Determining Shares’ Internal Return: Fifty Leading Large-Cap Companies

Zulkifli Caturida Meiwanto Doktoralina* Marsyaf Nurhasanah
Faculty of Economy and Business, Mercu Buana University, Jl. Meruya Selatan, Jakarta Barat 11650

Abstract
This study aims to test and analyse the determinants of internal stock returns with annual data observation used from 2014–2015. Following are the types of quantitative research employed in this study. The population of 41 companies with their capitalisation is listed on the Indonesia Stock Exchange (IDX), and their capitalisations report have been consistent for two years. The non-probability sampling technique is purposive sampling. A data analysis using a regression regarding the fixed-panel effect has an R-squared value of 71.6% compared with other models. The results showed that the return on assets, return on equity, debt-to-equity ratio, firm size and growth simultaneously and significantly influence stock returns. Partially, all independent variables have a positive and significant effect on stock returns. Hence, it is advisable to add external factor variables, using sample companies within other industries.

Keywords: Return on Asset (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), firm size, growth

1. INTRODUCTION
Large-capitalisation (large-cap) companies on the Indonesia Stock Exchange (IDX) can be perceived from the perspective of stock prices and the number of shares in circulation (Avery, Chevalier, & Zeckhauser, 2015; Haningsih, Zulkifli, & Doktoralina, 2014; Tambunan, 2008; Yermack, 1996). Under current conditions, this reflects significant price increases. Accordingly, the companies’ stocks qualify them for the category of 50 leading companies in terms of market capitalisation. The condition of the company can influence this status, including whether it has good financial performance or other information. (For example, systematic differences among countries concerning the structure of laws and their enforcement, such as laws’ historical origins, can account for differences in financial development.). In general, large-cap companies’ shares are viewed more favourably by investors, caused by their desire for high capital gains (Melzatia, Doktoralina, & Maharjo, 2018). That is, they hope to gain high profits in the short term (Porta, Florencio Lopez-de-Silanes, & Source, 2002). Another factor is the behaviour of risk averters. Therefore, besides paying attention to the interpretation of information in decision making, the essence of investment problems is that other information signals require investors to understand the activities of an inefficient capital market.

Currently, many investors select company shares if they can be categorised among the 50 leading companies regarding market capitalisation. This is due to the lack of investor knowledge to analyse and estimate financial performance, as well as confidence in rumours and information that quantifies the demand for stocks (Edelen, Ince, & Kadlec, 2016). In fact, the motivation for owning these shares is so that investors need not monitor a company’s financial performance. However, just because a company's shares are categorised among the 50 leading companies in market capitalisation does not mean it has sound financial performance, precisely because investors with considerable capital prefer for the stock to gain more significant profits.

Many studies have analysed the determinants of stock returns, like return on asset (ROA), return on equity (ROE), debt-to-equity ratio (DER) and firm size to stock return. Market factors and macro factors cannot be controlled from within the company, while microelements come from the company itself. Consequently, its performance can be measured through ratios concerning the company's performance. Companies can review more specifically if there is a decrease in stock returns caused by micro or macro factors (Firdausi & Riduwan, 2017).

Based on the above research results, this work contributes to the theoretical implications of studies that have found paradoxical conclusions. Therefore, the independent variables – i.e. ROA, ROE, DER, firm size and growth – in this study are used to assess the effect on stock returns. The objective is to understand the ROA, ROE, DER and firm sizes’ growing influence on stock returns in large-cap companies on the IDX, either jointly or partially.

Research purposes
The research objective is to examine and analyse the effect of internal stock returns, with the annual data observation period ranging from 2014 until 2015.

2. CONCEPTUAL FRAMEWORK OF THE STUDY
2.1 Signalling Theory
The disparity of information between management and investors is quite complicated. Therefore, it is more logical to assume that asymmetrical information is synergistic, thus describing behaviour when two parties
(individuals or organisations) have access to divergent information. For that purpose, signalling theory indicates the tendency for information asymmetry between firms’ owners and investors (Jensen & Meckling, 1976). Usually, one party, the sender, must choose whether and how to communicate (or signal) that information, and the other party, the recipient, must decide how to interpret the signal (Bergh, Connelly, Ketchen, & Shannon, 2014). Therefore, to avoid information asymmetry, companies should provide information as signals for investors.

