COMPARISON OF FINANCIAL PERFORMANCE AND STOCK PRICE BEFORE AND AFTER EX-DIVIDEND LISTED COMPANIES IN INDONESIA STOCK EXCHANGE

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ABSTRACT

The environmental Kuznets curve hypothesis (EKC) urges that there is an inverse-U-shaped relationship between carbon dioxide emission per capita and income per capita. Although there is lots of paper attempting to test the EKC hypothesis, the reported empirical results and conclusions are ambiguous. Departing from previous literature, this study focusses on two issues. Firstly, it examines the MINT countries which is neglected in the extend EKC literature. The MINT countries consist of Mexico, Indonesia, Nigeria and Turkey. The annual GDP per capita and carbon dioxide emissions per capita were obtained from the World Development Indicators 2013. The data set includes the period of 1967-2010, due to the availability of data. Secondly, the long run panel causality test suggested by Canning and Pedroni (2008) is used the test EKC hypothesis. Results of this study supported the EKC hypothesis only in the case of Nigeria.

Keywords: Financial performance, Indonesia stock prices, Ex-dividend date and the manufacturing sector
1. Introduction

The purpose of investors in buying shares in addition to capital gains are getting dividends. Companies that go public have an obligation to provide information to investors regarding its performance in the form of financial statements and the amount of dividends paid announcements (Mulyati, 2003). The amount of dividends paid the company's depends on dividend policy decided by the Board of management. In essence, dividend policy is determining how much of the profit will be distributed to shareholders as dividends, and how much profit will be retained for reinvestment (Husnan, 2001).

Dividend announcement is one of the important factors that could affect investors’ policies (Siaputra and Atmadja, 2006). Some research suggests that stock returns and stock prices react to the announcement of dividends as seen from the magnitude of the dividends. The reaction occurs in the period around the ex-dividend date. Ex-dividend date is the date or time when stock trading is no longer contain the right to get dividends (Darmadji and Fakhruddin, 2008). So, if you buy a stock on this date or later those shares are no longer providing dividends.

After the ex-dividend date, the market price of shares listed on the stock tends to fall as the shareholders who invest in the company no longer has a claim on the company declared dividend rights, so many investors are in no mood to buy stocks, which causes stock prices although the decline may be the company to report good financial performance. Campbell and Beraneks in Pudjiono (2002) stated that as a result of cash dividends to shareholders lead to falling stock prices at the ex-dividend date. It is considered to be information that is defined as a negative signal by investors because their shares are no longer an element of the dividend, so that the relationship between dividends and stock prices at the ex-dividend date is negative. It means that at the time ex-dividend date will lead to lower stock prices.

Research on stock price reaction at the time of the ex-dividend date has been investigated by Siaputra and Atmadja (2006). Research results concluded that the majority of the stock price will decline at the time after the ex-dividend date. Milonas et al. (2002) also analyze the behavior of the stock price at the time ex-dividend date in the Chinese stock market. The results showed that the price of the stock has decreased during the ex-dividend date by the amount of dividends paid. Additionally, Setianingsih (2006) also investigated the influence of fundamental and market risk factors on stock prices companies listed on the Stock Exchange at the time of the ex-dividend date. Research results indicate that the fundamental and market risk factors influence stock prices before and after the ex-dividend date.

Endri (2008) suggests to measure whether or not the financial performance of a company is generally done through an assessment of the company’s own financial statements using financial ratios. According to Ross, Westerfield, and Jordan (2012), financial ratios are classified into several groups, namely: liquidity ratios, leverage ratios, productivity ratios, profitability ratios and market value ratios.

2. Literature Review

Dividend is the value of the company’s net income after tax to retained earnings are recorded as a reserve for the company (Ang, 1997). Meanwhile, Stice et al. (2005) defines dividends as distributions to the shareholders of the company equal to the number of shares held by their respective owners. Dividends shows the relationship between the shareholders with profits from
the company. So that shareholders have a right to the profits according to the amount of capital (shares) owned. If the company has great earnings, dividends distributed to shareholders will increase. It will be more and more the interest of investors or prospective investors to purchase shares of the company. According to Ross, Westerfield, and Jordan (2012), while the dates associated with the actual dividend is as follows a). declaration date, b). ex-dividend date, c). date of record, and d). date of payment.

