hypothesis 2 in the random effect technique, the company's size which has a positive effect on IOS is supported.

In testing hypothesis 3, on the fixed effect technique, the effect of ROA (profitability) on IOS (MVABVA) has a t count of 9,078 with a significance level of 0,000 smaller than $\alpha = 0.05$ while the effect of ROA (profitability) on IOS (MVEBVE) has a t count of 3,298 with a significance level of 0.001 smaller than $\alpha = 0.05$. In the random effect technique, the effect of ROA (profitability) on IOS (MVABVA) has a t count of 1.378 with a significance level of 0.168 greater than $\alpha = 0.05$ while the effect of ROA (profitability) on IOS (MVEBVE) has a t count of 3.298 with a significance level of 0.000 smaller than $\alpha = 0.05$. Thus, hypothesis 3 which states ROA (profitability) has a positive and significant effect on IOS is supported.

Table 7. Regression Results of the Company's Limitations

IOS	Metode	Leverage	Systematic Risk
MVABVA	Common	-3.525*** (0.000)	-0,505 (0.613)
	Fixed	-3.250*** (0.001)	-3.770*** (0.000)
	Random	0.949 (0,342)	-0.426 (0.670)
	Uji Chow	22.893*** (0.000)	24.002*** (0.000)
	Uji Hausman	0.546 (0.459)	0.027 (0.869)
MVEBVE	Common	-0.758 (0.448)	3.667*** (0,000)
	Fixed	0.178 (0.858)	0.416 (0.677)
	Random	-0.179 (0.657)	1.538 (0.124)
	Uji Chow	828.700*** (0.000)	822.368*** (0.000)
	Uji Hausman	0.379 (0.537)	9.755*** (0.001)

Source: confirmatory factor analysis



Based on table 7, the chow test shows significant results, but the Hausman test shows insignificant results. It means that the fixed effect technique is the most appropriate technique. The fixed effect technique of Leverage on MVABVA has a count of -3,250 with a significance level of 0.001 which is smaller than α (0.05). It shows that Leverage on IOS (MVABVA) has a negative and significant effect. The effect of leverage on MVEBVE has t count of 0.178 with a significance level of 0.858 which is greater than α (0.05). It shows that the IOS leverage projected with the MVEBVE variable does not show a significant effect. Thus, hypothesis 4 which states that company's leverage has a negative effect on IOS is supported (on IOS (MVABVA)).

Based on table 7, the chow test shows significant results, but the Hausman test shows insignificant results. It means that the fixed effect technique is the most appropriate technique. In the fixed effect technique, the effect of systematic risk on MVABVA has a count of -3,770 with a significance level of 0,000 which is smaller than α (0,05). It shows that the systematic risk towards IOS (MVABVA) has a negative and significant effect. The effect of Systematic risk on MVEBVE on the chow test and hausman test show significant results. It means that random techniques are the most appropriate technique. In random techniques, the effect of Systematic risk on MVEBVE has a t count of 1.538 with a significance level of 0.124 greater than α (0.05). Whereas in the fixed effect technique, the effect of the systematic risk on MVEBVE has a t count of -3,770 with a significance level of 0,000 which is smaller than α (0.05). It shows that Systematic risk towards IOS (MVEBVE) shows a negative and significant effect. Thus, hypothesis 5 which states that the company's systematic risk has a negative effect on IOS supported on IOS (MVABVA).

ANALYSIS

The study results of hypothesis 1 show that the multinationality of the company has a negative and significant effect on IOS (MVABVA) but does not have a negative and significant effect on IOS (MVEBVE). Based on existing theories, the results of this study do not support the theory that multinational companies as a collection of choices and benefits of arbitration have a positive influence on the company's growth opportunities as measured by IOS. The results of this study also do not support the results of research conducted by Alnajjar & Riahi-belkaoui, (2001) where the results of the study showed positive and significant results at the 5% level, but the results of the study are relevant to the research conducted by Pagalung (2003) where the results of his research show that only the company's reputation variables have a significant effect on IOS. Hypothesis 1: the company's multinationality which has a positive effect on IOS not supported.

