



The Effect of Micro and Macroeconomic on Investment Opportunity: Evidences in ASEAN Countries

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Abstract

The purpose of this study is to obtain results: the influence of micro and macroeconomic factors of the company on investment opportunities. This research is conducted in five ASEAN countries, such as; Indonesia, Malaysia, Singapore, Thailand, and the Philippines (ASEAN-5). The microeconomic factors are measured by firm size, financial risk, profitability, and debt policy. The macroeconomic factors are measured by interest rates, exchange rates, inflation, and economic growth. The analysis unit of this study is 175 large capacity manufacturing industries listed on ASEAN-5 stock exchanges for the 2012-2017 period. The data analysis technique used is panel data regression analysis. The result shows that the Debt Equity Ratio has a negative and significant effect on investment opportunities in Microeconomic influence for the ASEAN-5 Countries. Risk does not have a significant effect on investment opportunities. Profitability is insignificant for the ASEAN-5 Countries and is significant for the State of Singapore, Thailand. Firm Size is significant for Indonesia, Malaysia, Singapore, and the Philippines. GDP growth has a significant effect on investment opportunities for the ASEAN-5 countries. The interest rate has harmed the opportunities of investment in Indonesia, Malaysia, and Singapore. Inflation has a negative and significant effect in Indonesia, Malaysia, Thailand, and the Philippines. Exchange rates are significant for Indonesia, Malaysia, and Singapore. Investment opportunities have a positive effect on the value of the company in ASEAN-5 Countries. The benefits of this study for creditors are as a guideline for disbursing credit, and for investors it is as a guideline for placing capital investments in companies that have favorable debt and equity considerations in five (5) ASEAN Countries.

Keyword: Investment Opportunities; Macroeconomic Factors; Microeconomic Factors; Value of the Firm; ASEAN

1. INTRODUCTION

The similarity in macroeconomic conditions can have the effect of transmission if one country experiences a crisis. The crisis caused by macroeconomic similarity is generally triggered by financial market players. Shiller (2010), developed a model to explain one mechanism of the effects of transmission through the similarity of macroeconomic conditions. According to him, financial market players actually received a lot of the same information from a source of information, so that a reaction or a new piece of information could spread

throughout the world in a short time and deliver messages to international market participants to carry out the same reaction. This possibility can occur if the response taken by some market participants is able to overcome market confidence and change market expectations. Thus, an attack on a currency can stimulate international market participants to take the same action. Vice versa, the reaction taken by international market players can encourage local market players to take the same actions.

In 2008, the crisis happened in America that impacted the debt crisis in several countries in Europe, caused the European currency exchange rate fell to the lowest point in the last 4 years to \$ 1.2237 US per 1 Euro. It is a negative economic growth, which not only affects the performance of the stock exchange in the European region but also beyond Europe, such as the stock exchange in the Asia Pacific region. Although the Asian region is considered as an area with better economic growth prospect than United States and Europe, in 2011 the domino effect of Europe's debt crisis was increasingly felt in Asia, including in the Southeast Asia region.

Balance Sheet Effect is an approach that states how macroeconomic fluctuations are also affected by the balance conditions in micro sector. Allen et al (2004) explained that the financial structure of many developing countries is a source of fragility and crisis. Another effect of the global financial crisis on the macroeconomic is in terms of interest rates. With the instability of the dollar exchange rate, interest rates will rise as the central bank will hold its currency that makes the inflation increase. The combination of the influence of the high dollar exchange rate and high-interest rates will also have an impact on the investment sector and the real sector. The investments in the real sector for instance property and small and medium-sized businesses (SMEs) in semester terms will be severely disrupted. Its influences on investment in the capital market will make people lose interest to choose the capital market as an attractive place to invest due to unfavorable macro conditions (Adiwarman, 2008).

Microeconomic factors of the company that are used in this study are Albreth & Richardson (1990) and Lee & Choi (2002). The author has found that larger companies are lacked in the drive to make distributed income compared to small companies because people see larger companies as more critical. Taichi Makia et al (2005) and Evica Petrovic et al (2009) found that there is a significant positive relationship between company risk and investment opportunity while Ahmed Rivai and Belkaoui's (2002) research on 100 manufacturing companies in America from 1987 to 1992 found out that profitability has a significant positive effect on investment policy. Gull and Jaggi (1999) found the relationship between free cash flow and debt policy is different between companies with low IOS and companies with high

IOS. Smith and Watts (1992) empirically found evidence that companies have greater chance on having a lower debt to equity ratio in their capital structure policy because of their capital funding (equity financing) tend to reduce agency problems that are potentially associated with the company's free cash flow. Meanwhile, research that examines the relationship between Macroeconomic factors of companies and investment opportunities has different results. Several other researchers such as Nkurikiye et al (2016), Chris O Udoka (2012), Anne Muthauro (2012) found a positive and significant relationship between interest rates and investment policies while different results are found by Sulaiman D. Muhammad et al (2013) that interest rates have a significant negative effect on Investment policy, and Onyemaechi Joseph Onwe (2014) found that there is no significant effect of interest rate to investment policy. While Nkurikiye Jean Boscoa et al (2016), Aurangzeb (2012), Akintunde Temitope et al (2013), Adigwe et al (2015), Sasi Iansiraroj (2016) and Qaiser Abbas et al (2011) found that economic growth has a significant positive effect against investment opportunities. Other results are obtained from Sulaiman D. Muhammad et al (2013) and Onyemaechi Joseph Onwe (2014) who found a significant negative correlation between economic growth and investment opportunities.

