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PENGARUH PROFITABILITAS TERHADAP KEBIJAKAN DIVIDEN DENGAN ANALISA DATA PANEL PADA MULTI-BISNIS DI BURSA EFEK INDONESIA PERIODE 2007-2017

EFFECT OF PROFITABILITY ON DIVIDEND POLICY WITH PANEL DATA ANALYSISIN MULTI-BUSINESS IN INDONESIA STOCK EXCHANGE PERIOD 2007-2017

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ABSTRAK

Masalah dividen sangat penting untuk menunjukkan prospek pertumbuhan perusahaan di masa depan, dan juga penting dalam struktur modal perusahaan. Kebijakan dividen dapat dipengaruhi oleh profitabilitas dan variabel lainnya. Dalam penelitian ini, profitabilitas dipilih karena perannya sebagai indikator utama yang menunjukkan kapasitas perusahaan untuk membayar dividen. Penelitian ini bertujuan untuk menganalisis pengaruh profitabilitas terhadap kebijakan dividen. Populasi penelitian adalah perusahaan yang terdaftar di Bursa Efek Indonesia. Secara sengaja memilih delapan perusahaan yang memiliki kategori likuiditas yang baik. Data untuk setiap perusahaan diambil dari tahun 2007 hingga 2017. Dengan struktur data ini, analisis yang digunakan adalah analisis regresi data panel. Model analisis data panel mencakup Common Effect Model (CEM) Fixed Effect Model (FEM) dan Random Effect Model (REM). Model terbaik diuji dengan uji Chow dan Hausman Test dan diperoleh The Fixed Effect Model. Kebijakan dividen diukur dengan variabel rasio pembayaran dividen. Temuan dalam penelitian ini menyimpulkan bahwa kebijakan dividen (Dividend Payout Ratio) dipengaruhi oleh ROE, EPS dan NPM, di mana variabel independen ini memiliki pengaruh positif dan signifikan terhadap DPR.

Kata kunci: Regresi Data Panel, Model Efek Tetap, Profitabilitas, Rasio Pembayaran Dividen

ABSTRACT

The issue of dividends is very important to show the prospects for the company's growth in the future, and also important in the company's capital structure. Dividend policy can be influenced by profitability and other variables. In this study, profitability is chosen due to its role as main indicator that shows the company's capacity to pay dividends. This study aims to analyze the effect of profitability on dividend policy. The study population is a company listed on the Indonesia Stock Exchange. Purposively selected eight companies that have a good liquidity category. Data for each company is taken from 2007 to 2017. With this data structure, the analysis used is panel data regression analysis. Panel data analysis models include the Common Effect Model (CEM) Fixed Effect Model (FEM) and Random Effect Model (REM). The best model was tested with the Chow test and Hausman Test and obtained The Fixed Effect Model. Dividend policy is measured by the variable dividend payout ratio. The findings in this study conclude that the dividend policy (Dividend Payout Ratio) is influenced by ROE, EPS and NPM, where these independent variables have a positive and significant influence on DPR

Keywords:Panel DataRegression, Fixed Effect Model, Profitability, Dividend Payout Ratio

INTRODUCTION

The main goal of investors in investing their funds in the company, in general, is to obtain returns in the form of dividends. Dividend policy determines how much of the company's profits will be distributed to holders (Weston and Copeland, 2010). Companies must consider the amount of profits that will be retained to float the company (Nurmala, 2006). According to Puspita (2009) the issue of dividends is very important to show the prospects for the company's growth in the future, and also important in the company's capital structure.

Dividend policy can be influenced by profitability and other variables. But in this study the authors chose profitability because profit is the main indicator that shows the company's capacity to pay dividends (Anil and Kapoor, 2008). Profit is a factor affecting current dividend payments in addition to the previous year's dividends (Lintner, 1965). A profit-producing company is able to pay dividends while saving and internally in the form of retained earnings to finance its investments with the requirement that the profit generated tends to be stable. If profits are higher, the cash flow will be higher in the company so the company can pay higher dividends (Jensen, Solberg and Zorn, 1992).

This study will discuss modeling with panel data regression. Panel data is a combination of time series data and cross section data (Nachrowi & Usman, 2006). Time series data usually includes one object but covers several periods. Cross section data consists of several or many companies, with several variables within a certain time period. Because panel data is a combination of cross section and time series data, it certainly will have more observation than cross section data or time series data. As a result, when combined into a data pool, in order to make a regression that only uses cross section or time series data only.

If the panel data analysis approaches the time series model approach such as a transfer function, then there is diversity information from the cross section unit that is ignored in the model. One of the advantages of panel data regression analysis is to consider the diversity that occurs in the cross section unit (Jaya & Sunengsih, 2009).