Ex-dividend date is the date on which the right to dividend for the year of its release” (Ross, Westerfield, and Jordan, 2012). In other words, if purchased on or after the date the shares are no longer providing dividends. Conversely, if someone wants to sell the shares and still want to get right to the dividend so he had to sell the ex-dividend date or later. Sularso (2003) states that at the ex-dividend date, the investor generally predict that dividends will affect the stock price. This prediction is based on logical reasoning, that the investor has lost the right to the return of dividends. Investors who wish to benefit, likely would choose to not be in a position to buy (long position). Thus the stock price will decrease proportional to the value of the returns that have been lost.

According to Mishkin and Eakins (2012), the stock is a security that represents part ownership of the assets and profits of a company. The shareholders are entitled to a percentage interest in the company, consistent with the percentage of shares outstanding. When a person buys shares in a company, then it automatically has ownership rights over such shares and the right to return in the form of dividends, capital gain/loss, as well as voting rights as investors.

In the movement of stock prices in the market, there are factors that can influence it. According Hernawati and Setyaningsih (2007) that influence share prices in the market are a). projected earnings per share, b). when the earned income, c). the level of risk with profit projections, d). the proportion of debt to equity firm, e). dividend policy, and f). External constraints such as the level of economic activity in general, taxes and stock exchanges.

Milonas et al. (2002) analyzed the behavior of stock prices at the time ex-dividend date in the Chinese stock market. The results showed for the dividend is not taxable stock price declined during the ex-dividend date by the amount of dividends paid. As for the taxable dividend, the stock price decline is closer to an amount equal to the adjusted dividend tax. Sularso (2003) conducted a study aimed to analyze the effect of the announcement of ex-dividend date on the Jakarta Stock Exchange, by taking a sample of 14 stocks. Results of these studies conclude that stock prices react negatively with decreasing up to the announcement of dividend at the ex-dividend date, and the stock price reacted positively with an increase to the announcement of dividends down at the ex-dividend date. Also concluded that there are significant changes in stock prices before and after the ex-dividend date. Sing-yang and Yun-lan (2004) also conducted a study on the phenomenon of ex-dividend date on the Taiwan Stock Exchange. The study found strong evidence that small investors sell their shares before the ex-dividend date and start buying from the ex-dividend date, which suggests that small investors prefer low prices. Research on the ex-dividend phenomenon has also been studied by Setianingsih (2006). The results obtained a conclusion that the cash dividend of independently variable, EPS, DER, JCI, and exchange rates jointly affect stock prices before and after the ex-dividend day. For different test showed that there are differences in variable cash dividend, EPS, DER, JCI, and the exchange rate between the stock price before and after the ex-dividend date. Pahlevi (2008) studied the effect of dividend announcement on stock prices at the ex-dividend date. Results of these studies concluded that the dividend announcement (DPS number) affect stock prices around ex-dividend date.
3. Theoretical framework

Based on the background and other explanations, researchers tried to describe relationships between variables in this study are shown in the following figure:

![Diagram of Theoretical Framework]

**Figure 1. Theoretical Framework**

From the picture above can be explained that the company’s financial performance as measured by CR, DER, TATO, ROA and the stock price on the manufacturing sector before the ex-dividend date will be compared with after the ex-dividend date, which is known for better performance.
4. Hypothesis

Based on the framework described hypothesis can be formulated as follows:

\( H_1 \): There are differences in financial performance as measured by the current ratio (current ratio/CR), the solvency ratio (Debt to Equity Ratio/DER), the productivity ratio (Total Assets Turn Over/TATO), the ratio of profitability (Return on Assets/ROA), and the ratio of market value (dividend Payout Ratio/DPR) partially and simultaneously both before and after the ex-dividend date.

\( H_2 \): There are differences in stock prices both before and after the ex-dividend date.