This study uses manufacturing companies as the research objects starting from 2012-2017. The reason researchers choose this type of company because manufacturing companies have bright predictions in the future and by looking at the potential population that continuously grows, the increasing number of developments in the housing sector, apartments, shopping centers, and office buildings that make investors become interested in investing their funds, therefore the prospect of stock trading is expected to continually increase. Another reason for choosing these companies engaged in the manufacturing sector is because the manufacturing sector is the most vulnerable sector in the macro industry against fluctuations in interest rates. From the macroeconomic perspective, the manufacturing industry has a very broad business opportunity that can affect stock prices in trading on the capital market. The manufacturing sector is an essential part of the economy, so the profits obtained will be linked to the macroeconomic and business conditions.

The contribution of the national manufacturing industry sector to the gross domestic product (GDP) is high confidential, the amount of the role of bringing Indonesia's manufacturing capability into the ranks of the country with the largest industrial contribution to the structure of GDP seen on the contribution (industrial sector) to the GDP. Growth in the industrial sector has some effects, it includes the expansion of employment.

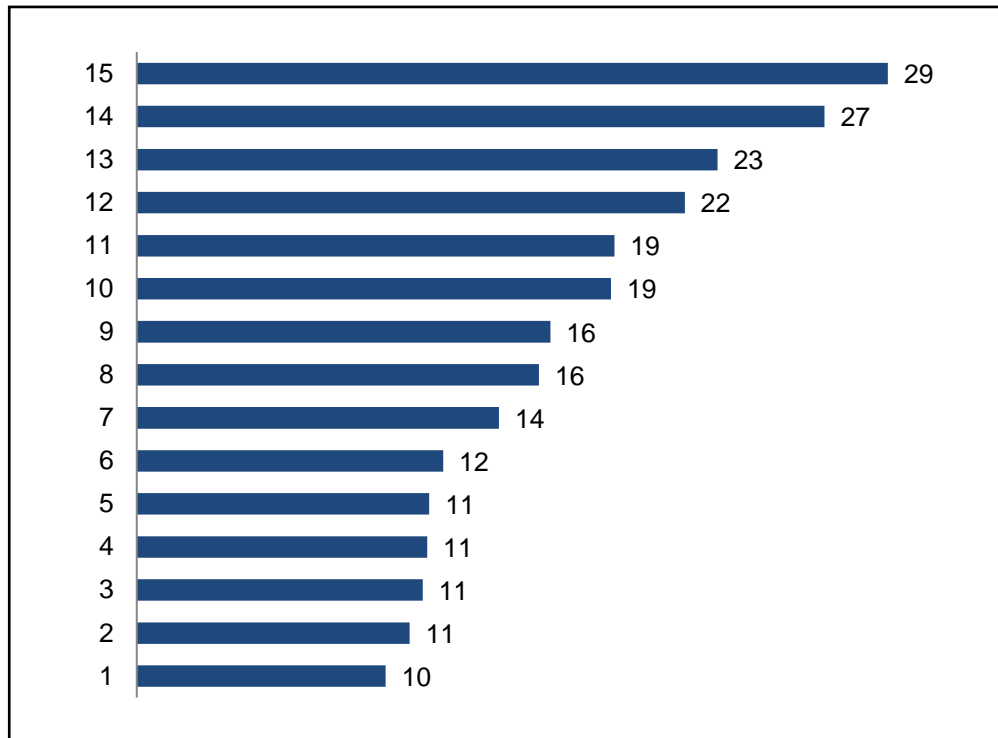


Figure 1. Contribution of the Manufacturing Sector to GDP
 Source : United Nations Statistics Division, 2017

Based on the research background, the theme of this research is: to analyze the influence of micro and macroeconomic factors of companies on Investment Opportunity Set (IOS) for manufacturing companies of ASEAN-5 Countries.

1.1. Literature Review

a. Investment Opportunity Set (IOS)

Myers (1977) stated that companies are a combination of assets in place and future investment options. This future investment option is then known as investment opportunity set (IOS). Investment options are an opportunity to develop, but companies may not always carry out all investment opportunities in the future. For the companies that can not use the investment opportunity, they will experience a higher expenditure compared to the value of the opportunity lost. The value of investment opportunities is the present value of the company's choices to make investments in the future.

According to Smith and Watts (1992), investment opportunity sets are the result of choices for making the investments in the future. Investment opportunity sets show the ability of companies to advantage the growth prospects. Growth prospects are an expectation desired by management, investors, and creditors. The prospect of a growing company for investors is a profitable thing, because the investment is expected to provide high returns.

Growing companies will be responded by markets and growth opportunities can be seen in investment opportunities proxied by various combinations of investment opportunity set values.

b. Firm Size

The size of the firm shows the scale of the company. The size of the firm can be measured by the total assets (assets) of the company (Machfoedz: 2006 in Widaryanti, 2009: 275). Assets according to Kieso (2011: 192) are as follows: "assets are a resource controlled by the results of past events and from which future economic benefits are expected to flow to the entity." The statement explains that assets are resources that are controlled by a company as a result of past events and are expected to receive future economic benefits for the company.

