Impact of earnings per share and dividend per share on firm value

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Abstract

The purpose of this study is to explore the impact of earnings per share (EPS) and dividends per share (DPS) on the value of the company on the Indonesian stock exchange for the period 2014-2017. This study uses data from 6 food industry companies listed on the Indonesian Stock Exchange to examine the impact of these variables. Multiple regression models are used to determine the effect of earnings per share and dividend per share. The results of the research show that earnings per share separately have a significant and positive impact on company value. However, the dividend per share does not substantially affect the value of the company. The findings of this research also found that firm value is affected simultaneously by EPS and DPS. The study concludes that investors can use Earnings per Share as the basis for making investment decisions, particularly on the Indonesian Stock Exchange for companies in the food industry. In practical terms, the implications of this research indicate that the management of companies listed on the Stock Exchange must formulate a dividend policy and develop a company strategy aimed at internal and external factors in order to increase the value of the company.

Keywords: Earnings per share; Dividend per share; Firm Value

1. Introduction

All firms can compete fairly in the capital market to attract investors (Lin, Lee, Kao, & Chen, 2011; Rahman & Ahmad, 2018; Hala, 2020). A capital market is the right place to invest and earn profits for investors (Nagendra, Kumar & Venoor, 2018). Investing in shares is one alternative investment that investors are interested in (Badruzaman, 2017). Investors therefore need the data to evaluate and compare different stocks in order to determine the performance of the entity they want to invest in (Ahmed, 2018). High risk-high return characteristics mean that inventories are a type of investment that, although promising relatively large returns, is quite a high risk. This is because capital market stock investment is susceptible to changes, both domestic and foreign changes, that occur. Changes in politics, economics, economics, laws or regulations, and changes within the organization itself. Such adjustments can affect the share price positively or negatively. An accurate share valuation can minimize risks while helping investors earn profits (Tangnigisalu, 2020). Therefore, potential investors need information about their share valuation and the situation before making investment decisions. This information can be obtained from the company's periodic financial reports (Arsal, Intan, Abd & Bashir, 2016). For decision-making stakeholders, financial statements are important for (Innocent, Ibanichuka, & Micah, 2020).

This is undoubtedly an issue for businesses to determine what factors or variables can be used in the capital market as indicators affecting share prices. The objective is for the company to control and achieve the goal of increasing the value of the company (Lamuda, Yusuf & Ibrahim, 2020). This results in prospective investors who wish to invest in the capital market need careful and accurate considerations of information to determine how closely related are the variables that cause fluctuations in the price of the shares of the company to be bought.

Hunjra, Ijaz, Chani, Irfan & Mustafa, (2014) states that shareholders are generally interested in large earnings per share (EPS) because it is an indication of the success of the company. One of the variables determining investors’ decision-making to invest in EPS. EPS is a significant amount of information provided to shareholders about the amount of money received from each share of their shares in the organization (Nagendra, Kumar & Venoor, 2018; Arkan, 2016). EPS reflects the share of preferred stock in corporate income, after-tax, and dividends allocated to each common share (Ahmed, 2018: Islam et al.,...
2014; Nagendra, Kumar & Venoor, 2018; Shehzad & Ismail, 2014). Investors can assess the potential earnings per share by understanding earnings per share, and company leaders can use that profit to determine the development of the company. An increase in total income indicates an increase in income per share, so that share value reflects an increase in the value of the company (Nawangwulan, Ilat, & Warongan, 2018).

An investor investing in a business will receive a return on the shares it holds (Mira, 2020). The greater the EPS of the company will provide a reasonably good return (Fauza & Mustanda, 2016). This will encourage investors to make even more substantial investments to raise the share price of the company (Innafisah, 2019). Brealy, Stewart & Alan, (2018) stated that the terms income stock and growth stock are often used by investors (investors). This shows that investors tend to purchase stocks that are increasing primarily in the hope of making a profit. For the coming year, they are more interested in future revenue growth than in dividends. They bought stocks instead, in order to earn cash dividends. The aim of the EPS calculation is to see the progress of the company's activities, determine the share price and determine the number of dividends to be distributed (Almeida, 2019).