5. Data, Research Methods and Analysis

Research object in this study are all manufacturing firms listed on the Indonesia Stock Exchange in except the banking sector that routinely provide a dividend once a year in the period 2009-2011. Data used in this research is quantitative data, i.e., the value of the company’s financial ratios and stock prices before and after the ex-dividend date. The value of the company’s financial ratios derived from the processing of the data contained in the quarterly financial statements before and after the ex-dividend date as the company that made the study sample was obtained from the official website of the Indonesia Stock Exchange (www.idx.co.id). While the data on stock prices before and after the ex-dividend date official data obtained from the Indonesia Stock Exchange as well as other data sources from the company’s website that the research sample.

The method used in this research is descriptive method of analysis, and testing different test hypotheses that describe a comparative analysis of financial performance and the company’s stock price before and after the ex-dividend date. The criteria used in determining the sample data of this study include the company issued a dividend in a row from 2009 to 2011 and company has not issued dividends in more than once a year.

Based on the above criteria, then gained 14 companies that were sampled in this study. So the total observations in this study amounted to 84 observations during the 3 years of the study period 2009-2011 using quarterly data (quarter data before and after the ex-dividend date).
Operational definition of variables in this study are shown in Table 1. the following:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable Concept</th>
<th>Measurement of Variable</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial performance</td>
<td>Company Financial Performance</td>
<td>Liquidity ratio: the ratio that measures a company’s ability to pay its obligations in the short term (Ross, Westerfield, and Jordan, 2010).</td>
<td>$X_{#1}$: [ CR = \frac{\text{Current assets}}{\text{Current liabilities}} ]</td>
</tr>
<tr>
<td>Financial performance</td>
<td>Company Financial Performance</td>
<td>Solvency ratio: the ratio that measures a company’s ability to meet its long-term obligations (Ross, Westerfield, and Jordan, 2010).</td>
<td>$X_{#2}$: [ DER = \frac{\text{Total debt}}{\text{Total equity}} ]</td>
</tr>
<tr>
<td>Productivity ratio: a ratio that measures how efficient and intensive use of the company’s assets to generate sales (Ross, Westerfield, and Jordan, 2010).</td>
<td>Productivity ratio</td>
<td>$X_{#3}$: [ TATO = \frac{\text{Sales}}{\text{Total assets}} ]</td>
<td></td>
</tr>
<tr>
<td>Profitability ratio: ratio that measures how much a company makes a profit in the use of assets and operations (Ross, Westerfield, and Jordan, 2010).</td>
<td>Profitability ratio</td>
<td>$X_{#4}$: [ ROA = \frac{\text{Net income}}{\text{Total assets}} ]</td>
<td></td>
</tr>
<tr>
<td>The ratio of the market value: ratio measures the company in creating value in society and shareholders (Ross, Westerfield, and Jordan, 2010)</td>
<td>The ratio of the market value</td>
<td>$X_{#5}$: [ DPR = \frac{\text{Dividend per Share}}{\text{Earning per Share}} ]</td>
<td></td>
</tr>
<tr>
<td>Stock prices: acceptance sacrifice had to be made by investors for participation in the company (the Act no.8 of 1995 on the Capital Market)</td>
<td>Stock Price</td>
<td>Quarterly closing stock price before and after the ex-dividend date</td>
<td>$X_{#6}$: [ PRICE = \text{Quarterly closing share price before and after the ex-dividend date} ]</td>
</tr>
</tbody>
</table>

6. Results and Discussion

6.1. Financial Performance Statistics Description Before and After Ex-Dividend Date

An overview of the statistical description of the quarterly financial performance is measured by the current ratio, debt to equity ratio, total asset turnover, return on assets, and the dividend payout ratio both before and after the ex-dividend date of manufacturing companies listed on the Stock Exchange of 2009-2011 are presented in the following table.
Table 2. Descriptive Statistics of Financial Performance

