The Impact of Current Ratio, Debt to Equity Ratio, Return on Assets, Dividend Yield, and Market Capitalization on Stock Return (Evidence from Listed Manufacturing Companies in Indonesia Stock Exchange)

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Abstract

This study aims to empirically investigate the firm’s performance on stock return. The selected firm’s performance indicators were financial ratios, market ratio and firm size. The selected financial ratio in this study was current ratio as one of liquidity ratios, debt-to-equity ratio as leverage ratios, and return on assets as profitability ratios. Dividend yield is considered as a market ratio while market capitalization is considered as firm size. The period of the study was from 2012 – 2016 and the sample population of this study was 18 manufacturing companies listed on Indonesia Stock Exchange (IDX). Since 2012 – 2016, the contribution of manufacturing sector industry almost quarterly of the Indonesia Domestic Product (PDB). However since 1998 up to 2016, trend of this sector has been declining and slightly showing increment by second quarter of 2017. The panel data regression analysis with random effect model was chosen as the method to analyze it. According to the findings, firm’s performance was simultaneously influenced stock market return.

Keywords: Manufacturing Sector, Firm’s Performance, Stock Market Return, Data Panel Regression.

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1. Introduction

Manufacturing sectors in Indonesia have been contributing to Indonesia Domestic Product (PDB). Since 2012 – 2016, the contribution of manufacturing industry around 20.91%, or almost quarterly of the PDB. However since 1998 up to 2016, trend of this sector has been declining and slightly showing increment by second quarter of 2017 [1]. Indonesia industrial ministry has been designed and implemented an integrated roadmap strategy in facing new revolution in industry so-called Manufacturing 4.0. One of the strategies for Indonesia in entering Manufacturing 4.0 is preparing and strengthen five manufacturing sectors, which are food and beverages industry, automotive industry, electronic industry, chemical industry and textile industry. The strategies are not addressed only for big manufactures but also small/home industries to catch opportunities in Manufacturing 4.0 era.

Manufacturing needs to upscale their company for further growth especially small company [2]. An initial public offering (IPO) is often used by a company to generate the capital needed to expand their business and rescale or upscale business is one of the ways to expanding the business.

One of the stock sectors which has been traded in Indonesia stock exchange market is Manufacturing Sector. The stock market development in Indonesia has been showing good development. One of the phenomena was single investor identification (SID) in Indonesia had increased by 23.47% within 2016 compare to 2015, and Indonesia Custodian Stock Index (KSEI) recorded that in December 2016’s only, there was 18.83% increment of new investors compare to last year [3]. This phenomenon showed that many of people have been interested in gaining their wealth out of passive income as investment alternative of their money. One of the passive income source is from stock market. The purpose in stock market return especially in common stocks is dividend and capital gains. Dividend derives from profit of the company while capital gain is yield between buying price and selling price. Despite of potential profits/gains, investors are also needs to be aware of potential losses. Therefore, investor needs information in making decision for their investment which one of it is investment on stock of listed manufacturing companies in Indonesia stock exchange.
One of the tools which is used by investor in making decision on investment in stock is financial report. Financial report contains information on fiscal based on historical data and its disclosures which may also contain information on subsequent event that possibly impacts future condition of company after the year-end period. Financial ratios calculation may enlighten investor in assessing financial report. Financial ratios are liquidity ratios, leverage ratio, profitability ratio, and activity ratio. This research accommodated three financial ratios, market ratio, and size effect of the company which are current ratio (CR), debt to equity ratio (DER), return on assets (ROA), dividend yield (DY), and market capitalization (MC) to study their impact on stock market return over period 2012-2016.

2. Literature Review

2.1. Grand Theory

In business world, it is a common practice that owners mandate or delegate managers as agents in order to manage their business to act on owners’ best interest. There is a possibility that agents are not act at best interest of the shareholders, and shareholders convince that agents will act at shareholders interest only if managers be awarded with good incentive and regular supervisions from owners in place. This situation will raise conflict of interest between managers and owners as revealed in agency theory which introduced by Ross [4] and developed by Jensen and Meckling [5].