The advantages of panel data regression according to Wibisono (2005) include:

1. Panel data is able to calculate individual heterogeneity by allowing individual specific variables;
2. This ability to control hererogenity further makes panel data usable for testing and building more complex behavioral models;
3. Panel data is based on repeated cross-section observations (time series), so that the panel data method is suitable for use as a study of dynamic adjustment;
4. The high number of observations has implications for data that are more informative, more varied and more collinearity between the data decreases and the degree of freedom is higher so that more efficient estimation results can be obtained;
5. Panel data can be used to study complex behavioral models; and
6. Panel data can be used to minimize bias that might be caused by aggregation of individual data.

This research was conducted using panel data regression analysis with the Common Effect Model, Fixed Effect Model and Random Effect Model methods to determine several factors that affect the Profitability Dividend Payout Ratio (DPR) as dependent variable. While the independent variables are Return on Assets (ROA), Return on Equity (ROE), Earning per Share (EPS) and Net Profit Margin (NPM).

Dividend

Dividends are amounts that are paid periodically by companies for shareholders as a return on invested capital (Jefferson et al., 2009). Dividends are the distribution of accumulated net income which is usually paid in cash, but can also be paid from non-cash assets or even additional shares of the company's own shares. All dividends of any kind reduce retained earnings. Dividends as a distribution of profits to holders of equity investments according to their proportion of certain types of capital. (Warsono, 2003) Then the definition of dividends is part of the profits available to ordinary shareholders distributed to ordinary shareholders in cash.

The company can determine how much dividend will be distributed to the shareholders. This policy concerns the interests of the company and the interests of shareholders because the profits derived by the company are generally part of the net earning after tax (EAT) distributed to investors in the form of dividends and some are reinvested to the company in the form of retained earnings. An optimal dividend policy is a dividend policy that creates a balance between current dividends and future growth so as to maximize the company's stock price, Brigham (2013). The amount of dividends distributed in the future to the shareholders by each company is different from year to year in accordance with the dividend policy adopted by each company. According to Warsono (2003), dividends within a company can be divided into three types, namely: Cash Dividends, Stock

Dividends, and Property Dividends

Dividend Policy

Dividend policy is an inseparable part of corporate funding decisions (Martono and Harjito, 2010). Dividend policy is a decision whether the profits obtained by the company at the end of the year will be distributed to shareholders in the form of dividends or will be retained to increase capital for investment financing in the future. Dividend Payout Ratio determines the amount of profit divided in the form of cash dividends and retained earnings as a source of funding. This ratio shows the percentage of company profits paid to the company's ordinary shareholders in the form of cash dividends. If the retained earnings of the company are large, it means that the profit to be paid as dividends becomes smaller. An important aspect of dividend policy is determining the appropriate allocation of profits between the payment of earnings as dividends and retained earnings at the company.

According to Warsono (2003), there are two kinds of indicators to measure dividend policy that are widely used, namely: Dividend Yield and Dividend Payout Ratio/DPR. (a) Dividend Yield is a ratio that connects dividends paid to the price of ordinary shares. Dividend Yield provides a measure of the component of the total return generated by the dividend, by adding to the appreciation of existing prices. Some investors use dividend yield as a measure of risk and as an investment filter, ie they will try to invest their funds in stocks that produce high dividend yields. (b) Dividend Payout Ratio is the ratio of the results of the comparison between dividends and profits available to ordinary shareholders. The DPR is widely used in valuations as a way of estimating dividends for the coming period, while most analysts estimate growth using retained earnings better than dividends.

Factors Affecting Dividend Policy

There are four factors that influence dividend policy, namely:

1. Company profitability
   Profitability is the ability of a company to generate profit in relation to sales, total assets and own capital (Sartono, 2001). This profit will be the starting point of the distribution of returns to be made by the company to its investors, both in the form of dividends and capital gains. The indicators used in this study to measure profitability are Net Profit Margin, Return On Assets and Return On Equity. According to Kasmir, (2008) Net Profit Margin is "net profit margin is a measure of profit by comparing the profit after interest and tax compared to sales. This ratio shows the company's net income from sales ".

   While Return on Assets according to Lestari and Sugiharto (2007) Return on Assets is the ratio used to measure the net profit gained from the use of assets. In other words, the higher this ratio, the better the productivity of assets in obtaining net profits. This will further increase the attractiveness of the company to investors. Increasing the attractiveness of the company makes the company more attractive to investors, because the rate of return or dividends will be even greater.

