



Determinants of Investment Decisions with Growth Opportunities as Moderating Variable

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ABSTRACT

This study aims to test growth opportunities in moderating the effect of cash flow, investment opportunities and profitability on investment decisions. The population in this study amounted to 10 oil and gas mining companies listed on the Indonesia Stock Exchange (IDX) for the period 2012-2016. The sample selection used a purposive sampling method to obtain 45 units of analysis from 9 companies. The data collection method used in this research is documentation technique. The research data analysis used descriptive statistical analysis and absolute difference test with SPSS 21. The results showed that cash flow has a significant negative effect on investment decisions. Investment opportunities have no influence on investment decisions. Profitability has a significant positive effect on investment decisions. Growth opportunities are proven to mediate the influence of cash flow on investment decisions and the influence of profitability on investment decisions. The conclusion of this study is that the company's investment decisions are directly influenced by cash flow and profitability. The next finding, growth opportunities proved to be able to mediate the effect of indirect cash flow on investment decisions and profitability on investment decisions.

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INTRODUCTION

Corporate growth is an expectation desired by all parties, both by internal party, namely management, as well as external parties such as investors and creditors. This growth is expected to be able to provide positive aspects for companies such as the opportunity to invest in the companies.

The prospect of a company that grows for investors is a profitable prospect, because the investment invested is expected to give a high return (Saputro and Hindasah, 2007). Increased economic development requires company management to be able to work more effectively and efficiently in order to maintain the stability of the company and its survival in business competition which is getting tighter, especially for go public companies in the capital market (Endiana, 2017). The movement of the capital market reflects the economic conditions of a country and the movement of capital markets is reflected by investor behaviour in making investment decisions (Ilham Masrurun & Heri Yanto, 2015).

Investment is an economic activity that is impor-

tant in managing corporate finances. Companies decide to invest because it expects benefits to be obtained in the future, such as increasing production of goods and services, expanding market share, earning profits and so on (Sandiar, 2017). Investment decision is an important factor in the function of corporate finances. Fama (1978) stated that company value is solely determined by investment decisions. This opinion can be interpreted that investment decisions are important, because to achieve corporate goals, namely maximizing the prosperity of shareholders will only be generated through corporate investment activities.

According to *detikfinance.com*, Minister of Energy and Mineral Resources Ignasius Jonan explained that the decline in investment could not be separated from world crude oil prices. In 2011-2012, the world crude oil price reached US \$ 100 per barrel. The increase in crude oil prices has an effect on investment decisions afterwards. So that it can be said that the decline in world crude oil prices caused a decline in oil and gas exploration investments which also reduced investment decisions. Most oil and gas companies make efficiency, including investment spending. As soon as the price of crude oil falls, it will affect the increase in investment decisions. The investment decisions made for oil and gas exploration are also often late, namely during the period

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after high oil prices.

The following is the decrease of investment in oil and gas exploration in Indonesia for the 2012-2016 period, which can be seen from the Table 1.

Table 1. The Decrease of Oil and Gas Exploration Investment in Indonesia

Years	Total Investments
2012	1.3 US\$ Billion
2013	1.4 US\$ Billion
2014	1.1 US\$ Billion
2015	0.5 US\$ Billion
2016	0.1 US\$ Billion

Source : katadata.co.id based on SKK Migas, Ministry of Energy and Mineral Resources (processed), 2018

Based on the data in table 1, it can be seen that the decline in investment in exploration of the oil and gas sector in Indonesia over a period of five periods (in 2012-2016) in American Dollar units has fluctuated. Oil and gas exploration and production activities are one form of profit-oriented business ventures. Reporting from the site *katadata.co.id*, according to SKK Migas of the Ministry of Energy and Mineral Resources states that the main problem for national companies, both private and state-owned enterprises is to seek new oil and gas fields is funds for investment in the production of new wells. This is due to the enormous costs and drilling for oil needed by highly skilled staff and very expensive technology. There are six factors that cause a decrease in investment, namely (1) the decline in oil prices, (2) the period of discovery until production takes 15 years, (3) the control of land acquisition and long bureaucratic licensing, (4) given low returns, (5) constraints to the extension of WK (Work Area) and legal certainty and (6) reserve replacement ratios and low exploration success.