Basiclly, managers have more comprehensive information compare to shareholders about true state of the businesses. This situation has been increased asymmetric information between managers and owners. The asymmetric theory was introduced by Akerlof [6]. Duc and Van Thanh [7] revealed one of the controlling tools which may be taken by shareholders to control their managers is deploying debt instead of own capital to mitigate this problem for capital structure decision. Nevertheless, Myers [8], also introduced pecking order theory that prioritizes internal fund as in its retained earning instead of employing external fund to finance their business such as debt.

Akerlof [6] stated that existence of agency theory had risen the signaling theory. Spence [9] attempted signal equilibrium theory concluded that good companies are able in distinguishing themselves to not good companies by sending credible signal about the quality of their business. Signals are categorized as credible only when not good companies unable imitate the signals which are sent by good companies. Ross [4] also stated that the signaling theory described investor perceptions about the prospect of the company due to corporate action.

Other considerable action to mitigate the agency problem is by dividend distribution. Dividend distribution will lessen the cash and it will encourage managers to work effectively and efficiently. Bird in the hand theory was initiated by Lintner [10] detected that investors prefer dividend instead of capital gains with reasons that dividend has less unpredictability than capital gain. According to clientele effect which was launched by Pettit [11], when most of shareholder lodge dividend, then company will recompense significant amount of dividend, and when most of shareholders lodge for lower dividend amount, the company will retain profit as retained earnings. Bhattacharya [12] in dividend signaling hypothesis revealed dividend payment also a signal for investor that the firm is profitable, thus, able to distribute dividend with expected cash flow.

Eugene Fama and Kenneth French [13], analyzed relationship between stock market return with firm’s size (market capitalization), market to book value ratio, beta and their impact on stock market return. The study concluded that size and market to book ratio are powerful variables in predicting average stock market return. Nevertheless, companies with small market capitalization afford higher stock market return compare to companies with big market capitalization.

2.2. Empirical Studies

Based on empirical studies, there were many of studies intended to enlighten impact of financial ratios, market ratio, and market capitalization which are indicated by current ratio, debt to equity ratio, return on assets, dividends yield, and market capitalization to stock market return.

According to Fabozzi et al [14], current ratio shows ability of company to pay its current liabilities by using its current assets. Investor usually prefer for company which has lower current ratio with assumption that excess fund is allocated to more productive assets in order to multiply its profit. Aga et al [15] and Jabbari and Fathi [16] who found that current ratio had positive and significant impact to stock market return, while Kebraree-zadeh et al [17] who revealed that current ratio had negative and significant impact to stock market return. Contrary results also found by Candradewi [18] and Basalam et al [19], who concluded that current ratio had negative but insignificant impact to stock market return, while Tumonggor et al. [20] found that current ratio had positive but insignificant impact to stock market return.

Debt to Equity Ratio measures financial risk which must be borne by shareholder relates to company liabilities comparing with company equity. According to Gazpersz [21], higher value of this ratio shows higher financial risk for shareholders. Jabbari and Fathi [16], and Basalam et al [19] who revealed that debt to equity ratio had positive and significant impact to stock market return, while Acheampong et al. [22] and Abdullah et al [23] who concluded that debt to equity ratio had negative and significant impact to stock market return. Other result found by Hasan et al [24] and Puspitadewi and Rahyuda [25], who concluded that debt to equity ratio had positive and insignificant impact to stock market return, while Husein and Mahfud [26] and Tumonggor et al [20] who indicated that
debt to equity ratio had negative and insignificant impact to stock market return.

According to Gazpersz [27], return on assets shows how company utilizes its assets to its net profit. Anwar [28] and Puspitasari et al. [25] concluded that return on assets ratio had positive and significant impact to stock market return, while Silviana and Rocky [29], and Hutauruk et al. [30] who found that return on assets had negative and significant impact to stock market return.

Bird-in-the-hand theory initiated by Lintner [10], stated that investor prefers dividend instead capital gains due to capital gains have higher unpredictability than dividend. Puspitasari and Purnamasari [31], and Wulandari [32], found that dividend yield had positive and significant impact to stock return, while Yadav and Yadav [33], and Yani and Santoso [34] who revealed that dividend yield had negative and significant impact to stock market return.