   Brigham & Houston (2013) explained that the most important ratio is Return on Equity, which is net income for shareholders divided by total shareholder equity. Shareholders certainly want to get a high rate of return on the capital they invest, and Return on Equity shows the level they have earned. If Return on Equity is high, stock prices will also tend to be high.
2. Company Liquidity
   Corporate liquidity is a major consideration in many dividend policies because dividends are cash out for companies, the greater the company's cash position and overall liquidity, the greater the company's ability to pay dividends. Therefore in this study the indicator used to measure liquidity is the cash ratio. The reason for using cash ratio in this study is because according to Kasmir, (2012) cash ratio is a tool used to measure how much cash is available to pay debts. The availability of cash can be shown from the availability of cash funds or cash equivalents such as checking or savings accounts in banks (which can be withdrawn at any time). It can be said this ratio shows the true ability for companies to pay short-term debts.
3. State of Shareholders
   If the situation of the larger shareholders is oriented towards capital gains, then the dividend payout will be low, thus allowing the company to hold profits for profitable investments.

Net Profit Margin

According to Bastian and Suhardjono (2006) Net Profit Margin is a comparison between net income and sales. If the Net Profit Margin gets bigger, the company's performance will be more productive, so that it will increase investor confidence to invest in the company. In essence,

Net Profit Margin measures the percentage of sales after deducting all costs. If this ratio gets higher, the company's profit will get better.The relationship between net income after tax and net sales shows management's ability to drive the company successfully enough to leave certain margins as reasonable compensation for owners who have provided their capital for a risk. The results of the calculations reflect the net profit per dollar of sale. Capital market investors need to know the company's ability to generate profits. By knowing this investor can judge whether the company is profitable or not.

Then according to Gitman (2012) Net Profit Margin is "The net profit margin measures the percentage of each sales dollar remaining after all costs and expenses, including interest, taxes, and preferred stock dividends, have been deducted" the meaning of the statement is that net profit margin measures the percentage of each dollar sale left after all costs and expenses, including interest, tax and dividend preferred stock have been reduced. Meanwhile, according to Kasmir, (2008) argues that "net profit margins are a measure of profit by comparing earnings after interest and taxes compared to sales. This ratio shows the company's net income from sales ".

According to Riyanto (2001) the size of the profit margin in each sales transaction is determined by two factors, namely net sales and operating profits. The size of the operating profit or net operating income depends on revenue from sales and the amount of operating expenses. A certain number of operating expenses can increase the profit margin by increasing the number of sales, or by pressing operating expenses. According to Husnan and Pudjiastuti (2006) net profit margin is one of the profitability ratios used to measure how much operational profit can be obtained from each rupiah sale. Net profit margin is often referred to as net income after tax to net sales. This ratio shows the rate of return on net profit against net sales as well as shows the cost efficiency of the company

The ratio of net profit margin is also called the ratio of income to sales. Regarding net profit margins, Fahmi (2013) said:

1. Net profit margin is equal to net income divided by net sales. This shows the stability of the unit to produce gains at a special sales level. By examining the profit margins and industry norms of a company in previous years, we can assess the efficiency of operations and pricing strategies as well as the competitive status of companies with other companies in the industry.
2. Gross profit margin is equal to gross profit divided by net profit. High profit margins are preferred because they show that the company gets good results that exceed the cost of goods sold.

The elements of Net Profit Margin according to Suwardjono (2014) define profit as a reward for the company's efforts to produce goods and services. This means that profit is the excess of income above costs (the total costs attached to the production and delivery of goods / services). Profit is one of the most important things in a company.

Profit consists of several types, namely:

1. Gross profit: represents net sales less cost of goods sold. Therefore gross profit is the surplus value obtained by the company from the sales received from the cost of goods sold by increasing sales or decreasing production costs, so the achievement of gross profit will be maximal.
2. Operating profit: is the difference between gross profit and operating costs or the difference between net sales proceeds and cost of goods sold and operating costs. Thus, operating profit is the net income from operations performed.
3. Net profit: is the difference over all income and profits against all costs and losses. This amount represents a net increase in all costs and losses. This amount represents a net increase in capital.
4. Retained earnings: represent the accumulative amount of net income from a limited liability company less income distribution.

From the definitions above, it can be concluded that the Net Profit Margin is the ratio used to measure the net income of a company after deducting the costs incurred. The higher this ratio, the better the profits generated by the company, so that the company's performance will also increase. The higher the profits generated by the company, the higher the possibility that the company will distribute dividends to investors.