Cash flow is an internal funding source for a company (Fazzari *et al.*, 1988). The results of research conducted by Zeila *et al.* (2008), Odit and Chitto (2008), Nguyen and Dong (2013) and Zaki (2013) show that cash flow has a positive and significant influence on investment decisions. Unlike the results of research by Ogilo and Ali (2015) and Prasetyantoko (2006) which show that cash flow has a negative influence on investment decisions

Investment opportunity is a part that influences a company in making capital expenditure decisions. The results of Nguyen and Dong (2013), Jummulyanti and Linda (2015), and Endiana (2017) studies show that investment opportunities have a positive effect on investment decisions. Prasetyantoko's research (2006) shows that investment opportunities have a negative effect on investment decisions. It is different from the results of Zaki's research (2013) that investment opportunities do not affect on investment decisions.

Profitability is an indicator of the company's management performance in managing corporate wealth as indicated by company-generated profits (Saragih, 2008). The results of the research by Odit and Chitto (2008), Ogilo and Ali (2015) and Endiana (2017) show that profitability has a positive and significant effect on in-

vestment decisions. In contrast to the results of the research by Saragih (2008) shows that profitability has a positive and insignificant effect on investment decisions

The purpose of this study is based on exposure to gap phenomena, research gaps, and theoretical support stated above to analyze the effects of cash flow, investment opportunities and profitability on investment decisions that are moderated by growth opportunities. The results of previous studies that are inconsistent show that there are influences of other variables that can influence the relationship of independent variables to dependent variables. The originality in this study uses the moderation regression analysis technique with an absolute difference test.

This study uses growth opportunities as a variable because it reflects opportunities or chances to grow in the company in the future and based on previous research shows that growth opportunities consistently influence on investment decisions. Corporate growth opportunities that show a positive trend are expectations that are highly desired by internal party of the companies, namely management and external parties of the companies, namely investors and creditors.

This study is based on the theory of pecking order assumptions. Pecking Order Theory proposed by Myers and Majluf in 1984 in Zaki (2013) stated that companies prefer funding from internal sources because the costs are cheaper. If external funds are needed, the companies will choose debt because it is seen as safer than issuing new equity as an option to meet investment needs. P The next option is the issuance of convertible bonds and subsequently the issuance of a new equity as the last option. Pecking order theory essentially reveals the level of order preference of managers in choosing the source of funds used to support corporate activities.

Corporate cash flow is an important determinant for growth opportunities. If the companies have sufficient cash inflows can be used for investment activities (Odit and Chitto, 2008). Reviewed from agency theory with high liquidity, the companies have a greater opportunity to invest in capital expenditure, namely investment in fixed assets such as land or property, buildings, and equipment. However, with high corporate liquidity will be sensitive to agency conflict. According to this theory, managers are pleased to use internal capital to finance investments because of capital internal is able to reduce supervision involvement from shareholders or external parties to investment decisions made by managers. Managers also prefer to store free cash flows instead of sharing them with shareholders. The higher the free cash flows, the greater the manager's freedom to control the company's resources (Hidayat, 2010).

H₁ : Cash flow has a significant positive effect on investment decisions.

Investment Opportunity Set is a component of company value which is the result of choices to make investment in the future. This means that company value is able to influence investment decision in the next period. High corporate value indicates that the stock pri-

ce at that time is also high and this reflects the breadth of opportunity of the company's investment. The higher the stock price, it will be easy for companies to attract investors to buy the corporate stock, so that it will have an impact on the increase of the corporate capital where the addition of capital can be used by companies to invest so that they can add assets to the company (Smith and Watts, 1992).