<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>CR_before</td>
<td>42</td>
<td>1.02</td>
<td>9.93</td>
<td>3.1805</td>
<td>2.47191</td>
</tr>
<tr>
<td>CR_after</td>
<td>42</td>
<td>.93</td>
<td>9.98</td>
<td>2.8226</td>
<td>2.07996</td>
</tr>
<tr>
<td>DER_before</td>
<td>42</td>
<td>.12</td>
<td>3.36</td>
<td>1.2604</td>
<td>1.05419</td>
</tr>
<tr>
<td>DER_after</td>
<td>42</td>
<td>.12</td>
<td>4.34</td>
<td>1.2798</td>
<td>1.08096</td>
</tr>
<tr>
<td>TATO_before</td>
<td>42</td>
<td>.19</td>
<td>1.41</td>
<td>.5056</td>
<td>.26375</td>
</tr>
<tr>
<td>TATO_after</td>
<td>42</td>
<td>.37</td>
<td>2.22</td>
<td>.8440</td>
<td>.38721</td>
</tr>
<tr>
<td>ROA_before</td>
<td>42</td>
<td>.07</td>
<td>9.06</td>
<td>3.7485</td>
<td>2.36320</td>
</tr>
<tr>
<td>ROA_after</td>
<td>42</td>
<td>.25</td>
<td>13.51</td>
<td>6.0182</td>
<td>3.69480</td>
</tr>
<tr>
<td>DPR_before</td>
<td>42</td>
<td>.02</td>
<td>6.00</td>
<td>1.0854</td>
<td>1.19818</td>
</tr>
<tr>
<td>DPR_after</td>
<td>42</td>
<td>.03</td>
<td>2.47</td>
<td>.6633</td>
<td>.58659</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Current Ratio (CR) is a measure of the ability of the company to meet its short term obligations. From the table above shows that the average CR_before (3.18) is higher than CR_after (2.82), indicating that the level of liquidity before the ex-dividend higher than that after the ex-dividend.

Debt to Equity Ratio (DER) indicates the size of the company's capital structure. From the table above shows that the average DER both before and after the ex-dividend showed almost the same values of 1.26 and 1.28 with a deviation of 1.59%. This shows that in the second period the proportion of debt is always higher than the use of equity.

Total Asset Turn Over (TATO) demonstrate the effectiveness and productivity of assets in generating revenue. From the table above shows that TATO after the ex-dividend tend to be larger than the previous TATO. This suggests that the ex dividend TATO_after more effective than ever before.

Return on Assets (ROA) shows the size of the company’s profitability, as measured by the ability to generate net income asset in the company. From the table above shows that the average ROA_after ex-dividend (6.02) is much higher than ROA_before (3.75). This shows the company’s profitability after the ex-dividend is higher than ever before.

Dividend Payout Ratio (DPR) is a share of the profits distributed as dividends to shareholders. From the table above it is clear that the average ex-dividend DPR_before much higher (1.08) compared to the ex-dividend DRP_after (0.66). This condition can be understood as a result of the dividend distribution of representatives after the condition becomes smaller than before.

From the above description of the company’s performance, it can be concluded that the overall performance of the company after the ex-dividend indicates a better condition than before it was due to the use of debt that is managed more effectively and more efficiently by the company to increase sales as well as in increasing its profits.
6.2. Description Manufacturing Company Stock Price Statistics Before and After Ex-Dividend Date

Overview of descriptive statistics stock prices both before and after the ex-dividend date of manufacturing companies listed on the Stock Exchange 2009-2011 period are presented in the following table.

<table>
<thead>
<tr>
<th>Description Stock Price Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRICE_before</td>
<td>42</td>
<td>71.00</td>
<td>120000.00</td>
<td>10043.6190</td>
<td>22497.72320</td>
</tr>
<tr>
<td>PRICE_after</td>
<td>42</td>
<td>98.00</td>
<td>127000.00</td>
<td>11565.5000</td>
<td>24840.73711</td>
</tr>
</tbody>
</table>

Description:
PRICE_before = share price before the ex-dividend date
PRICE_after = stock price after the ex-dividend date

From table 3 above shows that the average price of manufacturing company stock after the ex-dividend date is higher than the average stock price before. This indicates information that after the ex-dividend the positive signal is captured by the market certainty in obtaining corporate dividend to its shareholders.