Return on Asset

Return on assets identifies the level of profitability. This ratio measures the return on total assets after interest and taxes. The return on total assets or total investment shows the performance of management in using company assets to generate profits (Sartono, 2015). Meanwhile, according to Lestari and Sugiharto (2007) Return on Assets is the ratio used to measure the net profit gained from the use of assets. In other words, the higher this ratio, the better the productivity of assets in obtaining net profits. This will further increase the attractiveness of the company to

investors. Increasing the attractiveness of the company makes the company more attractive to investors, because the rate of return or dividends will be even greater. This will also have an impact on the company's stock price in the capital market which will increase so that ROA will affect the company's stock price.

Then According to Kasmir (2012), Return on Assets is a ratio that shows the return on the amount of assets used in the company. Thus it can be said that a company with a high level of return on assets will attract investors to invest their capital in the company, because it is considered that the company can generate high profits and will ultimately have a positive impact on the value of dividends to be received by the company's shareholders the. With so many investors interested in the company's shares, it will affect the stock price in the capital market. The more investors who want to buy the company's shares, the price of the company's shares will tend to increase.

According to Munawir (2007) the usefulness of the Return on Asset (ROA) analysis is stated as follows:

1. As one of its principal uses is its holistic nature. If the company has implemented good accounting practices, management using the Return on Asset (ROA) analysis technique can measure the efficiency of working capital use, production efficiency and sales department efficiency.
2. If a company can have industry data so that industry ratios can be obtained, then the analysis of Return on Assets (ROA) can be compared to the efficiency of capital use in its company with other similar companies, so it can be known whether the company is under, the same, or in above average. Thus it will be known where the weaknesses and what is already strong in the company compared to other similar companies.
3. Analysis of Return on Assets (ROA) can also be used to measure the efficiency of the actions taken by the division / section, namely by allocating all costs and capital into the relevant section. The importance of measuring the rate of return at the part level is to be able to compare the efficiency of a part with other parts of the company concerned.
4. Analysis of Return on Assets (ROA) can also be used to measure the profitability of each product produced by the company by using a good product cost system, capital and costs can be allocated to various products produced by the company concerned, so as such will can be calculated the profitability of each product. Thus the management will be able to find out which products have an essential profit in the long run.
5. Return on Assets (ROA) in addition to being useful for control purposes, also useful for planning purposes. For example, Return on Assets (ROA) can be used part of the basis for returning decisions if the company will expand.

Excess Return on Assets (ROA) according to Syamsudin (2009), namely:

1. Besides ROA is useful as a control tool, it is also useful for planning purposes. For example ROA can be used as a basis for decision making if the company will expand. The company can system ROA which must go through investments in fixed assets.
2. ROA is used as a tool to measure the profitability of each product produced by the company, by implementing a good production cost system, then capital and costs can be allocated to various products produced by the company, so that the profitability of each product can be calculated.
3. The most principle use of ROA is related to the efficient use of capital, production efficiency and sales efficiency. This can be achieved if the company has implemented accounting practices correctly in the sense.

Based on the explanation above, it can be stated succinctly that Return on Assets is a ratio that measures the total rate of return on assets to generate a company's net profit from the acquisition of assets, so that by using ROA the company can make the ratio as a control over investments made. From the results of Return on Assets size can be used as a basis for decision making when a company will expand its business, then it can also be used as a measurement of the profitability of products produced by the company, the higher the profitability achieved, the higher the likelihood that the company will distribute dividends to investors. ROA is used as a tool to measure the profitability of each product produced by the company

Return on Equity

According to Kasmir (2013) Return on Equity (ROE) is "Return on Equity or return on equity is a ratio to measure net income after tax with own capital. This ratio shows the efficiency of using their own capital. The higher this ratio, the better. This means that the position of the company owner is getting stronger, and vice versa. "According to Munawir (2010) Return on Equity is the ratio between net income after tax and own

capital. This ratio shows the productivity of the funds of the owner of the company in his own company. This ratio also shows the profitability and efficiency of own capital. The higher this ratio will be better because the capital position of the owner of the company will be stronger, or the better the profitability of own capital. Meanwhile, according to Harahap (2009) profitability ratios describe the ability of a company to earn profits through all of its capabilities, and existing sources such as sales, cash, equity, number of employees, number of branches and so on. One of the profitability ratios, namely ROE, is the ratio used to measure the level of net income that a company receives from its invested capital. The greater the ROE ratio illustrates the better the state of the company, so that it will increase investor confidence to invest their capital.

Furthermore, Brigham & Houston (2013) explains that the most important ratio is return on equity (Return on Equity) which is net income for shareholders divided by total shareholder equity. Shareholders certainly want to get a high rate of return on the capital they invest, and Return on Equity shows the level they have earned. If Return on Equity is high, stock prices will also tend to be high. According to Syamsudin (2009) Return on Equity shows how much the company's ability to provide compensation to shareholders for the capital invested, because ROE is a measure of income available to company owners for the capital they invest in the company. In general, of course, the amount of ROE will get higher stock returns or returns obtained.