This can be attributed to financial theory, namely pecking order theory proposed by Myers and Majluf (1984), that the second order of resources after internal financing is external financing. That means that in addition to funds from within, companies can also get funding from outside the company. Sources of funding from outside the company are funds originating from the parties of banks, insurance, ordinary shares and other creditors.

H₂ : Investment opportunities have a significant positive effect on investment decisions

Profitability is the end result of a number of company management policies and decisions. Thus, it can be said profitability is the ability of a company in obtaining net income from activities carried out on accounting period. If the profit generated by a company is high, then the company can allocate it to invest in the next period. That means profitability is closely related to earnings obtained by the company and will affect the availability of retained earnings that will be used to meet investment needs (Weston and Copeland, 1996).

The theory that underlies the relationship between profitability and investment decision is pecking order theory proposed by Myers and Majluf (1984), that financial managers will use the profits obtained especially first for investment activities, according to priority scale.

H₃ : Profitability has a significant positive effect on investment decisions

Companies with high growth opportunities tend to do investment to support its growth. Corporate investment is related with corporate funding. The greater the opportunity for investment, the more likely the company will use external funding sources specifically debt if the internal equity from retained earnings is insufficient.

(Sandiar, 2017). Fazzari (1988) stated that cash flow is a source of internal funding for the company. When internal funding is not sufficient for investment activities, it is probable that the company uses external financial sources, especially debt.

This is in line with the pecking order theory that companies prefer funding from internal sources because the costs are cheaper. If external funds are needed, the company will choose debt because it is seen as safer than issuing new equity as an option to meet investment needs.

H₄ : Growth opportunities moderate significantly the effect of cash flow on investment decisions.

The opportunity to obtain future profits with investment activities carried out by the company will greatly affect the investment decisions that will be taken by the company. Investment opportunities owned by high companies and supported by the opportunity to grow owned by the company in the future, the greater the chance for companies to make decisions to maximize the investment opportunities (Endiana, 2017).

Indirectly, investment opportunities suggested by Smith and Watts (1992) are indicated by the company's stock price which is an external source of funding. That way, if the stock price is high then it can be used to increase the company's capital to invest. Based on the pecking order theory proposed by Myers and Majluf (1984), that the second order of sources of funds after funding sources from within company (internal financing) is a source of funding from outside the company (external financing).

The existence of growth opportunities will also strengthen the positive relationship between investment opportunities and investment decisions. The higher the growth opportunities, the higher the investment decision, and vice versa. In accordance with Myers (1977) about the concept of investment opportunity set (IOS) that companies will have opportunities to grow (growth opportunities) if the current selected investment can provide benefits in the future.

H₅ : Growth opportunities moderate significantly the effect of investment opportunities on investment decisions.

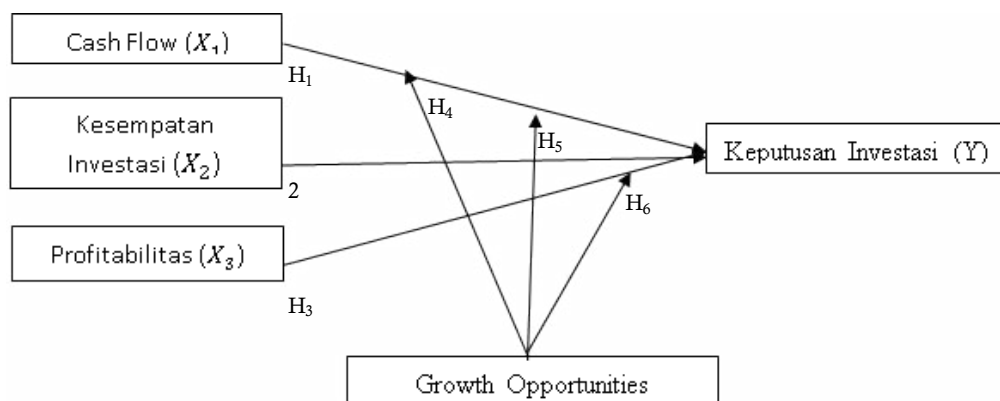


Figure 1. Research Model

The company's ability to obtain profit in operational activities will affect the investment decisions taken by the company. The higher the company's ability to earn profits and supported by the opportunity to grow in the future, the company will use the opportunity to invest as much as possible (Endiana, 2017).

