UDC 334

ANALYSIS OF THE EFFECT OF DEBT TO EQUITY RATIO ON STOCK RETURNS THROUGH RETURN ON ASSET AND NET PROFIT MARGIN IN INDONESIAN AUTOMOTIVE AND ALLIED PRODUCTS INDUSTRY

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ABSTRACT

This research aims to examine how the financial performance of the automotive and allied products companies listed on the Indonesia Stock Exchange influences stock returns generated during the period 2011-2017. Facing the tight competition in the ASEAN automotive industry and the position of Indonesia which is currently pursuing Thailand in the first rank, it can be a major consideration for investors in making investment decisions. It is quantitative research aiming to determine the relationships between several variables so it can be called as associative causal research as well. Based on the data collection techniques, the design of this research is cross-sectional. This research employed stock returns as the dependent variable, the Debt to Equity Ratio (DER) as the independent variable, and Return on Asset (ROA) and Net Profit Margin (NPM) as the moderator variables. This research used a purposive sampling technique to determine the research sample and 15 companies were selected. The research results showed that DER, ROA, and NPM have effects on stock returns by 46.7%. Furthermore, investors need to consider the DER, ROA, and NPM ratios before investing in these companies

KEY WORDS
Stock Returns, DER, ROA, NPM.

Before deciding to invest their funds, investors usually consider destination country economic conditions. A positively developing economic condition represents the welfare of the people in a country, let alone a high purchasing power of the people in this country. Through Gross Domestic Product (GDP) data, investors may find out a certain country's economic conditions to be used as their consideration background in making investment decisions.

According to data from World Bank and United States Census Bureau, Indonesia's GDP was 1.015 million US dollars in 2017 for 264 million people and GDP per capita grew by 4.32% in the period 2012 to 2017 (Indonesia, n.d.). The favorable economic conditions in Indonesia have boosted the number of middle-class peoples in Indonesia. This situation has also strengthened Indonesia's position as a developing country which deserves to be considered as the targeted country for investment.

Indonesia's vast geographical area and large population make transportation and infrastructure play an important role in maintaining Indonesia's economic stability. The growth of motor vehicles in Indonesia from 2012 to 2017 was 47%, which was dominated by motorcycles of 82%, followed by passenger cars of 11% and the remaining 7% were buses and trucks.

Rapid technological development also takes part in the unexpected new innovation, even it might have resulted in a number of pros and cons as well. Indonesia cannot avoid technological development. In 2015, an online motorcycle taxi widely known as GO-JEK was launched in Indonesia and was followed by GrabBike launch. These two online services have developed along the time until now.

The business of transportation network companies is getting bigger in Indonesia, and in turn, it is absolutely good news for investors or any people wishing to channel their funds to Indonesia. The positive growth of online motorcycle taxi and car taxi definitely brings a positive impact on the sales and financial performance of motor vehicles in Indonesia.

Indonesia ranks second in the ASEAN market as the largest automotive producer after Thailand. Domestic motorcycle sales in Indonesia over the period 2012 to 2014 increased by 11%, yet, it fell 18% in 2015. This decline was compensated by an increase in export value of 941% in 2015. ("*Domestic Distribution and Export* 2018," 2018).

In 2012, car sales in Indonesia increased to the highest number of 106,807 units in October and were reported as the highest record in history. However, Indonesia was still left behind Thailand which was able to sell 142,839 car units. Thailand's total population of 67 million people was only one-third of Indonesia's total population in 2012 (Harvenda, 2012).

Considering the economic conditions and Indonesia's automotive industry growth, this industry, therefore, cannot be underestimated by foreign investors. However, an investor will need a tool to be able to measure the Company's financial performance prior to deciding how much money to invest in Indonesia's automotive industry, and this tool is referred to as Financial Statements.

Halimahton et al.'s research (2013) showed that Net Profit Margin (NPM) has a positive relationship while Debt Equity Ratio (DER) has a negative relationship with the company's financial performance. Company performance can be reflected in the company's financial statements because through this report, investors can find out the company's financial ratios having a function as investment tools.