The study results of hypothesis 2 show that in the random effect technique, the company's effect which has a positive and significant effect on IOS is supported. Based on existing theories, the results of this study support the theory that the size of a company will affect the capital structure and the greater the company the greater the funds needed by the company to invest. The greater the size of a company, the tendency to use capital is also getting bigger, this is because large companies need large funds to support their operations. The results of this study support the research of Alnajjar & Riahi-belkaoui (2001) where the results of his research showed positive results and were significant at the 5% level. Hypothesis 2: Company size which has a positive effect on IOS is supported.



The results of hypothesis 3 show that the company's profitability which has a positive and significant effect on IOS is supported. Based on existing theories, the results of this study support the theory that profitability describes the income that the company has to finance investment. The profitability shows the ability of invested capital in the overall assets to generate profits for investors. Companies with high returns on investment use relatively small debt because the high rate of return allows the companies to finance most of their internal funding. The results of this study support the research of Alnajjar & Riahi-belkaoui (2001) but do not support the research conducted by Pagalung (2003). Hypothesis 3: profitability which has a positive effect on IOS is supported.

The results of hypothesis 4 show that the company's leverage which has a negative and significant effect on IOS is supported. Based on existing theories, the results of this study support the theory that the companies' growth tend to reduce the debt compared to companies that have no growth opportunities. Funding with own capital can reduce the problems caused by debt. The results of this study also support the results of research conducted by Alnajjar & Riahi-belkaoui, (2001) where the results of the study showed negative and significant results at the 5% level and the study of Pagalung, (2003), where the results of the study also showed significant results at the level 1% and 5%, however, the study of Pagalung, (2003) also shows that the leverage variable produces a positive relationship with IOS. Hypothesis 4: the company's leverage which has a negative effect on IOS is supported

The results of hypothesis 5 study show that the company's Systematic Risk which has a negative and significant effect on IOS is supported. Based on the existing theory, the results of this study support the theory where the influence of opportunities for the companies' growth with systematic risk depends on the definition of growth. The definition of growth as expansion is negatively related to growth with systematic risk (Beaver et al. 1970; Breen & Lerner 1973; Eskew 1979; Pettit & Westerfield 1972; Rosenberg & McKibben 1973; Thompson 1976). The definition of growth as a monopoly power in market factors or output produces greater economic power and also produces a negative relationship between growth and systematic risk. The results of this study also support the results of research conducted by Alnajjar & Riahi-belkaoui (2001) and the research of Pagalung, (2003) where the results of the study showed negative results and were significant at the 5% level. Hypothesis 5: the companies' Systematic risk which have a negative effect on IOS is supported.

DISCUSSION

The results of this study indicate that the variables of excellence (multinationality, size and profitability) confirmed by the research model conducted by Alnajjar & Riahi-belkaoui, (2001) show that only profitability variables have a positive influence on IOS and the results of this study do not support previous research. The profitability of a company that is proxied in the form of a company that has or earns a large profit will have a great opportunity to compete with the same type of company, so that it signals a company's future growth, where a portion of the profitability will be invested in the investment to increase the company's value (Yendrawati et al. 2013). Although the multinationality variable does not have a positive effect on IOS, this finding is relevant to the research conducted by (Pagalung 2003) with the same object of research, namely companies listed on the IDX. Thus, multinationality, the size and profitability can be used as the indicators of measuring the company's superiority. However,



the measurement of company excellence is still debated in terms of representative measurements.

The study results of the limitation variables (leverage and Systematic Risk) show results that are inconsistent with previous studies (Gaver & Gaver 1995a; Jaggi & Gul 1999; Smith & Watts 1992b). It happens because the possibility of the economic conditions in Indonesia has not recovered after the 2008 global economic crisis which was followed by another economic crisis, which hit almost all countries in the world. Because the researchers use some research data starting in 2009, so the structure of the companies' funding is not the same as the companies that do not face a crisis. The results of this study are interesting to be examined further : what factors cause the different condition and whether the cause of the difference is caused by differences in economic conditions which is used as samples of the research (previous researchers in the United States carried out before the economic crisis in which the research data used is in 1987 to 1993 while this study is held in Indonesia with a data taken after the global crisis because it uses data starting in 2009). It needs to be a study material for the subsequent research.