The prospect of a company that is growing for investors is a profitable prospect. This is related to the signaling theory that companies with favourable prospects will avoid selling shares and seek additional capital with the use of debt, so that they are seen as a positive signal for outside investors, while companies with less profitable prospects should sell shares, which means looking for new investors as friends to share losses, and is a negative signal for investors. The existence of growth opportunities will strengthen the positive relationship between profitability and investment decisions.

H₆ : Growth opportunities significantly moderate the influence of profitability on investment decisions.

Based on the framework above, the research mo-

del can be seen in Figure 1.

RESEARCH METHOD

This research was a type of quantitative research using secondary data. The research data was in the form of financial statements of the oil and gas mining companies in the Indonesian Stock Exchange's official website (www.idx.co.id). The population used was oil and gas mining companies listed on the Indonesia Stock Exchange during 2012-2016 with a total of 10 companies. The sample selection used a purposive sampling method. Determination of the sample based on the criteria obtained as follows Table 2.

The technique of data collection was done by the method of documentation on the company's audited financial statements. Testing the research hypothesis used moderating regression analysis by using absolute difference value. Classical assumption testing was done before testing the research hypothesis so that the test results met the BLUE criteria (Best Linear Unbiased Estimated). The model used in this study can be formulated as follows Table 3. Table 3 presents the

Table 2. Determination of Research Samples

Sample Criteria	Beyond Criteria	Number
Oil and gas mining sector companies listed on the Indonesia Stock Exchange for the period 2012-2016		10
Companies that publish annual Financial Statements in a row from 2012 – 2016	(1)	9
Companies publish incomplete financial statements on the Indonesia Stock Exchange during the study period.	(0)	9
Number of companies sample		9
Number of samples during the year 2012-2016 (9 x 5)		45
Data outlier		(9)
Number of Unit of Analysis during the study period		36

Source : Secondary data processed, 2018

Table 3. Operational Definition of Variables

No	Variables	Variable Definition	Measurement
1.	Investment Decisions	The difference in total assets for the current year with the total assets of the previous year which is then divided by the total assets of the previous year	TA = total asset t - total asset t-1 / total asset t-1
2.	Cash Flow	Cash flow what is meant by this research is cash flow from operating activities. Operating cash flow is the company's cash flow from the company's operating activities. The cash flow ratio in this study is measured by comparison of operating cash flows with total assets.	CF = Net profit + Depreciation / Total Assets
3	Investment opportunity	Companies that have a high book to market ratio (BM) explain or identify low investment opportunity for companies as well as a low book to market ratio (BM) which explains high opportunity for corporate investment.	BM = Book Value of Equity / Stock Market Value
4	Profitability (Return on Assets)	Ratio to assess a company's ability to generate profits	ROA = Net Profit / Total Asset
5	Growth opportunities	Tobin's Q is the ratio of the total debt book value plus the market value of equity to the book value of total assets. High Tobin's Q value means that the company's growth rate is also high in the future based on investor expectations	Tobin's Q = Book Value of Total Debt + Equity Market Value / Total Asset Book Value

Source: Secondary data processed, 2018

variables, understanding, measurement, and scale that are used based on previous research as references.

$$TA = \alpha + \beta_1 CF + \beta_2 BM + \beta_3 ROA + \beta_4 |CF - TOBIN'S Q| + \beta_5 |BM - TOBIN'S Q| + \beta_6 |ROA - TOBIN'S Q| + e \dots\dots\dots(1)$$