Septiana and Wahyuati's (2016) research results showed that partially DER has a significant effect on stock returns, while Return on Assets (ROA) has an insignificant effect. The research results of Renza (2007) who conducted the research from 2001-2005 showed that DER has a relationship with stock returns in Automotive & Allied companies. In addition, Pratama's (2018) research conducted on the Automotive & Allied companies for the period 2013-2016 showed that DER and ROA have no effect on Stock Returns.

This research writing is divided into 4 chapters. The first chapter is an introduction to the topic of this article. The researchers will explain the current conditions of Indonesia's automotive industry and its investment opportunities. The second chapter offers the literature review related to and used to support this research, in addition to the hypothesis supporting the research purposes. Research results and discussion are clearly explained in the third chapter. Last but not least, the fourth chapter will be the conclusions of this research.

This research aims to provide convenience to investors in determining what financial ratios investors can use in making investment decisions, especially in the Automotive and Allied Products Industry. In addition, from the companies' side, they can find out what ratios influence the increase in company stock returns because the company's financial ratios can influence investor decisions.

LITERATURE REVIEW

Stock Returns

Many experts say that one of many methods can be used to secure assets is to become an investor in company stocks. Stock ownership serves as an endeavor to prevent inflation. Thus, it is important for investors to be aware of and calculate Stock Returns that will be obtained from the targeted company.

By understanding how important Stock Returns are to investors, Companies needs to improve their performance. Tiryaki (2019) suggests that the increase in economic activity in the company is expected to lead to a higher increase in the Company's income, thus, in turn, it will also make Stock Returns grow positively.

Jogiyanto (2010) states Stock Returns are the results obtained from investments. Generally, investment decisions are made to gain a positive return as compensation for invested capital and willingness to assume the risks that investors might cause in their investments.

Thus, it can be concluded that, when a company fails to gain a higher income, Stock Returns will also decline. Adaoglu and Turan Katircioglu (2013) state Stock Returns influences monthly net foreign investor flows across the period of time.

Based on existing information, it can be ascertained that a company's Stock Returns can be used as an indicator to see the company's condition. This research defines Stock Returns as price differences from several periods. High Stock Returns reflect that the company is healthy, and vice versa.

The amount of debt used to manage the company, earnings and the number of profits generated by the company can affect stock prices as well as investor decisions in valuing the company. Thus, the Debt to Equity Ratio (DER), Return on Assets (ROA), and Net Profit Margin (NPM) ratios can be used as tools to see the company's condition.

Kurniaty et al. (2018) suggest that financial analysis shows differences in performance between companies in the same industry and the company's current financial position or trend. Analysts need several indicators to interpret and analyze the company's financial statements. The most frequently used indicator is the ratios.

Vanitha and Selvam (2011) in their research state that the liquidity, leverage and profitability ratios have an effect on the company's financial performance.

Debt to Equity Ratio (DER)

Higher liquidity shows that the company is in good condition, while higher leverage is a warning sign that the company is at risk (Borhan et al, 2014).

This is worth to consider that natural law states 'high risk, high return'. Then, debt does not always put the company at risk. It is precisely at a certain level that debt will be considered to benefit the company. The higher DER indicates that the independent party has more trust in the company because the higher the amount of capital the company has will support the company in expanding its business (Brigham and Houston, 2010). Debt to Equity Ratio (DER) is one of many tools that can be used to see how much debt the company has which may have an effect on the company's performance.

Return on Asset (ROA)

The measurement tool frequently used to calculate Company profitability is ROA. ROA is commonly defined as net income after taxes divided by total assets. ROA is used because it can provide a comparative measure of a company's performance. Joo, et al. (2011)

Pratama (2018) in his research concluded that ROA is a ratio used to reflect the company's performance in managing the company's assets to make profits. ROA is calculated by dividing net income after deducting actual costs by total assets. ROA is a comparative measure of profitability and is not bound by a certain value. Therefore, users may need to compare their ROA with the previous ROA value and/or similar companies.

Net Profit Margin (NPM)

NPM refers to the ratio of net profit after taxes and total selling (Husna and Desiyanti, 2016). Syamsuddin (2009) add that the higher the company's NPM, the better the company's operations are. This statement is supported by Vanitha and Selvam (2011) suggesting that the higher the company's profitability, the more effective the company's operations are.

The research conducted by Borhan et al (2014) showed that NPM has a significant effect on the company's performance. Thus, the sustainable growth of NPM can be a positive signal for the company to attract investors.