CONCLUSION

Based on the results of the research obtained, the conclusions that can be taken is that multinationality of the company does not have a positive and significant effect on IOS, but the size and profitability have positive effects on IOS so that the variables of the companies' excellence studied still need to be reviewed. Therefore, the measurement of the company's excellence is still debated in terms of representative measurements.

Other results concluded is that the company's Leverage and Systematic Risk had a negative and significant effect on IOS. It makes the company grow tends to reduce its debt and reduce the risk or problems that arise due to the possibilities of investment or growth that will be carried out by the company.

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. <https://doi.org/10.1108/03074350110767088>
- Adam, T., & Goyal, V. K. (2008a). The investment opportunity set and its proxy variables. *Journal of Financial Research*, 31(1), 41–63. <https://doi.org/10.1111/j.1475-6803.2008.00231.x>
- Adam, T., & Goyal, V. K. (2008b). The investment opportunity set and its proxy variables. *Journal of Financial Research*, 31(1), 41–63.
- Adam, T. R., & Goyal, V. K. (2003). The Investment Opportunity Set and its Proxy Variables: Theory and Evidence. *SSRN Electronic Journal*, (February). <https://doi.org/10.2139/ssrn.298048>
- 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. Retrieved from <http://wbiconpro.com/312-Dini>



Rosdini.pdf

- Alnajjar, F. K., & Riahi-belkaoui, A. (2001). Empirical Validation of a General Model of Growth Opportunities. *Managerial Finance*, 27(3), 72–90.
- Anagnostopoulou, S. C., & Drakos, K. (2016). Research in International Business and Finance Bank loan terms and conditions : Is there a macro effect ? *Research in International Business and Finance*, 37, 269–282.
<https://doi.org/10.1016/j.ribaf.2015.11.012>
- Anam, B. S., Arfan, M., & Shabri, M. (2016). Pengaruh Profitabilitas dan Set Kesempatan Investasi Terhadap Kebijakan Dividen Tunai Pada Perusahaan Manufaktur di Indonesia. *Jurnal Magister Akuntansi*, 5(3), 20–29.
- Ardestani, H. S., Rasid, S. Z. A., Basiruddin, R., & Mehri, M. (2013). Dividend Payout Policy, Investment Opportunity Set and Corporate Financing in the Industrial Products Sector of Malaysia. *Journal of Applied Finance & Banking*, 3(1), 123–136. Retrieved from http://www.scienpress.com/Upload/JAFB/Vol_3_1_8.pdf
- Baker, G. P. (1993). Growth, corporate policies, and the investment opportunity set. *Journal of Accounting and Economics*, 16(1–3), 161–165. [https://doi.org/10.1016/0165-4101\(93\)90008-4](https://doi.org/10.1016/0165-4101(93)90008-4)
- Baldwin, C. Y. (1986). The capital factor: Competing for capital in a global environment. *Competition in Global Industries*, 184–223.
- Barclay, M. J., Morellec, E., & Clifford W. Smith, J. (2001). *On the Debt Capacity of Growth Options*.
- Beaver, W., Kettler, P., & Scholes, M. (1970). The association between market determined and accounting determined risk measures. *The Accounting Review*, 45(4), 654–682.
- Bonacchi, M., & Parthenope, N. (2015). Customer Franchise — A Hidden , Yet Crucial , Asset *. *Contemporary Accounting Research*, 32(3), 1024–1049.
<https://doi.org/10.1111/1911-3846.12095>
- Bozec, Y., & Laurin, C. (2008). Large shareholder entrenchment and performance: Empirical evidence from Canada. *Journal of Business Finance & Accounting*, 35(1–2), 25–49.
- Breen, W. J., & Lerner, E. M. (1973). Corporate financial strategies and market measures of risk and return. *The Journal of Finance*, 28(2), 339–351.
- Brigham, E. F., C.Gapenski, L., & Daves, P. R. (2010). *Intermediate Financial Management* (10th editi). Orlando:The Dryden Press.
- 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.
<https://doi.org/10.1007/BF01739682>
- 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.
<https://doi.org/10.1023/A:1011270824166>
- Christie, A. (1989). Equity risk, the opportunity set, production costs and debt. *Unpublished Paper (University of Rochester)*.
- Chung, K. H., & Charoenwong, C. (1991). Investment Options, Assets in Place, and the Risk of Stocks. *Financial Management*, 20(3), 21–33. Retrieved from <http://www.jstor.org/stable/3665748>
- Collins, D. W., & Kothari, S. P. (1989). An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics*, 11(2–3), 143–181. [https://doi.org/10.1016/0165-4101\(89\)90004-9](https://doi.org/10.1016/0165-4101(89)90004-9)
- Conine Jr, T. E. (1983). On the theoretical relationship between systematic risk and price