2.2 Stock returns
According to Tandelilin (1997), a stock return is one of the factors that motivates investors to invest and also rewards investors’ courage for the risk of financing a business. ROI consists of two main components: yield and capital gains. Yield is a return component that reflects the cash flow or income derived periodically from an investment. Yields are only zeros (0) and positive (+). Capital gain (loss) is a component return that increases (decreases) the price of a gain (loss) for investors. Capital gain is minus (-) zero (0) and positive (+). In general, the stock return is income expressed as a percentage of the initial investment capital, which is generally influenced by components like market factors, macro factors and micro factors (Samsul, 2006:291).

2.3 Return on asset (ROA) affects stock returns
Some empirical studies suggest that ROA influences stock returns (Haghiri & Haghiri, 2012; Har & Ghafar, 2015; Kabajeh, Al Nu’aimat, & Dahmash, 2012; Natarsyah, 2000; Nugroho & Daljono, 2012). Other studies have stated that ROA (profitability proxied) does not affect a stock return (Panjaitan & Lubis, 2015; Rosa & Mulyani, 2013; Susilowati, 2011). Therefore, the first research hypotheses states: H₁: ROA affects stock returns.

2.4 Return on equity (ROE) affects stock returns
In ROE research, Heikal, Khaddafi and Ummah (2014); Limbong (2006); Nasution (2006) and Natarsyah (2000) stated ROE variables have a positive, significant effect on stock returns. Meanwhile, Harjito and Aryayoga (2009) say ROE does not affect stock returns. Thus, the second research hypothesis of this work states: H₂: ROE affects stock returns.

2.5 Debt-to-equity ratio (DER) affects stock returns
According to Natarsyah (2000);Panjaitan and Lubis (2015);Siburian and Daulay (2011) asserted that DER has a positive and significant effect on stock returns. Meanwhile, Suharlil and Oktorina (2005) and Firdausi and Riduwan (2017) remarked that DER does not affect stock returns. Consequently, the third research hypothesis states: H₃: DER affects stock returns.

2.6 The effect of firm size affects stock returns
According to Sugiarto (2011), firm size has a positive and significant effect on stock returns. Conversely, Adiwiratama (2012), Ahmad, Fida and Zakaria (2013) and Asri and Suwarta (2014) believe that firm size does not affect stock returns. Therefore, the research hypothesis is as follows: H₄: Firm size affects stock returns.

2.7 Growth affects stock returns
Concerning how growth influences stock returns, Suryana (2014) said the growth variable has a positive and significant effect on stock returns, though Naveed and Ramzan (2013) and Jiwandono (2014) indicated that growth does not affect stock prices, which are proxied with stock returns. Therefore, the next research hypothesis is:

H₅: Growth affects stock returns.

3. METHODOLOGY
This study is designed to determine the influence of one or more variables regarding independent variables (or an independent variable) on dependent variables (or a dependent variable).
3.1 Research variable
Operational variables and the measurement scale of this study use two kinds of variables, namely a dependent variable that is the stock return and an independent variable that is the ROA, ROE, DER, firm size and growth.