According to Fahmi (2012), states that ROE is a very important calculation in a company that shows a high and consistent ROE that indicates:

1. The company has an advantage that is durable in competition
2. Your investment in the form of shareholders' capital will grow at a high annual growth rate, so that it will lead to a high share price in the future.

The use of return on equity in describing the rate of return on capital invested by investors has another negative side, according to Brigham & Houston (2013) return on equity has several shortcomings in determining the financial performance of a company, namely:

1. Return on equity does not consider risk

Every investment in shares must have a risk, the greater the investment invested, the greater the risk that will be faced by investors. This is not reflected in the calculation of ROE. Financial leverage can increase the estimated ROE, but with higher risk sacrifices so increasing ROE through the use of greater leverage may not be too good. There are two reasons behind the impact of leverage:

a. Because interest can be a tax deduction, the use of debt will reduce tax liabilities and leave greater operating profit for corporate investors.

b. If operating income as a percentage of assets exceeds the interest rate on debt as is generally expected, then the company can use debt to buy assets, pay interest on debt, and get the rest for shareholders thereby driving the rate of return on equity.

2. Return on equity does not consider the amount of capital invested

The ROE level of a company does not necessarily provide a large added value to investors, because the value of return on investment depends on the amount of capital invested by investors.

Sarmento & Made, (2016) Return on equity (ROE) is the ability of a company with capital to generate profits. Company profits are usually the main factor to be used as a consideration for decision making related to the distribution of dividends to shareholders. ROE as one of the profitability ratios and is a very important indicator for investors to assist investors in measuring and knowing the company's ability to obtain net income regarding the distribution of dividends. The increase in ROE each period shows that management gives investors increased profits every period for investment through dividend distribution. The dividend policy adopted by the company certainly cannot be separated from the high valuation of return on equity. So a company can assume how much dividend is distributed. Increasing the company's return on equity, is expected to attract investor interest.

Reviewed based on the statement above, it can be concluded that ROE is the ratio used to determine the return from equity to generate net income after tax. This ratio can be used to review the productivity of a company's performance with the use of its own capital. The greater the value of ROE shows the better condition of the company so that investor confidence. Return On Equity is a financial ratio that is widely used to measure company performance, especially regarding company profitability. Return on equity is also an appropriate indicator for investors to aim at measuring the success of a business in enriching its shareholders to obtain dividends through investments that investors find profitable.

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The objectives of this research are:

1. To analyze the influence of Return on Assets on Dividend Payout Ratio
2. To analyze the influence of Return on Equity on Dividend Payout Ratio
3. To analyze the influence of Earning per Share on Dividend Payout Ratio
4. To analyze the influence of Net Profit Margin on Dividend Payout Ratio

Research Hypothesis

Based on the objectives, theoretical basis, previous research, and research paradigm, the hypothesis can be formulated as follows:

1. H1: Return on Assets (ROA) has a positive effect on Dividend Payout Ratio
2. H2: Return on Equity (ROE) has a positive effect on Dividend Payout Ratio
3. H3: Earning per Share (EPS) has a positive effect on Dividend Payout Ratio
4. H4: Net Profit Margin (NPM) has a positive effect on Dividend Payout Ratio

RESEARCH METHODOLOGY

Types of research

This type of research is research conducted is associative research, according to Sugiyono (2014) research with associative problem formulation is research conducted to determine the effect or also the relationship between two or more variables. The things that will be examined, analyzed and interpreted are all things related to dividend policy decisions that are influenced by net profit margin, return on assets, return on equity, and cash ratio. In this study the approach used is a quantitative approach. According to Efferin (2008), a quantitative approach is "research that emphasizes testing theories, and or hypotheses through measurement of research variables in numbers and conducting data analysis with statistical procedures and or mathematical modeling".

Population and Research Samples

The population that will be the object of this research is companies that report audited annual financial statements and are published on the Indonesia Stock Exchange in 2007-2017. From this population, eight companies were selected purposively.The eight companies are multi-business companies with good liquidity value, as state below.