RESULTS AND DISCUSSIONS

Classical assumption tests carried out include normality, multicollinearity, autocorrelation, and heteroscedasticity tests and declared free from problems so that further testing can be carried out, namely testing the research hypothesis. The result of the Kolmogorov-Smirnov normality test show the value of Asymp. Sig. (2-tailed) of 0.733 which is greater than the 0.05 significance level so that it can be concluded that the residual data is normally distributed. The result of the multicollinearity test, the tolerance values of all independent variables are greater than 0.10 and the VIF values are smaller than 10, so it can be concluded that the regression model does not have multicollinearity. The autocorrelation test results using the Durbin - Watson value of 2.160 is greater than the upper limit (du) 1.7245 and less than 4 - 1.7245 (4 - du), it can be concluded that there is no autocorrelation. This study uses a Gletser test to examine for heteroscedasticity. The result of the Gletser test shows that the level of significance of all the independent variables are greater than 0.05. Thus, the regression model does not have heteroscedasticity.

The test result of the coefficient of determination shows that the adjusted R² is 0.777. This shows that the research model used is able to explain 77% of the variation in the company's investment decisions. Hypothesis testing based on the model used in this study can be formulated and the results summarized can be seen in Table 4.

$$TA = 0.143 - 0.404CF + 0.174BM + 0.564ROA - 0.877 |CF - TOBIN'S Q| - 0.877 |BM - TOBIN'S Q| + 0.856 |ROA - TOBIN'S Q| \dots\dots\dots(2)$$

The Effect of Cash Flow on Investment Decisions

The result of the study based on table 4 shows H₁ which states that cash flow has a significant positive effect on investment decisions, rejected. This result can be interpreted that cash flow has a significant negative effect on investment decisions. The increase in cash flow does not affect the decline of investment decisions made by the company. The result of this study does not support the research hypothesis which states that cash flow has a positive effect on investment decisions.

Fazzari (1988) stated that cash flow is an internal funding source for the company. When there is insufficient internal funding for investment activities, then it is likely that the company uses external funding sources, especially debt. Increasing funding with debt will reduce the conflict between shareholders and management which known as an agency problem, besides that debt will also reduce the excess cash flow in the company, thereby reducing the possibility of waste carried out by management (Jensen, 1986 in Margaretha and Asmariani, 2009).

According to agency theory, managers prefer to use internal capital to finance investments because internal capital can reduce the involvement of monitoring by shareholders or external parties on investment decisions made by managers. Managers tend to choose projects that are more difficult to be monitored by outside parties, so as to provide greater flexibility for the managers to make decisions that benefit them (Hidayat, 2010)

The Effect of Investment Opportunities on Investment Decisions

The result of the study based on table 4 shows that H₂ which states that investment opportunity has a positive and significant effect on investment decisions is rejected. The result can be interpreted that investment opportunities do not affect on investment decisions. Increased investment opportunities do not affect higher investment decisions of the companies. The result of this study does not support the research hypothesis which states that investment opportunities have a positive ef-

Table 4. Results of Hypothesis Testing

No	Hypothesis	Explanation	Coefficient	Sig.	Results
1	H1	cash flow has a significant positive effect on investment decisions	-0.404	0.012	Hypothesis Rejected
2	H2	Investment opportunities have a significant positive effect on investment decisions	0.174	0.131	Hypothesis Rejected
3	H3	Profitability has a significant positive effect on investment decisions	0.563	0.001	Hypothesis Accepted
4	H4	Growth opportunities moderate significantly the effect of cash flow on investment decisions	-0.877	0.001	Hypothesis Accepted
5	H5	Growth opportunities moderate significantly the effect of investment opportunities on investment decisions	0.166	0.825	Hypothesis Rejected
6	H6	Growth opportunities significantly moderate the effect of profitability on investment decisions	0.855	0.001	Hypothesis Accepted

fect on investment decisions.