Research on market capitalization which were conducted by Aceampong et al [22] and Abdullah et al [23], concluded that market capitalization had positive and significant impact to stock market return, while Ardiansyah and Amanah [35], and Japlani [36] who concluded that market capitalization had negative and insignificant impact to stock market return. On the other study, Fitriyana [37], found that market capitalization had positive and insignificant impact to stock market return.

3. Methodology

3.1. Research Design

The study was combination of cross-sectional and time analysis over period 2012 -2016 and evidence from listed 18 manufacturing companies in Indonesia Stock Exchange over period 2012-2016. The data were provided in balanced panel as it contained all observation in same all time frame. E-views software was chosen to conduct analysis process in this study.

The purposive sampling technique was used for sample selection. Since it is quite impossible to investigate every variation on stock market return, in this study, three financial ratios, market ratio and size effect of the company which were current ratio (CR), debt to equity ratio (DER), return on assets (ROA), dividend yield (DY), and market capitalization (MC) used as influence indicators for stock market return. The study used secondary data where financial ratios, dividend yield 2012 -2015 and market capitalization originated from annual financial report and summary of firm performance in Indonesia stock exchange database, while dividend yield 2016 was calculated based on information on Indonesia Custodian Stock Index (KSEI). Stock market return originated of daily adjusted closing price because this price had adjusted with corporate action of each company, then annualized it by using geometric mean calculation. In this study, data transformation to logarithm was used to convert data from one structure to other structure in order more nearly meet the statistical assumptions.

3.2. Variables

This study used 5 independent variables and 1 dependent variable. Those 5 independent variables were current ratio (CR), debt to equity ratio (DER), return on assets (ROA), dividend yield (DY), and market capitalization (MC), while independent variable is stock market return (SR).

<table>
<thead>
<tr>
<th>Table 1. Independent and Dependent Variables</th>
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</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td><strong>CR [38]</strong></td>
</tr>
<tr>
<td><strong>DER [39]</strong></td>
</tr>
<tr>
<td><strong>ROA [40]</strong></td>
</tr>
<tr>
<td><strong>DY [41]</strong></td>
</tr>
<tr>
<td><strong>MC [42]</strong></td>
</tr>
<tr>
<td><strong>SR [43]</strong></td>
</tr>
</tbody>
</table>

Where:

- __GM = Geometric Mean__
- __R = (adjusted closed price period t - adjusted closed price period t-1)/ closed price period t-1__

3.3. Regression Analysis

Regression analysis as statistic tool which is used to understand which among the independent variables are related to the dependent variable, and to explore how changes on dependent variable when independent variables are varied. Following is the regression model used in this study:
\[ SR = \beta_0 + \beta_1 CRt + \beta_2 DERt + \beta_3 ROAit + \beta_4 DYit + \beta_5 MCit + \varepsilon \]  

(7)

Where: \( t = 1 \ldots, t \) refers to the time period and \( i = 1 \ldots \), refers to the member of the panel (cross-section), \( SR \) refers to log return of stock market return, \( \beta_0 \) as coefficient of intercept constant, \( \beta_1 - \beta_5 \) as coefficients of slope, \( CR \) refers to logarithm of current ratio, \( ROA \) refers to logarithm of return on asset, \( DER \) refers to logarithm of debt to equity ratio, \( DY \) refers to logarithm of dividend yield, and \( MC \) refers to logarithm of market capitalization.

4. Result and Discussion

4.1. Descriptive Statistic

<table>
<thead>
<tr>
<th>Statistic</th>
<th>( \text{LOG}_{-} \text{CR} )</th>
<th>( \text{LOG}_{-} \text{DER} )</th>
<th>( \text{LOG}_{-} \text{ROA} )</th>
<th>( \text{LOG}_{-} \text{DY} )</th>
<th>( \text{LOG}_{-} \text{MC} )</th>
<th>( \text{LOG}_{-} \text{SR} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.48</td>
<td>2.00</td>
<td>2.06</td>
<td>2.01</td>
<td>13.31</td>
<td>2.00</td>
</tr>
<tr>
<td>Median</td>
<td>2.47</td>
<td>2.00</td>
<td>2.05</td>
<td>2.01</td>
<td>13.52</td>
<td>2.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.88</td>
<td>2.01</td>
<td>2.23</td>
<td>2.18</td>
<td>14.65</td>
<td>2.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.18</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
<td>11.39</td>
<td>2.00</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.17</td>
<td>0.00</td>
<td>0.05</td>
<td>0.02</td>
<td>0.86</td>
<td>0.00</td>
</tr>
<tr>
<td>Observation</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