Table 1. List of Research Samples

No	Code	Company List
1	ASII	PT Astra International Tbk
2	UNVR	PT Unilever Indonesia Tbk
3	MYOR	PT Mayora Indah Tbk
4	KLBF	PT Kalbe Farma Tbk
5	INDF	PT Indofood Sukses Makmur Tbk
6	LMSH	PT Lionmesh PrimaTbk
7	TCID	PT Mandom Indonesia Tbk
8	SMSM	PT Selamat Sempurna Tbk

Operational Definitions of Research Variables

Each variable in this study can be defined as follows:

$$Dividend\ Payout\ Ratio = \frac{Dividend\ per\ share\ (DPS)}{Earning\ per\ share\ (EPS)}$$

$$Earning\ per\ Share = \frac{Profit - Preferred\ Dividends}{Weighted\ Average\ Common\ Shares}$$

$$Net\ Profit\ Margin = \frac{Net\ profit}{Revenue}$$

$$Return\ on\ Asset = \frac{Net\ Income}{Average\ Total\ Asset}$$

$$Return\ on\ Equity = \frac{Net\ Income}{Equity}$$

The Variable Operationalization of research is presented in Table 2 below

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Table 2 Variable Operationalization

Variable	Dimension	Indicator	Concept
Dividend Policy	Dividend Payout Ratio	Dividend per Share Earning per Share	Dividend per Share divided by Earning per Share
Profitability	Return on Asset	Net Income Average Total Asset	Net Income divided by Average Total Asset
	Return on Equity	Net Income Equity	Net Income dividedn by Equity
	Earning per Share	Profit Preferred Dividends Average Common Share	Profit is reduced by Preferred Dividends and then devided by Average Common Share
	Net Profit Margin	Net Profit Revenue	Net Profit divided by Revenue

Research Paradigm

This study uses the dependent variable namely Dividend Payout Ratio while the independent variable in this study are Return on Assets, Return on Equity, Earning per Share and Net Profit Margin.

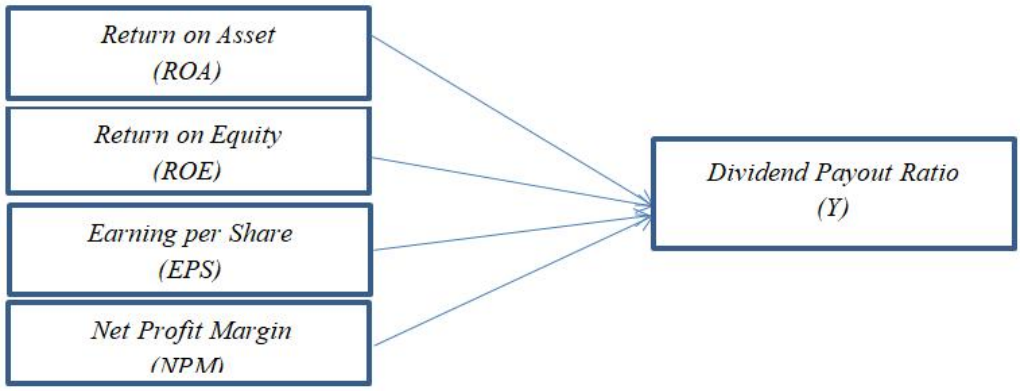

Figure1.Research Paradigm

Panel Data Estimation Model

In this study, the method used is panel data analysis. Panel data regression model is a regression that uses panel data, in the form of using time series panel data and cross section data. There are several methods that can be used to estimate the panel data regression model, including the common effect model, the fixed effect model and the random effect model. To choose the best estimation model, the testing step is used as described below.

1. Chow Test

Chow Test is a technique that aims to choose the best model between the Common Effect model and the Fixed Effect Model, with the hypothesis:

Ho: The model follows the Common Effect
Ha: The model follows the Fixed Effect

If the F-statistic probability value is smaller than the significance level (5%), then reject Ho. Vice versa if the F-statistical probability value is greater than the significance level (5%), then accept Ho. It can be concluded that the model will follow the fixed effect approach if the statistical F probability value is significant <5%.

2. Hausman Test

The Hausman Test aims to choose between the Fixed Effect Model (FEM) or the Random Effect Model (REM), or the test that aims to see whether there are random effects in the data panel. The value that must be considered in the Hausman Test is the probability value of a random cross-section. The hypotheses in the test are as follows:

Ho: The model follows the Random Effect
Ha: The model follows the Fixed Effect

The F test provisions use a significance level of 0.05 (5%). The test results will be seen by meeting the following requirements: F statistic < The level of significance, Ho is rejected or F statistic > Significance level, Ho received.

3. Lagrange Multiplier Test

The Lagrange Multiplier Test (Breusch - Pagan Random Effect) is performed to choose the best model whether common effect or random effect. This test is carried out if the results of the fixed and random tests are not consistent in the chow test and Hausman Test. The hypotheses in the test are as follows:

Ho: The model follows the Common Effect
Ha: The model follows the Random Effect

If probability Breusch – Pagan < 0.05 then Ho is rejected, in other words the suitable model is the Random Effect Model.