NPM is the ratio of net profits, which are total sales deducted by all expenses including taxes, to sales. The higher the NPM, the better the Company's operations are (Syamsuddin, 2009).

Hypothesis

H1:   DER has an effect on Stock Returns
H2:   DER has an effect on ROA
H3:   DER has an effect on NPM
H4: NPM has an effect on Stock Returns

H5: ROA has an effect on Stock Returns

H6:   DER has an effect on Stock Returns through ROA and NPM

Conceptual Framework

Based on the information mentioned above, the hypothesis obtained in this research are illustrated in Figure 1:
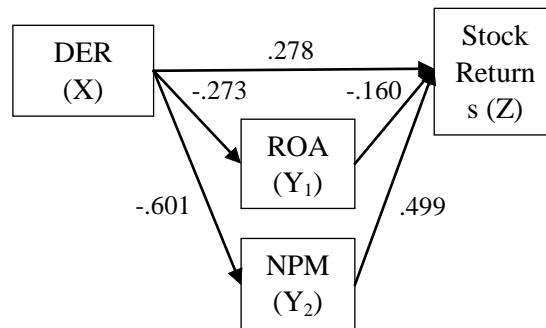

Figure 1 - Conceptual Framework

METHODS OF RESEARCH

Research Design

Based on the data obtained, this research is quantitative cross-sectional research. This research is associative research because the researchers want to examine the relationships between variables. The dependent variable in this research is Stock Returns which is according to the research hypothesis are influenced by DER, ROA, and NPM as the independent variables.

Population and Sampling

The populations in this study were Automotive and Allied Products companies listed on the Indonesia Stock Exchange in the period 2011 - 2017. This research employed the purposive sampling method, with criteria namely (1) the companies engage in the Automotive and Allied Products industry and is listed on the Indonesia Stock Exchange; (2) the companies that actively submit annual financial statements (the period 2011-2017). Based on these criteria, 15 companies were selected as the research sample.

Data Collection

The data collection technique in this research was documentation by using the Indonesian Capital Market Directory data from the period 2011 - 2017 and data on the Indonesia Stock Exchange website ("Laporan Keuangan dan Tahunan," n.d.).

Data Analysis

This research used path analysis to determine the effect of each variable with the SPSS 24.0 data processing application for Windows.

$-0.273X + \varepsilon = Y_1$

$-0.601X + \varepsilon = Y_2$

$0.278X - 0.160Y_1 + 0.499Y_2 + \varepsilon = Z$

Table 1 shows that the highest returns on the Automotive and Allied Products Industry listed on the Indonesia Stock Exchange in the Period 2011-2017 occurred in 2013, obtained by a company with the MASA stock code. In 2013, the highest DER was obtained by INTA which was also the highest value during the study period and made INTA the company with the lowest ROA value. The industry average ROA for the year was 7.23%. The highest NPM in 2015 was issued by a company with the HEXA stock code.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 - Descriptive Data

The Period 2011-2017	DER (x)	ROA (%)	NPM (x)	Stock Returns (x)
N	15	15	15	15
MAX	15.46	23.39	2.60	1.8584
MIN	0.14	-5.11	-0.16	-0.90
Average	1.54	5.44	0.09	0.07

Correlation Analysis
Correlation between DER and ROA

The research results showed that DER has a significant negative effect on ROA with a t-count of 2,603 and a significance level of 0.011. Thus, it can be interpreted that the amount of debt owed by the companies in the automotive industry influences company profits. Based on the research results, it is revealed that the higher company debt is, the smaller company profits will be gained, and vice versa. These research results are in line with the Pecking Order Theory which shows a negative relationship between profits and debt.

Correlation between DER and NPM

The research results showed that DER has a significant negative effect on NPM with a t-count of -6.889 and a significance level of <0.05. Similar to the effect of DER on ROA, the research showed that the higher company debt is, the smaller company profits will be gained. However, DER has a significant effect on NPM. It is indicated by a significance level of 0,000. A low NPM means that companies only generate small profits and operates in an ineffective way.