- elasticity of demand. *Journal of Business Finance & Accounting*, 10(2), 173–182.
- Dewenter, K. L., Hess, A. C., & Brogaard, J. (2017). Institutions and Deposit Insurance : Empirical Evidence. *Journal of Financial Services Research*.
<https://doi.org/10.1007/s10693-017-0271-8>
- Djalil, M. A., Saputra, M., & Munandar, A. (2017). Influence of Investment Opportunity Set , Financial Leverage and Firm Size on Real Activity Manipulation and Its Implication on Stock Return (Study on Manufacturing Company Listed i ... Influence of Investment Opportunity Set , Financial Leverage and Fir. *Journal of Resources Development and Management*, 29(January), 59–65.
- Eskew, R. K. (1979). The forecasting ability of accounting risk measures: Some additional evidence. *Accounting Review*, 107–118.
- Fama, E. F. (1978). The Effects of a Firm's Investment and Financing Decisions on the Welfare of Its Security Holders. *The American Economic Review*, 68(3), 272–284.
Retrieved from <http://www.jstor.org/stable/1805260>
- Fama, E. F., & French, K. R. (1998). Taxes, financing decisions, and firm value. *The Journal of Finance*, 53(3), 819–843.
- Fama, E. F., & French, K. R. (2015). Incremental variables and the investment opportunity set. *Journal of Financial Economics*, 117(3), 470–488.
<https://doi.org/10.1016/j.jfineco.2015.05.001>
- Fazilla, U. (2018). Pengaruh Tata Kelola Perusahaan dan Kesempatan Investasi Terhadap Biaya Hutang dan Struktur Modal (Studi Empiris pada Perusahaan Industri Infrastruktur yang Terdaftar di Bursa Efek Indonesia Tahun 2011-2016). *Jurnal Online Mahasiswa*, 1, 1–15.
- Gaver, J. J., & Gaver, K. M. (1993). Jennifer J. Gaver and Kenneth M. Gaver. *Financial Management*, 16, 125–160.
- Gaver, J. J., & Gaver, K. M. (1995a). Compensation Policy and the Investment Opportunity Set. *Financial Management*, 24(1), 19–32. <https://doi.org/10.2307/3665874>
- Gaver, J. J., & Gaver, K. M. (1995b). Policy and Set Opportunity. *Financial Management*, 24(1), 19–32.
- Giriati. (2016). Free Cash Flow, Dividend Policy, Investment Opportunity Set, Opportunistic Behavior and Firm's Value: (A Study About Agency Theory). *Procedia - Social and Behavioral Sciences*, 219, 248–254. <https://doi.org/10.1016/j.sbspro.2016.05.013>
- Gujarati, D. N. (2012). *Basic econometrics* (5th ed.). New York: Tata McGraw-Hill Education.
- Gul, F. A. (1999). Government share ownership, investment opportunity set and corporate policy choices in China. *Pacific Basin Finance Journal*, 7(2), 157–172.
[https://doi.org/10.1016/S0927-538X\(99\)00004-9](https://doi.org/10.1016/S0927-538X(99)00004-9)
- 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. <https://doi.org/10.1023/A:1008397808221>
- Gul, F. A., Leung, S., & Srinidhi, B. (2000). The Effect of Investment Opportunity Set and Debt Level on Earnings>Returns Relationship and the Pricing of Discretionary Accruals. *Social Science Research Network*, (July). <https://doi.org/10.2139/ssrn.236080>
- 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*.
- Hikmah, K. (2004). *Hubungan Investment Opportunity Set Terhadap Kebijakan Pendanaan, Deviden 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. [https://doi.org/10.1016/S0929-1199\(02\)00024-X](https://doi.org/10.1016/S0929-1199(02)00024-X)
- Hossain, M., Cahan, S. F., & Adams, M. B. (2000). *The Investment Opportunity Set and the Voluntary Use of Outside Directors: New Zealand Evidence*.
- Hsiao, C. (2014). *Analysis of panel data*. Cambridge university press.
- Jaggi, B. and Gul, F. (1999). An analysis of joint effects of investment opportunity set, free cash flows and size on corporate debt policy. *Review of Quantitative Finance and Accounting*, 12, 371–381.
- Jatmiko, B. P. (2015). Hari Ini Menjadi yang Terburuk Dalam 5 Tahun Terakhir. Retrieved from <https://ekonomi.kompas.com/read/2015/08/24/121053026/.Hari.Ini.Menjadi.yang.Terburuk.dalam.5.Tahun.Terakhir>.
- 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. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jones, S., & Sharma, R. (2001a). The association between the investment opportunity set and corporate financin ...