The descriptive statistics were used as a measure for the analysis of mean, median, maximum, minimum, and standard deviation. Table 2 showed the values of descriptive statistic between variables. Sample observation was 90 samples. The maximum and highest mean values had been observed in case of current ratio, following that, the maximum value of current ratio 2.88 and the minimum value was 2.18 while mean value is 2.48. Minimal dispersion of 0.17 indicated there was low deviated value to mean data value.

The maximum value in case of debt-equity ratio was 2.01 and the minimum value was 2.00 while mean value was 2.00 having standard deviation of 0.00. Small dispersion of 0.0 indicated that the value had small distance value each other or some data showed exactly same value.

The maximum value in case of return on assets was 2.23 and the minimum value was 2.02 while mean value 2.06 having standard deviation of 0.05. Minimal dispersion of 0.05 revealed that value was close concentrated to mean data value. This condition caused by a small variation of the studied sample by comparing distance between minimum to mean value.

The maximum value in case of dividend yield was 2.18 and the minimum value was 2.00 while mean value 2.01 having standard deviation of 0.02. Minimal dispersion of 0.02 indicated there was low affected by data outliers.

The maximum value in case of market capitalization was 14.65 and the minimum value was 11.39 while mean value 13.31 having standard deviation of 0.86. Small dispersion of 0.86 revealed the value was close to mean data value.

Finally the maximum value in case of stock market return was 2.00 and the minimum value was 2.00 while mean value 2.00 having standard deviation of 0.00. Standard deviation showed deviation was 0.0 indicated contrived situation where each data had small distance value each other or some data showed exactly same value.

4.2. Data Quality Analysis

Data panel is observing time series data and cross-section data. Unit root test needs to be conducted in order to determine whether a time series variables are nonstationary and having a unit root. Levin, Lin & Chu (LLC) and Phillips-Perron Fisher (PP) test were used and with the significant level by 0.05 (\( \alpha = 5\% \)), the result showed under significant level, and it meant that all data was stationary.

4.3. Selection of Panel Data Regression Model

There are 3 variety models of panel data which are known, common effect model or also known as pooled least square (CE), fixed effect model (FE) and random effect model (RE). Determination of model is determined by result of 3 tests which are known as chow test, Hausman test, and langrange multiplier test with the significant level is set on 0.05 (\( \alpha = 5\% \)). As illustrated on Table 3, random effect model was the best model in this study.

<table>
<thead>
<tr>
<th>Test</th>
<th>Prob.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chow test</td>
<td>0.0213</td>
<td>Prob&lt;0.05 = Fixed Effect (FE)</td>
</tr>
<tr>
<td>Hausman test</td>
<td>0.3887</td>
<td>Prob&lt;0.05 = Random Effect (RE)</td>
</tr>
<tr>
<td>Langrange Multiplier test</td>
<td>0.0338</td>
<td>Prob&lt;0.05 = Random Effect (RE)</td>
</tr>
</tbody>
</table>

4.4. Results of Panel Data Regression Analysis

The effect of between variables is shown in regression analysis. Regression analysis shows variation of dependent variable explained by independent variables. Based on the
As illustrated in Table 4, the random effect model revealed all independent variables were simultaneously statistically significantly influenced the stock market return (p-value < 0.05 as significant level of this study).

The values of determination of coefficient R² was 0.3275320, which meant that 32.75 percent variation of stock market return had been explained by the variations of all independent variables, which were current ratio, debt to equity ratio, return on assets, dividend yield, quick ratio, and earnings per share. 67.25 percent variation of stock market return had been explained by the other independent variables which were not included in this study. In addition, the presented model was free from the presence of autocorrelation as the value of Durbin Watson was close to two (DW = 1.9834471).