The size of the firm is very influential on investment, especially related to the ability to get a loan. Large companies are more diversified, more easily enter the market, receive a higher credit rating for the debts they issue, and pay lower interest rates on their loan funds (Mariyam 2009: 89).

c. Financial Risk

Financial leverage is the use of a source of funds that has a fixed burden in the hope that it will provide additional benefits that are greater than the fixed expense, thereby increasing the profits available to shareholders. Corporate financial leverage shows the level of earnings per share variability due to uncertainty of net income before interest and taxes, or degree of financial leverage (DFL), which measures the sensitivity of earnings per share to changes in net income before interest and taxes. Financial risk is the variability of earnings to be received by shareholders and financial leverage is one of the factors that affect financial risk. The use of higher financial leverage will result in high fixed capital costs, and also high financial risk. Thus the higher the degree of financial leverage (DFL) the higher the financial risk.

Baye (2006: 157) mentions that there are several factors or sources of business uncertainty that can pose risks, including: First is the general macroeconomic conditions that can cause a company's business ups and downs. Second is the ups and downs that occur in certain industries where companies and managers operate. Sluggishness in an industry is often related to the economic crisis that hit a particular industry or the industrial cycle has reached the stage of maturity. Third is the actions and reactions of competing companies that cannot be predicted with certainty. The actions and reactions of competing companies determine the level of competition between companies in the

industry. The fourth is unexpected changes in tastes and preferences of consumers, as in industries whose life cycle is very fast. Fifth is uncertainty originating from the supply side, changes in costs and expenses associated with changes in input prices used in the production process. Changes in raw material prices, electricity and telephone tariff increases, oil price increases, unexpected increases in minimum wages can cause uncertainty for companies.

d. Profitability

Profitability according to K.R.Subramanyam (2010: 09), "a summary of the net results of operating activities in a certain period stated in financial terms". Meanwhile, according to G. Sugiyarso and F. Winarni (2005: 118) "profitability is the ability of companies to make profits in relation to the sale of total assets and own capital". According to Greuning (2005: 29) "profitability is an indication of how a company's profit margins relate to sales, average capital, and average ordinary stock equity". Profitability is the result of profits earned by the company in a certain period in which the profits of a company associated with all sales, capital and shares, where the profit is measured in an indication of the company's sales in order to get profits or profits derived from sales. assets.

There are several ways to measure profitability including Gross Profit Margin, Net Profit Margin, Return On Assets, Return On Equity, Profit Margin, Profitability and Earning Power. In this study profitability is measured by Return On Equity (ROE). Return On Equity (ROE) is a ratio to measure net income after tax with own capital. The higher this ratio, the better the profitability level of the company.

e. Debt Policy

Capital is classified into two types, namely: debt and equity. Debt has advantages in the form of (Brigham and Gapenski, 2006: 82):

- 1) interest reduces taxes so that debt costs are low,
- 2) creditors get limited returns so shareholders do not need to share profits when business conditions are advancing,
- 3) creditors do not have voting rights so that shareholders can control the company with a small investment.

However, debt also has weaknesses, namely:

- 1) debt is usually of a certain period of time to be paid on time,
- 2) a high debt ratio will increase risk which will further increase capital costs,
- 3) if the company is in difficult conditions and its profits cannot meet interest expense then it is possible to carry out liquidation actions.

The debt and equity mix for corporate funding is the main subject of capital structure decisions. An efficient capital mix can reduce the cost of capital, which can increase the net economic return and increase the value of the company. Companies that only use equity are called "unlevered firm", while those that use equity mix and various types of debt are called "levered firm".

f. Interest Rate

Interest rates are the value, level, price or profit given to investors from the use of investment funds on the basis of calculating the economic value within a certain time period. Bank interest rates are used to control a country's economy. According to Brigham (2001: 158), interest rates are the price that must be paid on loan capital, and dividends and capital gains that are the result of equity capital.

Interest rates provide a profit from the amount of money lent to other parties on the basis of time and economic value calculations. High and low profits are determined by the high and low interest rates. The function of interest rates in the economy are as follows:

- 1) Help the flow of current savings toward investment to support economic growth.
- 2) Distributing the amount of credit available, in general providing credit funds to investment projects that promise the highest returns.
- 3) Balancing the money supply with the demand for money from a country.
- 4) An important tool concerning government policy through its influence on the amount of savings and investment. (Sunariyah, 2013: 80)

g. Exchange Rate

Exchange rate is a comparison between the price of a country's currency against other country's currencies. The exchange rate is also the price of an asset, so the principle of regulating the price of other assets is also applied in exchange rate regulation. Because of the exchange rate is the price of an asset, the determination of the exchange rate using an approach depends on the analysis of asset demand and supply (Mishkin, 2009 cited by Pranandari, 2015: 59). Demand for assets is determined by investor expectations regarding the future value of the asset. If domestic and foreign investors estimate that the return on assets in domestic currency will be relatively lower than assets in foreign currencies, the demand for assets in domestic currency will be low. Thus the domestic currency will weaken or depreciate if there is an increase in the exchange rate (foreign exchange) of the domestic currency. The weakening of the local currency exchange rate against the dollar will have an impact on the decline in the stock price index. When the

domestic currency depreciates, investors will lose so they will withdraw from the capital market.

h. Inflation

Inflation is a macro fundamental factor of macroeconomic indicators that illustrates an unhealthy economic condition, because the prices of goods in general increase so that it weakens people's purchasing power. The price of goods will always experience a change, usually in the form of an increase. But if the increase only occurs for one or two items it cannot be called inflation. Changes in the form of increases in prices of goods in general and take place continuously, in economic terms is called inflation (Sadono, 2000: 82).