The profit per share is the Dividend per Share (DPS). DPS is a profit distributed to shareholders by a company in proportion to, or in proportion to, the number of shares held, and may take the form of dividends in cash or dividends in shares (Datu & Maredesa, 2017). The bird in the hand theory states that the value of the firm will be maximized by a high cash dividend payout ratio. This occurs because investors consider that the cash dividend is a low risk issue in order to increase the potential for capital gains. In this case, at the general meeting of shareholders, the company needs to consider the distribution of dividends with regard to the composition of the number of dividends to be distributed with retained earnings. Brigham & Houston (2006) explain that the distributed dividends can influence the stock price of the company in the information signaling content hypothesis because the dividend distribution announcement contains essential information about its prospects. It can be interpreted from this statement that a company's dividend policy, namely the distribution of dividends to shareholders, affects share prices.

It is quite essential to study this research topic because investors have different goals when investing their capital. One objective is to obtain, in the form of an increase in share prices or dividends, a return on investment in shares. EPS can measure the maximization of shareholder wealth because it can affect investor trust in the company. EPS is an indicator of the success of the company in generating its shareholders' profits (Islam et al., 2014). The dividend policy is one of the policies in companies that can affect company value. For investors, the content of the information in dividend announcements is a signal. Einde, (2008) states that, after distribution of dividends, the average share price increases. On the basis of these views, it can be said that the company's dividend distribution policy may increase its share price.

Using EPS and DPS ratios, this study aims to measure firm value. This research refers to the different approaches, including the EPS and DPS ratio, most frequently used to evaluate organizational performance (Ahmed, 2018; Nagendra, Kumar & Venoor, 2018; Thonse Hawaldar, Ur Rahiman, M, & Kumar, 2017; Robbetze, De Villiers, & Harmse, 2017; Warrad, 2017; Sharafoddin & Emsia, 2016; Arslan & Zaman, 2014; Sharif, Purohit, & Pillai, 2015). We use the signaling theory in this study to explain how businesses should provide financial reporting users with signals. A signal is a form of information about the efforts of management to achieve the wishes of the owner (Bulbulia & Sosis, 2011). The signaling theory describes the value of the company by providing investors with information on the increase in EPS; this data will be a positive signal because it demonstrates that the company has adequate liquidity and can meet the needs of investors in the form of dividends (Mustafa & Junaid, 2018). However, if the company announces a decrease in earnings per share, investment return, and dividend distribution rate, this information will be received as a negative signal that the performance of the company has decreased (Peso, Elgar & Barron, 2015). Therefore, this study asks whether EPS, DPS, and firm value have a significant relationship and influence.

As an indicator of firm value level, EPS can be used (O'Sullivan & McCallig, 2012). EPS is one way to measure the success of shareholder earnings (Annisa & Nasaruddin, 2019). The research findings by Solomon et al., (2016) found that EPS has a positive impact on the value of the company. The findings of this study show that there is a significant relationship between accounting data and the company's equity status. It is known that EPS has a positive correlation with investments in equity. Research results (Nuradawiyah & Susilawati, 2020), which show that EPS negatively affects firm value, show different results.