- Jones, S., & Sharma, R. (2001b). The association between the investment opportunity set and corporate financing and dividend decisions: Some Australian evidence. *Managerial Finance*, 27(3), 48–64. <https://doi.org/10.1108/03074350110767097>
- 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. <https://doi.org/10.1111/1468-5957.00265>
- Kathleen Eisenhardt. (1989). Agency Theory: An Assessment and Review. *Academy of Management Journal*, 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., and Ahmadnia, L. (2013). The Relationship between Investment Decisions and Financing Decisions: Iran Evidence. *Basic and Applied Scientific Research*, 3(3), 144–150.
- Kogut, B. (1983). Foreign direct investment as a sequential process. *The Multinational Corporation in the 1980s*, 38–56.
- McMahon, M. J., Playforth, M. J., & Booth, E. W. (1981). Identification of risk factors for acute pancreatitis from routine radiological investigation of the biliary tract. *British Journal of Surgery*, 68(7), 465–467.
- Mira, T., C. M. Y., & Ho, Y. K. (2002). *The Impact of Firm Size. Concentration and Financial Leverage on The Effectiveness of R&D Invesment in Generating Growth Opportunities for Firm*. Singapore.
- Mueller, D. (1986). Persistent performance among large corporations. *The Economics of Strategic Planning*, 31–61.
- 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. <https://doi.org/10.18178/joams.5.6.445-451>
- Myers, S. C., & Majluf, N. (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, 13, 187–221. <https://doi.org/10.3386/w1396>
- 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. <https://doi.org/10.1111/j.1540-6261.1977.tb03272.x>
- Narayanan, R., & Uzmanoglu, C. (2018). Credit Default Swaps and Firm Value. *Journal Of Financial And Quantitative Analysis*, 00(00), 1–33. <https://doi.org/10.1017/S0022109017001235>
- Novianti, A., & Simu, N. (2016). Kebijakan Hutang , Kebijakan Dividen , Dan Profitabilitas , Serta Dampaknya Terhadap Investment Opportunity Set (IOS). *Jurnal Manajemen Teori Dan Terapan*, (1), 1–11.
- Pagalung, G. (2003). Pengaruh Kombinasi Keunggulan dan Keterbatasan Perusahaan terhadap Set Kesempatan Investasi (IOS). *Jurnal Riset Akuntansi Indonesia*, 6(3), 249–263.
- Pettit, R. R., & Westerfield, R. (1972). A model of capital asset risk. *Journal of Financial and Quantitative Analysis*, 7(2), 1649–1668.
- Pratiwi, M. W., & Dewi, R. C. (2012). Pengaruh ukuran perusahaan terhadap reaksi pasar yang dimoderasi. *Media EKonomi Dan Manajemen*, 25(1), 58–71.
- Prihatini, P., Rahmiat, & Susanti, D. (2018). Pengaruh Profitabilitas, Investment Opportunity Set, dan Kepemilikan Manajerial Terhadap Kebijakan Dividen (Studi Pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2013-2016). *Jurnal EcoGen*, 1, 298–307.
- 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.
- Rahmiati, & Huda, P. N. (2015). Pengaruh Kebijakan Dividen, Kesempatan Investasi dan Profitabilitas Terhadap Keputusan Investasi. *Jurnal Kajian Manajemen Bisnis*, 4(September).
- 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).
- Rosenberg, B., & McKibben, W. (1973). The prediction of systematic and specific risk in common stocks. *Journal of Financial and Quantitative Analysis*, 8(2), 317–333.
- Sami, Heibatollah, S. M. S. H., & Lam, C. K. K. (1999). *Association between the Investment Opportunity Set and Corporation Financing, Dividend, Leasing, and Compensation Policies: Some Evidence from an Emerging Market*.
- Skinner, D. J. (1993). The investment opportunity set and accounting procedure choice. Preliminary evidence. *Journal of Accounting and Economics*, 16(4), 407–445. [https://doi.org/10.1016/0165-4101\(93\)90034-D](https://doi.org/10.1016/0165-4101(93)90034-D)
- Smith, C. W., & Watts, R. L. (1992a). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, 32(1991), 263–292.
- Smith, C. W., & Watts, R. L. (1992b). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, 32(3),