According to Pranandari (2015), inflation is the increase of price that occurs in general and continuously. If inflation occurs, it will increase the production costs of goods and services so that it can cause a decrease in profits generated by the company. The decline in the profit will affect in a decrease in dividends and also returns. This will reduce the expected return, in other word, it can cause a decrease in the demand for shares of a company. The decline in demand for stocks will cause a decline in stock prices and have an impact on decreasing investment. An increase in high prices will cause high inflation, this condition will affect the increase in production costs. High production costs will cause the selling price of manufactured goods to rise, and this will reduce people's purchasing power because the real income of the community also decreases. Declining public purchasing power results in a decline in company sales, and a decline in company sales will reduce company profits. If the company's profit decreases, then it can be said the company's performance also decreases.

i. Economic Growth

Economic growth describes the material standard of living which increases over time (one year) for the lives of people in a country that comes from increasing incomes, thus allowing people to consume more and varied amounts of goods and services (Mankiw, 2003: 173) . To measure economic growth, economists use gross domestic product (GDP) data, which measures the total income of each person in the economy. Gross Domestic Product (GDP) is often considered the best measure of economic performance.

The goal of GDP is to summarize economic activity in the value of a single money over a certain period of time (Mankiw, 2003: 173). To see GDP statistics there are two ways, namely; (1) GDP as the total income of everyone in the economy, (2) GDP as total expenditure on output of economic goods and services, so, from the second perspective, it is clear that GDP is a reflection of economic performance.

1.2. Hypothesis Framework

a. Effect of Size of the Firm on Investment Opportunities

Large companies find it easier to obtain loans, that gives the greater usage of asset value, and banks' trust level is also higher and easier to invest. Therefore, in investment research, one of the determining variables is the firm size. Peasnell, Pope, and Young (1998) have shown a negative relationship between the firm size and earnings management in the UK. Albrecht & Richardson (1990) and Lee & Choi (2002) found that larger companies lacked in the drive to make income smoothing compared to small companies because people see that larger companies are more critical by for them. However, if earnings management is efficient, the greater the firm size, the higher the profit management. It will also encourage investment. Firm size is a reflection of the size of the company's wealth (Fraser, 2006). This variable is measured using natural log of sales (Moh'd Perry and Rimbey, 1995).

b. Effect of Financial Risk on Investment Opportunities

Financial risk is the variability of earnings that will be received by shareholders and financial leverage is one of the factors that influence financial risk. The use of higher financial leverage will affect in the higher fixed capital costs, and also higher financial risk. Thus, the higher is the degree of financial leverage (DFL), the higher the financial risk.

Research conducted by Taichi Makia et al (2005) and Evica Petrovic et al (2009) found that there is a significant positive relationship between the company risk and the opportunity for investment, while the study of C.S. Armstrong, R. Vashishtha (2012) and Engelbert J. Dockner (2013) found that there is a positive and significant relationship between financial risk and firm value. According to Herwono Indra Saputra and Njo Anastasia's research (2013), from all types of investments provided, there are only cash type investment, deposits, money market mutual funds that have relationship with the respondent's risk profile which means that of all respondents' risk profiles, the main choice for the portfolio is the type group cash investments, deposits and money market mutual funds.

c. Effect of Profitability on Investment Opportunities

Profitability shows the company's ability to generate returns on several capital or assets that are utilized at certain times. Fulfillment of these funding needs in a conducive macroeconomic condition is relatively better if it is fulfilled through debt, due to tax saving. The higher is the profitability, the greater the investment opportunities that can

be run (Baskin, 1983 in Saputro and Hindasah, 2007). The greater is the funds owned by the company, the greater the manager can decide to invest these funds into profitable investments to increase the value of the firm. Based on the research of Ahmed Rivai and Belkaoui (2002) on 100 manufacturing companies in the United States from 1987 to 1992, it is found that profitability has more significant positive effect on investment policy.

d. Effect of Debt Policy on Investment Opportunities

Debt policy is the company's policy to fund all forms of operations using financial debt. This financial debt is carried out with the aim of financing company's activities both in terms of company's operation and investment to measure the level of debt usage as a source of corporate financing.

Larry Lang et al. (1996) found that there is a negative relationship between leverage and future growth for companies that only limits the growth opportunities. Gull and Jaggi (1999) found the relationship between free cash flow and debt policy is different between companies with low IOS and companies with high IOS. Smith and Watts (1992) empirically found evidence that companies have a better prospect have a lower debt to equity ratio in their capital structure policy because their own capital funding (equity financing) tend to reduce agency problems that are potentially associated with the company's free cash flow. Based on this, it can be stated that the influence of IOS on debt policy does not exactly give a good benefit. Debt to Equity Ratio (DER) reflects the company's ability to fulfill all of its obligations, which is indicated by how much of its own capital is used to repay debt.

e. Effect of Interest Rate on Investment Opportunities

Rising interest rates will encourage people to feel save, and become more lazy to invest in the real sector. The increasing in this interest rates will also be borne by investors, which is an increase in interest costs for the company. The public does not want to risk investing in higher costs, as a result investment becomes undeveloped. Many companies have difficulty in maintaining their lives, and this has caused the company's performance to be declined. The decline in company performance can give some outcome in the decline in stock prices, and with the decline in stock prices, it means that the value of the company will also decrease.