H1: Earnings Per Share has a positive and significant effect on firm value

Lilianti, (2018), explained that to determine how much profit each stock market gets, information on dividends per share is needed. Dividends are part of shareholder profits from stock investments (Adediran & Alade, 2013) and have an impact on stock market price reactions (Nagendra, Kumar & Venoor, 2018; Adediran & Alade, 2013). DPS shows the actual amount of dividends distributed per share (Nagendra, Kumar & Venoor, 2018), and shareholders are entitled to such dividends because the share value corresponds to the present value of the dividend payment flow (Adediran & Alade, 2013). Additional resources will also be invested by investors in the most effective capital market. The value of the company, in this case, the stock price, is one of the main variables that every investor has in making decisions (Arkan, 2016). The theory of signaling explains how businesses should provide users of financial reports with signals. A signal is a type of information about the efforts of management to achieve the desires of the owner. Signaling theory will describe the value of the company by
providing investors with information on the increase in EPS; this data will be a positive signal because it demonstrates that the company has sufficient liquidity and can meet the needs of investors in the form of dividends. However, if a reduction in earnings per share, return on investment, and dividend payout rate is announced by the company, this information will be received as a negative signal that its performance has decreased. Reducing the number of dividends paid can be incorrect information for the company, according to Halim (2005), because dividends are a sign of the availability of company profits and the number of dividends paid as information on the growth in current and future profit levels. The share price will decrease with this assumption because many shareholders will again sell their shares.

H2: Dividen Per Share has a negative impact on firm value.

2. Research Design and Method

All food industry companies listed on the Indonesia Stock Exchange in the study period were in the population of this study and had financial report data from 2014 to 2017. To determine samples that match the criteria met by the model used in this study, purposeful sampling was used. These criteria are (1) food industry companies listed consecutively on the Indonesian Stock Exchange during the 2014 to 2017 study period, (2) data on research variables is provided by the company, (3) dividends are distributed by the company during the 2014 to 2017 study period. Based on the criteria of six companies, PT Delta Djakarta Tbk, PT Indofood Sukses Makmur Tbk, PT Multi Bintang Indonesia Tbk, PT Mayora Indah Tbk, PT Nippon Sari Corporindo Tbk and PT Sekar Laut Tbk, respectively. To examine the effect of EPS and DPS on firm value, data was analyzed using multiple regression models. This study uses a core trend measurement of standard deviation and the lowest and highest values for data characterization and clarification (Ghozali & Latan, 2015).

3. Results and Discussion

Result Analysis

This measurement has been used most frequently in previous research. For all study variables, Table 1 shows the results of the central tendency measurement. The minimum EPS value is 1001.7892 with a standard deviation of 3552.23345, while the minimum DPS value is 2781.5829 with a standard deviation of 9596.07735. Table 1 shows the minimum EPS value. Similarly, as a proxy for firm value, the value (min) of the stock price is 22558.04, with a standard deviation of 78596.677.

As a prerequisite in the regression analysis, we test the classical assumption of data normality test, multicollinearity test, and heterokedastisitas test (Chen & Popovich, 2011; Ainiyah, Deliar, & Virtriana, 2016). The normality test research results can be seen in Table 2, which shows the variables EPS, DPS. In general, stock prices have not distributed data because the significant value is <0.0. The data is transformed into a natural logarithmic model (Ln) for the data to be normally distributed, and the information is tested again to achieve the normality assumption.

Table 1. Central Tendency Measurement

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS</td>
<td>24</td>
<td>3,12</td>
<td>46076,00</td>
<td>2781,5829</td>
<td>9596,07735</td>
</tr>
<tr>
<td>EPS</td>
<td>24</td>
<td>25,10</td>
<td>17621,00</td>
<td>1001,7892</td>
<td>3552,23345</td>
</tr>
<tr>
<td>Harga Saham</td>
<td>24</td>
<td>300</td>
<td>390000</td>
<td>22558,04</td>
<td>78596,677</td>
</tr>
</tbody>
</table>

The results after data transformation with Ln are shown on the basis of table 2; the stock price variable (Ln Stock price) is 0.200, the DPS variable (Ln DPS) is 0.05, and the EPS variable (Ln EPS) is 0.174; it can be concluded that all variables distributed with a meaningful value > 0, 05. Similarly, the results of the multicollinearity test in table 4 show EPS and DPS tolerance values >0.10 and VIF <10, so that it can be concluded that there is no multicollinearity in all the variables used in the study.