- 263–292. [https://doi.org/10.1016/0304-405X\(92\)90029-W](https://doi.org/10.1016/0304-405X(92)90029-W)
- Soebiantoro, U. (2007). Pengaruh struktur kepemilikan saham, leverage, faktor intern dan faktor ekstern terhadap nilai perusahaan. *Jurnal Manajemen Dan Kewirausahaan*, 9(1), 41–48.
- Subramaniam, R. K., & Shaiban, M. S. (2011). Investment opportunity set and dividend policy in Malaysia: Some evidence on the role of ethnicity and family control. *International Conference on Economics, Business and Management*, 22, 170–177. <https://doi.org/10.5897/AJBM11.687>
- Thompson, D. J. (1976). Sources of systematic risk in common stocks. *The Journal of Business*, 49(2), 173–188.
- Tsetsekos, G. P. (1991). Multinationality and Common Stock Offering Dilution. *Journal of International Financial Management & Accounting*, 3(1), 1–16.
- Villalonga, B., Amit, R. ('Raffi') H., Trujillo, M.-A., & Guzmán, A. (2015). Governance of Family Firms. *The Annual Review Of Financial Economics*, 7, 35–54. <https://doi.org/10.1146/annurev-financial-110613-034357>
- Villalonga, B., Amit, R., Chung, W., Demsetz, H., Esty, B., Faccio, M., ... Yeung, B. (2006). How do family ownership , control and management affect firm value ? \$. *Journal of Financial Economics*, 80(2006), 385–417. <https://doi.org/10.1016/j.jfineco.2004.12.005>
- Widarjono, A. (2009). Ekonometrika pengantar dan aplikasinya. Yogyakarta: Ekonisia.
- Wulandari, S., & Aris, M. A. (2018). *Pengaruh Pertumbuhan Laba, Size, Leverage, Investment Opportunity Set, Dan Good Corporate Governance Terhadap Kualitas Laba (Studi Empiris Perusahaan Manufaktur terdaftar di Bursa Efek Indonesia Periode 2013-2015)*. Universitas Muhammadiyah Surakarta.
- Yendrawati, R., Adhianza, F. R., Ekonomi, D. F., Islam, U., Fakultas, A., Universitas, E., & Indonesia, I. (2013). Faktor-Faktor Yang Berpengaruh Terhadap Set Kesempatan Investasi (IOS) Pada Perusahaan. *Jurnal Inovasi Dan Kewirausahaan*, 2(1), 32–41.
- 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.