Significant influence of interest rates on investment policy as found by Nkurikiye et al (2016), Chris O Udoka (2012), and Anne Muthauro (2012) showed a positive and significant relationship of interest rate to investment policies, while different results are found by Sulaiman D. Muhammad et al (2013) that interest rates have a significant

negative relationship with investment policy, and Onyemaechi Joseph Onwe (2014) found that there is no significant relationship of interest rate to investment policy.

f. Effect of Exchange Rate on Investment Opportunities

Several studies of exchange rates have been carried out, including Claude, et al (1996), Suryanto (1998), Sudjono (2002), Siti (2004), Robiatul and Ardi (2006), and Dedi and Riyatno (2007). The results of the study of Claude, et al (1996), found that economic risks (including exchange rates) are positively related to stock returning in capital markets of the developed countries, while in developing countries, there is no significant influence between economic risk (including exchange rates) on stock returns. Suryanto (1998), in his research has found that US dollar, Singapore dollar and pound exchange rates have a significant effect on stock prices. Sudjono's (2002) study found that the exchange rate (exchange rate) is negatively related to stock prices. Siti (2004), found that the exchange rate has a negative effect but not significant on the stock beta. While the results of research from Robiatul (2006), he found that the exchange rate has a negative and significant effect on stock beta. However, from Dedi and Riyatno's research (2007), it is found that the exchange rate has a positive and significant effect on systematic risk.

g. Effect of Inflation on Investment Opportunities

According to Pranandari (2015), inflation is the increase of price that occurs in general and continuously. If inflation occurs, it will increase the production costs of goods and services so that it can cause a decrease in profits generated by the company. The decline in the profit will affect in a decrease in dividends and also returns. This will reduce the expected return, in other word, it can cause a decrease in the demand for shares of a company. The decline in demand for stocks will cause a decline in stock prices and have an impact on decreasing investment.

Nurdin (2009) conducted the research by using variables of inflation, exchange rates, interest rates, economic growth, government policies, capital structure, asset structure, level of liquidity and risk of stock investment. The method used is regression. The results show that inflation negatively affects the risk of property investment in Jakarta Stock Exchange. Interest rates negatively affect the risk of property investment in the JSX. The rupiah or US Dollar exchange rate does not affect the risk of property investment in the JSX. Nkurikiye Research held Jean Boscoa et al (2016) and Onyemaechi Joseph Onwe et al (2014) Inflation has a significant positive effect on Investment Policy, while opposite results are obtained by Chris O Udoka et al (2012) where inflation has a positive effect on investment opportunities.

h. Effect of Economic Growth on Investment Opportunities

Nurdin (2009) conducted the research by using variables of inflation, exchange rates, interest rates, economic growth, government policies, capital structure, asset structure, level of liquidity and risk of stock investment. The method used is regression. The results show that inflation negatively affects the risk of property investment in Jakarta Stock Exchange. Interest rates negatively affect the risk of property investment in the JSX. The rupiah or US Dollar exchange rate does not affect the risk of property investment in the JSX. Nkurikiye Research held Jean Boscoa et al (2016) and Onyemaechi Joseph Onwe et al (2014) Inflation has a significant positive effect on Investment Policy, while opposite results are obtained by Chris O Udoka et al (2012) where inflation has a positive effect on investment opportunities.

Effect of Economic Growth on Investment Opportunities. GDP growth indicates economic growth, and if economic growth improves then the purchasing power of people will increase and provide an opportunity for companies to increase their investment, resulting in profits for the company. High profits become an attraction for investors to buy the company's shares, it will increase the stock price index in the capital market (Tandelilin, 2001). If GDP increases, this will cause a high money supply, so that people will take the initiative to invest their money by buying capital market products as short, medium and long-term investments.

Nkurikiye Jean Boscoa et al (2016), Aurangzeb (2012), Akintude Temitope et al (2013), Adigwe et al (2015), Sasi Iansiraroj (2016) and Qaiser Abbas et al (2011) found that economic growth has a significant positive effect on investment opportunity. Other results are obtained from Sulaiman D. Muhammad et al (2013) and Onyemaechi Joseph Onwe (2014) who found a significant negative correlation between economic growth and investment opportunities.

The construct in this study is the company's microeconomic factors, which are: firm size, financial risk, profitability and debt ratio, and macroeconomic factors of the company, which are: interest rates, exchange rates, inflation and economic growth which are considered to influence investment opportunities measured through IOS. Thus, the formulation of the hypothesis that will be submitted to be tested in this study, namely:

- 1) There is an influence of the company's microeconomic factors on investment opportunities in ASEAN-5 countries
- 2) There is an influence of micro and macroeconomic factors on investment opportunities in ASEAN-5 countries.

2. METHOD

The data used in this study are the secondary data paneled from the ASEAN-5 countries. The variable value is obtained from the annual report from each country which consists of 35 large capitalized manufacturing companies. This study only observes the financial statements of companies listed on the Stock Exchange of ASEAN-5 countries: Indonesia, Malaysia, Singapore, Thailand and the Philippines from the period 2012-2017.