RESULTS AND DISCUSSION

1. Description of Variables

By using data from eight companies and the 2007-2017 period, the following are descriptive statistics of the research variables (Table2).

In Table 2 above, the average (average) value of each variable is presented, namely DPR = 0.468, ROA = 0.164, ROE = 0.304, EPS = 0.592 and NPM = 0.102. The standard deviation of NPM is 0.045 or the smallest compared to the others, meaning that the data do not have high diversity. This is supported by the value of variance = 0.002. In contrast, EPS has a higher diversity than others with variance = 0.523. DPR and NPM have negative Kurtosis, where the data is in theplatykurticcategory, meaning that the data distribution tends to be low and stable.

Table 3. Descriptive Statistics of Research Variables

	DPR	ROA	ROE	EPS	NPM
Mean	0.468	0.164	0.304	0.592	0.102
Std. Deviation	0.260	0.158	0.317	0.723	0.045
Variance	0.067	0.025	0.101	0.523	0.002
Skewness	0.504	4.178	2.329	3.007	0.389
Kurtosis	-0.375	25.739	4.416	10.879	-0.294
Range	1.053	1.240	1.341	4.280	0.224
Minimum	0.035	0.015	0.017	0.020	0.011
Maximum	1.088	1.255	1.358	4.300	0.235
Sum	41.184	14.472	26.780	52.078	8.978
N	88	88	88	88	88

Source: Financial Statement for 2007-2017 (processed)

2. Model Test Results

In summary, the three estimation models give different results, where the Common Effect Model shows that variables that have a significant effect on the DPR are ROE, EPS and NPM, and EPS has a negative parameter sign and does not fit the hypothesis, whereas the Fixed Effect Model, ROE, EPS and NPM has a positive and significant effect on DPR, whereas in the Random Effect Model, DPR is influenced by ROE and NPM. The highest Adjusted R-squared is the Fixed Effect Model, which is 80.81%, as shown in Table 4.

Table 4. Summary of Common Effect, Fixed Effect and Random Effect Model

	Common Effect Model		Fixed Effect Model		Random Effect Model	
Variable	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**
	0.252501	0.0000	0.644502	0.0000	0.516049	0.0000
ROA	0.089872	0.5709	0.047730	0.6472	0.070514	0.4959
ROE	0.427917	0.0000	0.119153	0.0414	0.400720	0.0005
EPS	-0.088217	0.0026	0.040448	0.0122	-0.005342	0.8217
NPM	1.202649	0.0609	2.397391	0.0001	-1.749186	0.0019
R-squared	0.515236		0.832377		0.150953	
Adjusted R-squared	0.491874		0.808116		0.110035	

Log likelihood	26.16210	72.88772	
F-statistic	22.05436	34.30901	3.689162
Prob(F-statistic)	0.000000	0.000000	0.008164

3. **Test Requirements in The Panel Data Analysis**

a. Chow Test

Chow Test is a test to determine which model is best for use between the Fixed Effect model or the Common Effect model. The basis for evaluating the chow test can be seen from the probability value (prob) for the chi-square cross section. If the value is> 0.05 then the model chosen is the Common Effect model. But if the value is <0.05 then the Fixed Effect model is chosen. The following are the results of the Chow Test conducted in this study:

Tabel 5.Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	20.541634	(7,76)	0.0000
Cross-section Chi-square	93.451225	7	0.0000

The results of Table 4, the Prob-value in the Chi Square cross-section is 0.0000, it means the probability value < 0.05, so that the regression model is Fixed Effect Model.

b. Hausman Test

This Hausman Test is used in conducting statistical tests to choose whether the Fixed Effect or Random Effect model is more appropriate to use. In this test, measured using the probability value (Prob) in Random Cross-section. If the Cross-section is Random> 0.05 then the model chosen is Random Effect. Likewise, on the contrary, if the probability value (Prob) < 0.05, the chosen model is Fixed Effect.

The following are the results of the Hausman Test:

Table 6. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	24.675118	4	0.0001

The results from the table above, it can be seen that the Prob value for Cross-section Random is smaller than the significance value, which is 0.0001 < 0.05. Thus it can be concluded that Ha is accepted and Ho is rejected, which means the best model that can be used in this study is the Fixed Effect Model.

The two tests above, the Chow Test and the Hausman Test provide a consistent and satisfying decision, so that the Lagrange Multiplier Test no longer needs to be continued, and the model suggested in this study is the Fixed Effect Model.

4. **Fixed Effect Model**

Based on the fixed effect method data regression table, the significance test carried out consisted of the Adjusted R-squared and t-test. Following are the results of tests conducted using EViews 10 using the Fixed Effect Model.