Correlation between DER and Stock Returns

The research results showed that DER has a significant positive effect on Stocks Returns with a t-count of 2.045 and a significance level of 0.044. At a certain degree, the amount of debt owed by the companies has a positive effect, one of which is Stock Returns. DER will reach the optimal point when the WACC (Weighted Average Cost of Capital) or capital costs reaches a minimum level. (Sudrajat, 2019)

In an effort to develop business, especially the automotive industry which cannot be kept away from technological developments, innovation needs to be taken in a sustainable manner. To fulfill the conditions of external competition, the companies need to make significant investments, causing them to require a large investment of funds.

These research results supported previous studies conducted by Rachmatika (2006) showing that DER has an effect on Stock Returns.

Correlation between ROA and Stock Returns

Profits obtained by automotive companies from the sales of goods or services deducted with costs and taxes have an insignificant effect on the companies' Stock Returns. The research results showed that ROA has no significant effect on Stock Returns with a t-count of -1,059 and a significance level of 0,293. Thus, although the automotive companies have been operating efficiently, it only results in an insignificant effect on Stock Returns.

The research conducted by Astuti (2006) also showed that ROI / ROA has an insignificant effect on Stock Returns.

Correlation between NPM and Stock Returns

The results generated from the calculation through SPSS obtained a t-count of 2.741 and significance level of 0.008 for NPM and Stock Returns. These results showed that NPM has a significant positive effect on Stock Returns.

Accordingly, assumed that the companies can generate a high profit and the operations run smoothly, the companies' Stock Returns will be higher than expected. These research results are supported by Astiti et al.'s (2014) research which showed that NPM has a significant positive effect on Stock Returns.

Effect of DER on Stock Returns through ROA and NPM

The research results showed that DER, through ROA, has an insignificant yet positive effect on Stock Returns (-x-0.160 0.273) = 0.043; The effect of DER on Stock Returns through NPM resulted in a negative significant effect (0.601 x-0.499) = -0.299; With the effect of models (1-(1-0,098) (1-0.075) (1-0,362)) = 0.467 or 46.7%, 53.3% Stock Returns are influenced by variables other than those employed in this research.

Davis (2001) states factors based on value and size have explained much of the common variation in U.S. stock returns for the past three-quarters of a century.

In addition, the economic stability of a country can also be a decisive factor in the share price in a certain industry. Accordingly, in deciding to invest their money, investors need to consider global economic conditions. According to the Government Regulation of the Republic of Indonesia No. 20/8/PBI/2018 on advance for motor vehicles loans or motor vehicles financing officially enacted on 1 August 2018 has become a consideration for investors whether they will continue to invest their money in the automotive industry or not.

CONCLUSION

The results showed that DER has a significant negative effect on ROA and NPM. Therefore, the higher debt used by the companies will result in a smaller return. In such conditions, the companies need to conduct public disclosure and provide information to the shareholders and the public concerning the purpose of the use of debt by the companies so that investor trust and/or public trust against the companies in the automotive industry can be maintained. The companies need to realize that not all investors and the public understand how the companies can benefit from debt. Because when debt is managed properly and on the right track, at a certain point, debt will give maximum profit to the companies.

This condition is also reflected in the relationship between DER and NPM and stock returns, showing a significant positive effect. This condition confirms that the companies' decision to obtain a loan for investment purposes can generate profits if the companies' operations are well managed. A higher NPM of a company means a better company's operations.

Based on the research results, to obtain maximum profits from stock returns, then in deciding to invest in the automotive industry in Indonesia, investors can use the company's DER and NPM ratios for consideration. Thus, it becomes important for the companies in the automotive industry to always pay attention to every decision taken in the use of debt as well as to properly manage the companies in order to earn profits and good sales performance.

Indonesia's biggest competitor in the automotive industry is Thailand, which is left behind Indonesia in terms of resources. Therefore, to be able to compete with Thailand, Indonesia needs to consider and employ the company's internal and external strategic measures. From the internal side, the companies can innovate through the investments of advanced technology, human resources having competent skills, and subsidiaries able to support vehicle components. While from the external side, the automotive industry in Indonesia needs support from the government for an integrated vision and mission between business players and the government, so the enacted regulation does not harm businesses players as well as the government. This condition is supported by the GDP from the Manufacturing industry in Indonesia as one of the 5-top players in the industry sector contributing above 17% to GDP. GDP from the Manufacturing industry in Indonesia is 20.5% and becomes the largest contribution in Southeast Asia. (Deny, 2019).

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