2.1. Variable Operationalization

a. Microeconomic Factors

The size of the company, is a reflection of the size of the company's wealth (Fraser, 2006: 239). This variable is measured using the natural log of sales (Moh'd Perry and Rimbey, 2005: 108).

Financial risk, is the greater the fixed costs that must be incurred by the company, the more likely the company is experiencing financial difficulties that lead to bankruptcy (Delcours, 2007), this risk is measured by:

$$Risk = \frac{\text{standard deviation EBIT}}{\text{total assets}}$$

Profitability According to Nika and Mahaputra (2012: 85) is the company's ability to obtain profits in relation to sales, total assets, and own capital. Profitability in this study was measured using return on assets (ROA), which is the ability of the total assets invested in total assets to generate profits calculated by net profit after tax with total assets. The ROA ratio can be formulated as follows:

$$ROA = \frac{\text{earning after tax}}{\text{total assets}}$$

Debt policy is a company policy to fund all forms of operations using financial debt. This financial debt is carried out with the aim of financing the company's activities both in terms of company operations and for investment. In measuring debt policy in this study, it is proxied by DER (Debt Equity Ratio). According to Sukirni (2012: 68) this ratio is measured by the following formula:

$$DER = \frac{\text{total liabilities}}{\text{total equity}}$$

b. Macroeconomic Factors

Interest rate, is the amount of interest paid per unit of time or people have to pay for the opportunity to borrow money (Samuel, 2008: 287).

Foreign exchange rates, domestic exchange rates per foreign exchange rate which is a bilateral exchange rate in which there are 2 countries (Batiz, 2004: 78).

Inflation is a change in the form of an increase in the price of goods in general and continues (Sadono, 2000: 73).

Economic growth, which is exchanged for gross domestic product, is the final value of goods and services produced in a country, usually one year (Mankiw, 2004: 98).

c. Investment Opportunity Set (IOS)

In this study the authors using the ratio of market to book value of equity [MVE / BVE]. The results of Adam and Goyal's research (2008) show that the ratio of book-to-market of assets and equity is one of the proxy for valid growth potential, and this ratio has the highest correlation with company growth in the future. The MVE / BVE ratio is used by considering the opinion of Gaver and Gaver (1993) that market value can indicate a company's opportunity to grow and conduct investment activities so that the company can obtain growth in equity and assets. Therefore, this study uses the Market Value to Book Value of Equity (MVE / BVE) as a proxy for IOS. Mathematically, Market Value to Book Value of Equity (MVE / BVE) is formulated as follows:

$$MVE/BVE = \frac{\text{number of shares outstanding} \times \text{closing price}}{\text{total equity}}$$

2.2. Data Analysis Technique

To test the hypothesis the author uses panel data regression analysis techniques. Panel data is a combination of periodic data (time series) and individual data (cross section). Shochrul R. Ajija (2011: 52) argues that the advantages of panel data regression analysis have implications for not having to test classical assumptions, because research that uses panel data allows identification of certain parameters without the need to make strict assumptions or does not require the fulfillment of all assumptions classic linear regression as in ordinary least square (OLS).

This regression assumption test is carried out using a panel regression model. This data model is then estimated using ordinary least square (OLS), as follows:

$$y_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$$

Note:

Y = Dependent Variable

X = Independent Variable

α = Constant

β = Regression Coefficient

ε = Residual variable

• i shows the cross-section unit (i = 1, ..., n)

• t shows time series (t = 1, ..., t).

For regression analysis with panel data, the authors use the software 'Eviews 9'.

3. RESULTS AND DISCUSSION

3.1. Results

These are the results of this study that analyzes the differences in the effect of firm size, financial risk, profitability, and debt policy on investment opportunity set (IOS) for ASEAN-5 countries.

Table 1
Regression Analysis with Panel Data on the Effects of Microeconomics on Investment Opportunities

Variable	coefficient	Prob
Indonesia		
1. Firm size	-0.041990	0.0098***
2. Risk	0.010723	0.7124
3. Roa	0.006163	0.7187
4. DER	-0.021115	0.0255**
F-Statistic	3.094724	0.016782
Malaysia		
1. Firm size	0.140813	0.0128**
2. Risk	0.000135	0.5451
3. Roa	-2.24E-05	0.4774
4. DER	-0.100258	0.0747*
F-Statistic	89.40713	0.00000
Singapore		
1. Firm size	-0.006195	0.9807
2. Risk	-5.57E-05	0.1280
3. Roa	-4.88E-06	0.9087
4. DER	-0.000650	0.0496**
F-Statistic	0.346090	0.846553
Thailand		
1. Firm size	0.050301	0.0622*
2. Risk	-9.69E-05	0.3140

3. Roa	-1.60E-06	0.3663
4. DER	-0.137351	0.0001***
F-Statistic	9.839060	0.00000
Philippines		
1. Firm size	-0.159804	0.0450**
2. Risk	0.000501	0.4517
3. Roa	0.000536	0.0394**
4. DER	-0.023347	0.0001***
F-Statistic	6.425691	0.000072

Note: *** Significant at 1%; ** significant at 5%; * significant at 10%

Table 2
Regression Analysis with Panel Data on the Effects of Micro and Macroeconomics on Investment Opportunities