Table 7. The Estimation of Parameter with Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Significance	
C	0.644502	0.054091	11.91514	0.0000		
ROA	0.047730	0.103877	0.459486	0.6472	Not Significant	
ROE	0.119153	0.057404	2.075699	0.0414	Significant	*
EPS	0.040448	0.015753	2.567638	0.0122	Significant	*
NPM	2.397391	0.570414	4.202896	0.0001	Significant	**
Cross-section fixed (dummy variables)						

R-squared	0.832377	Mean dependent var	0.4679
Adj. R-squared	0.808116	S.D. dependent var	0.2596
F-statistic	34.30901	Durbin-Watson stat	0.9340
Prob(F-statistic)	0.000000		

Source: Data Analysis Output with EViews 10

The estimation model that is built is good, this is reflected in the value of F Statistics of 34.30901 with Prob (F-statistic) 0.0000, with the following regression equation.

*DPR = 0.645 + 0.048 ROA + 0.119 ROE * + 0, 040 EPS * + 2.397 NPM ***

ROA has a positive effect on the DPR with a parameter coefficient of 0.048, but the results of hypothesis testing produce a probability value of 0.6472 and greater than 0.05, so the effect of this variable is not significant. On the other hand, the ROE, EPS and NPM variables have a positive effect and this is in accordance with the hypotheses that were built, with parameter coefficients of 0.119, 0.040 and 2,397, respectively. If ROE increases by 1 unit, then the DPR will increase by 0.119 units as is the case with EPS and NPM, if it increases by 1 unit, then the DPR will increase by 0.040 and 2,397 respectively. Hypothesis testing results indicate that all three have a positive influence and obtained a t-statistic value greater than t-table (t0.05;df:76 = 1,9917) or with a probability value smaller than 0.05, meaning that ROE, EPS and NPM have a significant influence on the DPR as a dependent variable. Thus the results of testing the hypothesis H2, H3 and H4 are accepted.

When compared with previous studies, research results differ from one another. This study is in line with Kautsar (2014) and Junaidi (2014), where ROE has a positive and significant effect on the DPR, while Rahmawati et al. (2014) shows ROE has a positive effect on the DPR but is not significant, and Mardaleni (2014) shows ROE has a negative effect and insignificant to the DPR.

ROE is quite widely used in various financial analyzes, in various sectors of companies listed on the Indonesia Stock Exchange. Halimah (2019) also tested the effect of ROE and EPS variables on Cosmetics Companies And House Hold Goods Listed On Indonesia Stock Exchange. Likewise, Mardahleni (2018) conducted a Profitability Ratio Analysis analysis. The analysis conducted is to compare the Financial Performance of PT. Hanjaya Mandala Sampoerna with Industry averages. Analysis of provitability with the DuPont system shows the role of ROE provitability, as well as ROA and profit margin valuation reflects an analysis of the company's good financial performance (Lestari, et al., 2018)

While the effect of Earning per Share (EPS) on the DPR is different from the research of Lukita (2018) and Junaidi (2014), where EPS has a negative and not significant effect on the DPR. This difference is influenced by various factors, both regarding data, type of company and time period (time series), as well as the analytical method used. The research mentioned above uses multiple regression (Common Effect Model) with SPSS and not with panel data analysis. The analysis results in this study indicate that panel data analysis provides better results, because it can choose the best model from the three possible choices. As in this study, the Fixed Effect Model obtained more satisfying results.

CONCLUSION

This research shows that panel data analysis gives more satisfying results compared to multiple regression analysis, where multiple regression analysis uses the common effect model, whereas in panel data analysis the best estimation model can be determined whether Coommon Effect Model, Fixed Effect Model or Random Effect Model. In this study, with the Chow and Hausman Test, the best model is the Fixed Effect Model.

This study examines how much the influence of independent variables ROA, ROE, EPS and NPM on the DPR (as the dependent variable). The four independent variables have a positive influence on DPR. This is in accordance with the theoretical basis. Furthermore, the hypothesis test results obtained: H1 which states "*Return on Assets has a positive effect on Dividend Payout Ratio*" is rejected because the effect is not significant or the probability value is greater than 0.05. Whereas the hypotheses H2, H3 and H4, which state "*Return on Equity (ROE), Earning per Share (EPS) and Net Profit Margin (NPM) have a positive effect on Dividend Payout Ratio (DPR)*" can be accepted, based on the

resulting statistical test. The findings in this study conclude that the dividend policy (Dividend Payout Ratio) is influenced by the variables ROE, EPS and NPM, where these three variables have a positive and significant influence.

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