According to the pecking order theory proposed by Myers and Majluf (1984), that the second order of sources of funds after funding sources from within company (internal financing) is a source of funding from outside the company (external financing). That means that in addition to funds from within, the companies can also get funding from outside. Sources of funding outside the companies are funds originating from banks, insurances, other creditors, and also ordinary shares which are part of the company's value.

The Effect of Profitability on Investment Decisions

The result of the study based on table 4 shows that H_3 which states that profitability has a positive and significant effect on investment decisions, accepted. The result can be interpreted that profitability affects on investment decisions. This shows that the higher the profitability, the investment decisions made by the company are also getting higher. The positive coefficient value of this study shows that the higher the profitability, the higher the company will be to be able to allocate it to make company investments. This is because companies with favorable prospects will tend utilizing internal funds sourced from profits compared to debt (external funds).

The result of the study is in accordance with the Pecking Order Theory which states that the hierarchy of funds usage starts with internal funds especially first used then external funds if internal funds are insufficient. The companies will prioritize the use of internal funds for their investment needs and operational activities so that if they have enough internal funds, they will not use external funds to meet funding needs.

Growth Opportunities Moderate the Effect of Cash Flow on Investment Decision

The test result presented in table 4 shows that H_4 which states that growth opportunities moderate the effect of cash flow on investment decisions is accepted. This shows that growth opportunities can moderate the influence of cash flow on corporate investment decisions. This shows that the greater the corporate cash flow to be allocated into investment activities, the greater the company's opportunity to grow.

The theory that underlies the relationship between cash flow and investment decisions moderated by growth opportunities is pecking order theory. If cash flow is enough to finance investment activities so there is no need to use external funding source. The greater the cash flow owned by the company which is growing, the greater investment will be made by the company.

Growth Opportunities Moderate the Effects of Investment Opportunities on Investment Decisions

The test result presented in table 4 shows that H_5 which states that growth opportunities moderate the effect of investment opportunities on investment decisions is rejected. The result of this study indicates that growth

opportunities are not able to moderate the effect of investment opportunities on investment decisions.

Pecking Order Theory becomes the basis of this hypothesis. Investment opportunity is a component of company value reflected in price stock. If the stock price is high as the second source of funds after the corporate internal funds, the level of investment made by the company is too high. This certainly has an impact on the greater the company's opportunity for grow in the future. With results that are not significant in this hypothesis, the companies will choose to use internal funds in line with pecking order theory to reduce risk that using debt that is considered to be too risky for the companies.

Growth Opportunities Moderate the Effect of Profitability on Investment Decisions

The test result presented in table 4 shows that H_6 which states that growth opportunities moderate the effect of profitability on investment decisions is accepted. This shows that growth opportunities are able to significantly moderate the influence between profitability to corporate investment decisions. This shows that the bigger the level of corporate profitability to be allocated into investment activities, the greater the company's opportunity to grow.

The prospect of a company that grows for investors is a profitable prospect. This is related to the signaling theory that companies with profitable prospects will avoid selling shares and strive to increase capital with the use of debt, so that seen as a positive signal for outside investors, while the companies with disadvantageous prospect should sell shares, which means looking for new investors as friends sharing losses, and is a negative signal for investors.

CONCLUSIONS

The conclusions that can be drawn from the results of this study are that cash flow has a significant negative effect on investment decisions, investment opportunities have no effect on investment decisions, profitability has a significant positive effect on investment decisions, growth opportunities significantly moderate the effect of cash flow on investment decisions, growth opportunities does not significantly moderate the effect of investment opportunities on investment decisions, and growth opportunities significantly moderate the effect of profitability on investment decisions. Investment opportunity variable does not affect investment decisions even growth opportunities are not able to moderate them. The effect of cash flow on investment decisions also gets result that is contrary to the research hypothesis, including moderated by the growth opportunities variable. For further research it is expected to be able to add research variables and research samples.

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