Variable	coefficient	Prob
Indonesia		
1. Firm size	0.041977	0.0082***
2. Risk	-0.000474	0.9868
3. Roa	0.012269	0.4840
4. DER	-0.019676	0.0387**
5. Inflation	-0.187683	0.7541
6. Exchange rate	-6.58E-05	0.8972
7. Interest	-0.056454	0.0185**
8. PDB	-0.012999	0.5620
F-Statistic	2.694161	0.007767
Malaysia		
1. Firm size	0.458311	0.0038***
2. Risk	0.000162	0.6967
3. Roa	-3.03E-05	0.7095
4. DER	-0.096553	0.3073
5. inflation	-1.486505	0.0450**
6. Exchange rate	0.887261	0.0783*
7. Interest	-0.191486	0.0527*
8. PDB	0.003265	0.0630*
F-Statistic	1.848520	0.070074
Singapore		
1. Firm size	2.117657	0.0000***
2. Risk	5.90E-07	0.7518
3. Roa	0.000497	0.0000***
4. DER	-0.000212	0.1872
5. inflation	1.27E-09	0.7473
6. Exchange rate	-24.94241	0.0014***
7. Interest	-2.311589	0.0005***
8. PDB	0.429802	0.0000***
F-Statistic	9522.220	0.0000***
Thailand		
1. Firm size	0.047536	0.5985
2. Risk	-9.87E-05	0.2675
3. Roa	7.69E-06	0.0004***

4. DER	-0.134097	0.0011***
5. inflation	4.28E-05	0.3951
6. Exchange rate	6.258362	0.3802
7. Interest	-0.058037	0.7560
8. PDB	0.062265	0.0674*
F-Statistic	4.099226	0.000162
Philippines		
1. Firm size	0.5985	0.1134
2. Risk	0.2675	0.5115
3. Roa	0.0004***	0.0326**
4. DER	0.0011***	0.0553*
5. inflation	0.3951	0.0824*
6. Exchange rate	0.3802	0.2006
7. Interest	0.7560	0.9591
8. PDB	0.0674*	0.0015***
F-Statistic	7.045156	0.000000

Note: *** Significant at 1%; ** significant at 5%; * significant at 10%

The influence of company size on investment opportunities for Indonesia, Malaysia, and Singapore on the microeconomic influence occurs negatively, but on the influence of microeconomic and macroeconomic factors, the direction of the coefficient changes to be positive. This shows that large companies have been able to overcome the macro environment that tends to change dynamically in order to have more investment opportunities. This is contrary to Thailand and the Philippines. The size of the company is not dominant in determining investment opportunities because the two countries have not been able to overcome the macro environment, so the size of the company does not determine investment opportunities.

Risk does not have a significant effect on investment opportunities on the influence of microeconomics or the influence of either microeconomic or macroeconomic factors. This shows that investment is not possible to be done in companies that have high risks because it will carry a large bankruptcy cost.

Profitability that was not significant for all ASEAN countries on the influence of microeconomics becomes significant on both microeconomic and macroeconomic drivers for Singapore, Thailand, and Philippines. This shows there has been a balance sheet effected for those three countries. This happens because of the interest expense on the loans are low, not too high on inflation and high on GDP per capita so that the investment opportunities will occur in companies that have high profitability. This does not apply to Indonesia and Malaysia profitability due to the two countries do not consider the return on assets to obtain investment opportunities as it is not dominant in determining investment opportunities.

Debt equity ratio has a negative and significant effect on investment opportunities on the influence of micro-economic factors for the five ASEAN countries. This is possible because the greater the debt, the higher interest will arise which will incur bankruptcy costs due to the burden of principal debt payments and the interest so that investment will be rapidly decreased. This also applies to the influence of micro and macroeconomic factors for Indonesia, Malaysia and Singapore, but for Malaysia and Singapore the countries do not show a dominant influence. This happens due to lower interest costs and inflation compared to other countries.

Inflation has a negative effect on investment opportunities in Malaysia. The reason is the inflation rate in Malaysia is higher than the other countries. It means the higher the inflation, the lower the investment opportunity. This is inversely proportional to the Philippines. It has lower inflation compared to Malaysia so that inflation in Philippines has a positive effect on investment opportunities. This can be happened because inflation in Philippines is still low so that it is possible to make investment opportunities. As for Indonesia, Singapore and Thailand, inflation is not a determinant of investment opportunities because this high inflation will pose a risk in investing.

For Malaysia and Singapore, the exchange rate has a positive effect on investment opportunities. This shows the magnitude or strength of the ringgit currency and the Singapore dollar against the US dollar compared to other countries so that the exchange rate becomes a determining factor in determining the investment policy.

The interest rate has a negative and significant effect on investment opportunities for Indonesia, while it is not for other countries. The reason is due to the high interest rate in Indonesia compared to other countries, because for other countries the interest rate is not a determinant of investment opportunities. This happens because the interest rate in Indonesia is greater than the other countries which is around 7.5. This will cause investment opportunities financed by loan interest will be riskier than other countries, whereas for other countries, the interest rate has no effect on investment opportunities. This is because the interest rate is not used as a guide in determining the investment opportunities because investments finance based on loans will pose a high risk.