6.3. Comparative Analysis of Financial Performance and Stock Price Manufacturing Sector Companies listed on the IDX before and after the ex-dividend date Period 2009 - 2011

After all data normality and homogeneity test using the Kolmogorov Smirnov and Levene Statistic test results obtained there are some who need trasformation research data with the data that is normal logarithmic current ratio (CR), the dividend payout ratio (DPR), and the price of shares and thereafter throughout data to be normal and homogeneous. To test the performance comparison of the financial and manufacturing sectors the company's stock price before and after the ex-dividend date is by using Paired Sample T Test.

The following table presents the results of Paired Sample T Test financial performance (as measured by the current ratio, debt to equity ratio, total asset turnover, return on assets, and the dividend payout ratio) and stock prices before and after the ex-dividend date. Guidelines for decision-making is if the value of significance (sig) < 0.05 then there is a difference in the financial performance variables and stock prices between the periods before and after the ex-dividend date. Conversely, if the value of significance (sig) > 0.05 then there is no significant difference in the financial performance variables and stock prices between the periods before and after the ex-dividend date.
Table 4. Paired Samples T Test Results

<table>
<thead>
<tr>
<th>Pair</th>
<th>Expression</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Ln_CR_before - Ln_CR_after</td>
<td>1.859</td>
<td>41</td>
<td>.070</td>
</tr>
<tr>
<td>Pair 2</td>
<td>DER_before - DER_after</td>
<td>-.549</td>
<td>41</td>
<td>.586</td>
</tr>
<tr>
<td>Pair 3</td>
<td>TATO_before - TATO_after</td>
<td>-13.763</td>
<td>41</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 4</td>
<td>Ln_ROA_before - Ln_ROA_after</td>
<td>-7.111</td>
<td>41</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 5</td>
<td>Ln_DPR_before - Ln_DPR_after</td>
<td>6.187</td>
<td>41</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 6</td>
<td>Ln_PRICE_before - Ln_PRICE_after</td>
<td>-3.701</td>
<td>41</td>
<td>.001</td>
</tr>
</tbody>
</table>

Based on the table above, the value of the variable significance of 0.070 and a current ratio of debt to equity ratio of 0.586, which means greater than the 0.05 level. This may imply that there are no significant differences in the variable current ratio (CR) and debt to equity ratio (DER) between the periods before and after the ex-dividend date. Meanwhile, the significance value of variable of TATO, ROA, DPR, and the share price is less than the 0.05 level, which means there is a difference between the period before to after the ex-dividend date.

7. Conclusions and Recommendations

Based on the research that has been conducted, the following conclusions can be drawn:

Overall financial performance as measured by the current ratio (CR), debt to equity ratio (DER), the total asset turnover (TATO), return on assets (ROA), and the dividend payout ratio (DPR) after the ex-dividend indicates conditions better compared to the period before the ex-dividend this case after the ex-dividend attributable to the use of debt which managed the company more effective and more efficient in increasing sales as well in increasing its profits. The same thing is true of the average manufacturing company’s stock price after the ex-dividend date is higher than the average stock price prior. This indicates information that after the ex-dividend absence of positive signal captured by the above market gain certainty in the company’s dividend to its shareholders.

From the results of Paired Sample T Test is known that there is no significant difference of the variable current ratio (CR) and debt to equity ratio (DER) between the periods before and after the ex-dividend date. However, the variable TATO, ROA, DPR, and stock prices there are significant differences between the period before to after the ex-dividend date. These results differ from the results of other studies relevant to the topic that is of Sularso (2003), Sing-Yang and Yun-Lan (2004) which states that stock prices tend to fall after the ex-dividend date due to the fact the stock price tends to increase significantly.

The recommendation that can be given to investors and future researchers of this study are investors need to pay attention to the positive signal from the dividend distribution made by the company after the ex-dividend because it was followed by the improved performance of the company in generating profits for the company from the effectiveness of the use of debt (debt) with a significant difference.

Appropriate investment strategy that needs to be done by the investor is to buy the stock before the ex-dividend to be maintained due to the company’s financial performance will continue to improve after the ex-dividend.
To convince the conclusions of this study, it is suggested to the next researchers to conduct similar research topics on different sectors of the company.

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