The results of the heteroscedasticity test using a scatterplot graph show that in the form of dots, the data is spread irregularly so that it can be stated that there is no heteroscedasticity in the study between variables. It can be concluded, based on the results of the normality test, multicollinearity and heteroscedasticity, that the data used in the study meets the requirements and can be analyzed using regression.
### Table 2. Normality test after Ln transformation

<table>
<thead>
<tr>
<th></th>
<th>Ln_Stock Price</th>
<th>Ln_DPS</th>
<th>Ln_EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Normal Parameters**&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>8,319881118937792</td>
<td>4,579819289202178</td>
<td>5,201468061345799</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1,616766478648019</td>
<td>2,578448003222162</td>
<td>1,566150773184216</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td>Absolute</td>
<td>.132</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>.103</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>-.132</td>
<td>-.157</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>Absolute</td>
<td>.132</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>.200&lt;sup&gt;c,d&lt;/sup&gt;</td>
<td>.050&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

### Table 3. Multicollinearity Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td></td>
</tr>
<tr>
<td>Ln_EPS</td>
<td>.398</td>
</tr>
<tr>
<td>Ln_DPS</td>
<td>.398</td>
</tr>
</tbody>
</table>

### Table 4. Research model test

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.969&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.939</td>
<td>.933</td>
<td>.41779</td>
</tr>
</tbody>
</table>

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In table 4, the results of the research model test show that the variables EPS and DPS have an R-value of 0.969. This states that there is a strong correlation between EPS (X1) and DPS (X2) stock prices (Y) with a level of significance of 0.05 <0.05933. The R2 value of 93.3 percent, on the other hand, states that stock price changes can be explained by the EPS and DPS variables; the remaining 6.7 percent is explained by other variables not included in the research model.

The value of the EPS variable t-test is shown in Table 5 to be 10.001 with a significant value of 0.000 <0.05, indicating that the EPS has, in part, a significant effect on stock prices. The DPS t-test value, meanwhile, was obtained at 0.826 with a
significant value of 0.418 > 0.05, indicating that stock prices were not partially affected by the DPS.

The F-test is used to prove the effect of EPS and DPS on stock prices simultaneously, the results of which can be seen in table 6. The F-test results show that, with a significant level of 0.000, the F-value is 161.178. This shows that the EPS and DPS variables have a significant effect on the stock price variable of 0.000 <0.055 at the same time.

**Discussion**

This study shows that, for the period 2014-2017, the EPS had a significant impact on the stock prices of food industry companies listed on the Indonesian Stock Exchange. This happens because when the company announces earnings, investors will view the EPS value to measure what to expect. If the EPS value is not met, the share price will decline; if the EPS is too high, the other hand, the stock value will be higher. EPS can be used as a driving factor for capital market investment (Tupe, 2014; Islam et al., 2014) and is the foundation of rational decision-making (Shehzad & Ismail, 2014). Theory of signaling, which explains how businesses should provide financial report users with signals. A signal is a type of information about the efforts of management to achieve the desires of the owner. Signaling theory will describe the value of the company by providing investors with information on the increase in EPS; this data will be a positive signal because it demonstrates that the company has sufficient liquidity and can meet the needs of investors in the form of dividends. However, if a reduction in earnings per share, return on investment, and dividend payout rate is announced by the company, this information will be received as a negative signal that its performance has decreased.

These results are consistent with (Ahmed, 2018; Idawati & Wahyudi, 2015; Innocent et al., 2020; Islam et al., 2014; Majanga, 2015; Robbetze et al., 2017; Solomon et al., 2016; Wang, 2013) who discovered that EPS is a determinant affecting stock prices in stock exchange-listed companies. However, it is distinct and inconsistent with those who found no effect of EPS on stock prices (Khairani, 2016; Warrad, 2017). Because investors will see the EPS value as a measure of what is expected when the company announces earnings, this inconsistency of research results can be caused. Speculation over its performance caused the large volume of trading ahead of the earnings release, and EPS was one of the driving factors. If the EPS value is not met, the share price will decline; if the EPS is too high, on the other hand, the stock value will be higher (Tupe, 2014). EPS can be used as a driving factor for investing in the capital market with these considerations (Islam et al., 2014) and a basis for rational decision-making (Shehzad & Ismail, 2014).