As revealed in Table 4, the hypothesis of H1 revealed that the current ratio influence on stock market return was positively and insignificant. Therefore, the alternate hypothesis H1 was rejected. This was consistent with the previous study of a positive and insignificant connection between current ration on stock market return. For instance, Tumonggor et al. [20], found that current ratio was positively related to stock market return but failed to show a significant result. But the result of this study was not in line with results of researches which were conducted by Aga et al. [15] and Jabbari and Fathi[16] who revealed that current ratio was significantly influenced stock market return.

The hypothesis of H2 indicated that debt to equity ratio influence on stock market was negatively and insignificant. Thus, the alternate hypothesis H2 was rejected. This finding was similar with Hussein and Mahfud [26], and Tumonggor et al [20], and different with result which was indicated by Acheampong et al [22] and Abdullah et al [23].

The hypothesis testing analysis of H3 revealed that there was positive and significant influence of return on asset on stock market return. Therefore, the alternate hypothesis H3 was accepted. This result was consistent to Anwaar [28] and Puspitasari et al. [25] but in contrast Silviana and Rocky [29], and Hutauruk et al. [30] who showed return on assets had negative and significant impact to stock market return.

The hypothesis of H4 showed that dividend yield influence on stock market was positive and insignificant. Thus, the alternate hypothesis H4 was accepted. This finding was consistent with Puspitasari and Purnamasari [31], and Wulandari [32] who revealed that dividend yield had positive and significant impact to stock market return, while in contrary, Yadav and Yadav [34], and Yani and Santoso [33] found that dividend yield had negative and significant impact to stock market return.

The hypothesis of H5 showed that market capitalization influences on stock market were negatively and insignificant. Thus, the alternate hypothesis H5 was rejected. This finding was similar to Ardiansyah and Amanah [35], and Japlanji [36], who also found an insignificant negative impact of market capitalization on stock market return. This result in contrast to Acheampong et al [22] and Abdullah et al [23] who revealed market capitalization influenced stock market return.

4.5. Summary of the Hypothesis Testing

Based on conducted test results, the researcher come to condition to accept or reject the hypothesis as following.

H1: Current ratio significantly influences on stock market return. Rejected
H2: Debt to equity ratio significantly influences on stock market return. Rejected
H3: Return on asset ratio significantly influences on stock market return. Accepted
H4: Dividend yield significantly influences on stock market return. Accepted
H5: Market capitalization significantly influences on stock market return. Rejected

5. Conclusion and Recommendation

5.1. Summary of the Finding

The finding of this study revealed stock market return was influenced by return on asset and dividend yield. As revealed in Table 4, the results showed that profitability...
ratio which was indicated by return on assets and market ratio which is indicated by dividend yield had positive and significant influence. The positive interconnection between return on asset on stock market return and dividend yield would increase stock market return significantly. Both of them will send credible signal to market especially investor in term of stock market return.

Return on assets credible positive signal to investor that firm’s management has been utilizing firm’s assets which were funded by debt and equity (assets = liabilities + equity). This positive signal will also minimize conflict of interest between agents (managers) and owners (shareholders) as revealed by agency theory. As predicted, dividend yield was influenced stock market return, it was consistent with bird in hand theory that investor lodge for dividend instead capital gains due to unpredictability issue on capital gains. Dividend payment alerted investors that firm’s management had worked in the best interest of investor in order to maximize shareholders’ wealth and compensated shareholders by distribution of dividend. This condition expedited credible positive signal for investors and was consistent to dividend signaling theory as well.

Nevertheless, there were variables insignificantly influenced stock market return in this study. It is recommended for the firm’s manager to evaluate the linkage between these variables and how to bring a significant impact to boost the stock market return.

5.2. Recommendation

There are several recommendations for future research in order to overcome the limitation of the study. First, inclusion on more variables, with longer time period, and different sectors. Secondly, a more detailed econometric model should be adopted to explain relationship between stock market return and other variations of independent variables.

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