GDP has a positive effect on the investment opportunities. The amount of GDP illustrates the amount of wealth of a country. The higher the GDP, the easier companies in that country make investment opportunities. This is applied in Philippines, Malaysia, and Singapore, as these 3 countries have higher GDP growth compared to Indonesia and Thailand. It means that these 3 countries are easier to invest because of their large GDP. As for Indonesia,

the GDP is not the determinant in the investment opportunities because companies in Indonesia rather prioritize the size of loans to finance investment opportunities. This can be seen from the large loan interest rate of Indonesia compared to other countries. Based on the figure 2, the highest GDP growth are found in Philippines, Indonesia and Malaysia.

Investment opportunities that are proxied through IOS are significant to the value of the company in ASEAN-5 countries. Investment decisions will provide information or positive signals about the company's prospects in the future so that the stock prices will respond positively to the rising investment opportunities with the rising research and the development costs. Investment choices are the opportunity to develop, but often companies cannot always implement all the investment opportunities in the future. For companies that cannot use the investment opportunity, they will experience a higher expenditure compared to the value of the lost opportunity. The investment opportunity value is the present value of the company's choices to make investments in the future.

3.2. Discussion

The study that discusses the determinants of investment opportunities and company value for the ASEAN-5 countries has never been found by the author. This is the originality of this study. The study of Xaypanya et al (2013), entitled: *The Determinants Of Foreign Direct Investment In ASEAN: The First Differencing Panel Data Analysis*, analyzes the determinants of FDI in ASEAN-3 (Cambodia, Laos and Vietnam) and ASEAN-5 (Indonesia, Malaysia, the Philippines, Thailand and Singapore) using panel data 2000 to 2011. This study analyzes the investment in companies even though there is a balance sheet effect that macroeconomic factors will affect investment opportunities, whereas in Xaypanya et al (2013), the investment opportunity in question is FDI which is international capital flows where companies from one country establish or expand their companies in other countries, so the understanding is more macroeconomic problems. Besides this, our study compares the determinants of investment opportunities for each ASEAN country, whereas in the study of Xapanya et al (2013) investment opportunities are not compared for each country.

The research by Wongbangpo and Sharma (2001), entitled: *Stock Market And Macroeconomic Fundamental Dynamic Interactions* analyzes the relationship between stock prices and some macroeconomic variables for ASEAN-5 countries, such as GNP, interest rate inflation and the exchange rate of money to stock prices using granger analysis. The difference with this research is in addition to analyze the influence of macroeconomics on firm values. This study also analyzes the determinants of the opportunities and investment of ASEAN-5 countries, namely micro and macroeconomic factors. The next research is from Liwan and

Lau, (2007) entitled *Managing Growth: The Role Of Exports, Inflation And Investment In Three ASEAN Neighboring Countries*. This research analyzes the relationship of exports, inflation and investment and economic growth for 3 countries: Indonesia, Malaysia and Thailand. Ma'in and Ismail, (2010), in their research entitled: *Impact Of The Debt Ratio On Firm Investment: Evidence From Malaysian Listed Firms* analyzes the effect of Debt ratio on investment opportunities. The research period is conducted in 2000-2007 using panel data.

4. CONCLUSION AND IMPLICATIONS

Debt equity ratio has a negative and significant impact on investment opportunities in the influence of Microeconomic factors for ASEAN-5 countries. This indicates that the greater the DER, the investment opportunity will decrease, this is possible because the greater the debt, the higher interest that will arise bankruptcy fees due to the burden of payment of principal debt plus interest so that investment will decrease. This phenomenon also can be seen in the influence of micro and macroeconomic factors in Indonesia, Malaysia and Singapore, but for Malaysia and Singapore do not show the dominant influence of DER on IOS. This is because the interest expense and inflation are smaller compared to other countries (Indonesia, Thailand and Philippines).

Risk does not have a significant effect on investment opportunities in the influence of Microeconomic factors and micro and macroeconomic influences. This indicates that investment is not possible in companies that have a high risk because it will bring a large bankruptcy cost.

The previous insignificant profitability for ASEAN-5 countries on Microeconomic influence is significant for the countries of Singapore, Thailand and Philippines. This indicates that balance sheet effects have occurred in those countries. This is possible because of the low interest rate on loans, inflation that is not too high and high GDP per capita so that investment opportunities will occur in companies that have high profitability. This cannot be applied in Indonesia and Malaysia, because profitability is not dominant in determining investment opportunities. Those countries do not consider the return on assets to get investment opportunities.

For Malaysia and Singapore, the firm size on microeconomic influence has a negative relationship, but for micro and macroeconomic factors the direction of the coefficient changes to positive.

GDP growth has a significant effect on investment opportunities in Malaysia, Singapore, Thailand and Philippines. This indicates that prosperous economic growth in a country will

impact investment opportunities in the firm. This does not apply in Indonesia due to GDP development does not reflect investment opportunities.

The interest rate has a negative effect on investment opportunities for Indonesia, Malaysia and Singapore because high interest rates on loans will cause investment opportunities. This is different from Thailand and Philippines. Investment opportunities are not taken into account loan interest.

Inflation has a negative and significant effect in Malaysia, but for Philippines a positive influence shows that the higher the inflation, the greater the opportunity for investment, thus it indicates there is lower inflation in Philippines compared to Malaysia.

The exchange rates for Malaysia and Singapore have a significant effect on investment opportunities but are different for the two countries. The direction of the coefficient of the Singapore currency exchange rate is different from Malaysia because the Singapore dollar exchange rate against the US dollar is higher than the Malaysian ringgit exchange rate against the US dollar.

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