The DPS factor, meanwhile, does not affect the share prices of food industry companies listed on the Indonesian Stock Exchange for the period 2014-2017. Investors seeing the announced dividends not in line with their expectations can cause the absence of DPS’ influence on share prices (Douglas & Frank, 2013) because DPS is required to assist potential investors in making the right investment choices on the Stock Exchange (Farrukh et al., 2017). The theory of signaling explains how businesses should provide users of financial reports with signals. A signal is a type of information about the efforts of management to achieve the desires of the owner. Signaling theory will describe the value of the company by providing investors with information on the increase in EPS; this data will be a positive signal because it demonstrates that the company has sufficient liquidity and can meet the needs of investors in the form of dividends. However, if a decrease in earnings per share, return on investment, and dividend payout rate is reported by the company, this information will be received as a negative signal that the performance of the company has decreased. The findings of this research are consistent with the results of Khairani, (2016), but not consistent with the results (Farrukh et al., 2017; Majanga, 2015; Sharif et al., 2015; Warrad, 2017), which found that stock prices were affected by DPS. Differences in research results can occur because it is possible to view dividend announcements from two perspectives. If the dividends declared are in line with shareholder expectations, the stock market price will be affected positively, whereas if the dividends declared are not in line with investor expectations, the stock market price will be affected negatively (Douglas & Frank, 2013). Companies must therefore understand the impact of dividend distribution on the psychology of investors, which affects the stock price of the company (Majanga, 2015), to ensure that it has a good and robust dividend policy to increase profitability so that it can attract investors (Adediran & Alade, 2013) because dividends make a significant contribution to stock prices (Majanga, 2015).

This study found that the stock prices of food industry companies on the Indonesian Stock Exchange for 2014-2017 were simultaneously influenced by EPS and DPS. These findings are consistent with the results of several studies such as (Ahmed, 2018; Arslan & Zaman, 2014; Farrukh et al., 2017) in Pakistan (Innocent, Uchechukwu, & Ikechukwu, 2015) and (Adediran & Alade, 2013) in Nigeria, (Lin et al., 2011) in Shanghai, (Warrad, 2017) in Jordan, (Majanga, 2015) in Malawi, and (Nagendra, Kumar & Venoor, 2018) in Bombay that found EPS and DPS concurrently. This shows that information about EPS and DPS can help investors make wise choices about investing their funds in the capital market (Nagendra, Kumar & Venoor, 2018; Sharif et al., 2015).

**4. Conclusions**

This study examines the effect of EPS and DPS on firm value through either partial or simultaneous proxying of stock prices. In order to achieve the research objectives, previously abnormal data obtained on the Indonesian Stock Exchange from 2014-2017 was transformed (Ln) so that data normality was accepted and multicollinearity and heteroscedasticity met
the requirements. This study shows that EPS, in part, has a significant impact on stock prices, whereas DPS does not. This study also shows that EPS and DPS have an effect on the stock prices of the food industry on the stock exchange at the same time. On the basis of these findings, investors are expected to view earnings and dividend data as something that can help investors make wise and rational decisions (Nagendra, Kumar & Venoor, 2018; Sharif et al., 2015; Shehzad & Ismail, 2014). Investment decisions rely on the expectations of the investment benefits achieved (Sharafoddin & Emsia, 2016; Solomon et al., 2016). Based on these findings, this study recommends that dividend policies that can increase firm value as much as possible can be formulated by the management of companies listed on the Stock Exchange. Also, development must a business strategy focused on internal and external factors affecting EPS and features that, according to company information effectively value shares.

References


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