<table>
<thead>
<tr>
<th>Table 3.1</th>
<th>Operational Variables and Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent:</strong></td>
<td><strong>Measurement</strong></td>
</tr>
<tr>
<td>Stock Return (Y)</td>
<td>( \frac{P_t - P_{t-1}}{P_{t-1}} )</td>
</tr>
<tr>
<td>(Samsul, 2006:291)</td>
<td>Data determination: April 1 to March 31 of next year with the stock price at the close of the month.</td>
</tr>
<tr>
<td><strong>Independent:</strong></td>
<td></td>
</tr>
<tr>
<td>Return on Asset (X₁)</td>
<td>ROA = ( \frac{\text{Net Profit After Tax}}{\text{Total Asset}} )</td>
</tr>
<tr>
<td>(Kasmir, 2013:201)</td>
<td></td>
</tr>
<tr>
<td>Return on Equity (X₂)</td>
<td>ROE = ( \frac{\text{Net Profit After Tax}}{\text{Equity}} )</td>
</tr>
<tr>
<td>(Kasmir, 2013:204)</td>
<td></td>
</tr>
<tr>
<td>Debt-to-Equity Ratio (X₃)</td>
<td>DER = ( \frac{\text{Total of Debt}}{\text{Capital}} )</td>
</tr>
<tr>
<td>(Harahap, 2008:306)</td>
<td></td>
</tr>
<tr>
<td>Firm Size (X₄)</td>
<td>Firm size is measured by the natural log of total assets.</td>
</tr>
<tr>
<td>(Mahmudah &amp; Suwitho, 2016)</td>
<td></td>
</tr>
<tr>
<td>Growth (X₅)</td>
<td>( \frac{\text{Penjualan (t)} - \text{Penjualan (t-1)}}{\text{Penjualan (t)}} )</td>
</tr>
<tr>
<td>(Harahap, 2008:309)</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Population and sample
This study’s population is all 50 companies that have considerable capitalisation value recorded in the IDX. Furthermore, it is based on the criteria formulated in advance. Purposive sampling is the technique used in this study. The company criteria were set out as follows: that is, first, the large-cap companies appearing consistently on the IDX were recorded from 2014 to 2015. Second, companies were included that are always listed in large-cap categories and that published financial statements during the years of research observation.

3.3 Analysis method
This research used panel data regression analysis, which combines time series and cross-section data. According to Gujarati and Porter (2006), this approach in analysing multiple linear regressions in panel data include the pooled least square, fixed effect and random effect. The panel data model was picked with the Chow and Hausman tests, like tests done with the regression model. The regression model tests conducted include: first, the determination coefficient test denoted by \( R^2 \); second, the simultaneous significance test (F) to discern the significance of the effect of joint independent variables in the model on the dependent variable; and third, the partial significance test (t) with statistical value to determine the significance of the individual influence of an independent variable in the regression model to the dependent variable.

4. RESULTS AND DISCUSSION
The data panel regression method used in this research is based on three models: pooled least square, fixed effect and random effect. Consequently, the best model in this research will be analysed further. However, when the
research result is known, there will be a paired test for each model with the Chow and Hausman tests.

Table 4.1
Hasil Uji Chow Test

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>2.682730</td>
<td>(6,79)</td>
<td>0.0215</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>12.413611</td>
<td>40</td>
<td>0.0060</td>
</tr>
</tbody>
</table>

Based on Table 4.1, the probability value of the F test at 0.02 is smaller than α = 0.05. Subsequently, H₀ is rejected, and Hₐ is accepted, which means that a better fixed-effect model is used in estimating panel data regression than the pooled least square model. The Hausman test is then conducted to determine whether the fixed effect model or random effect model is more appropriate.

Table 4.2
Result of Hausman Test

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>6.010344</td>
<td>10.0306</td>
<td>0.0306</td>
</tr>
</tbody>
</table>

Based on Table 4.2, the probability value of the chi-square test, at 0.03, is smaller than α = 0.05. Thus, H₀ is rejected, and Hₐ is accepted, which means that the fixed effect model is better for estimating panel data regression than the random effect model.

Estimation of panel data regression models together
Based on the calculations in Table 4.3, the goodness-of-fit test measured by the coefficient of determination (R²) shows a value of 71.6%. This means the variation of change in the increase and decrease in company stock returns consistently has considerable capitalisation value in the IDX from 2014–2015, which can be explained by the variable ROA, ROE, DER, firm size and growth. With a value of 28.4%, the rest is explained by variables not used in this research model. Tests of significance together show that a probability of 0.000 is smaller than α = 0.05. This means that H₀ is rejected, and Ha, accepted. Accordingly, it can be stated that the ROA, ROE, DER, firm size and growth together influence stock returns, meaning the measured independent variable determines the fit for this model and this research.

Table 4.3
Estimation Results of Panel Data Regression Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>PLS</th>
<th>FEM</th>
<th>REM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constants</td>
<td>0.336</td>
<td>3.343</td>
<td>0.053</td>
</tr>
<tr>
<td>Return on Asset</td>
<td>0.077</td>
<td>2.745</td>
<td>0.040</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>2.812</td>
<td>3.602</td>
<td>0.038</td>
</tr>
<tr>
<td>Debt-to-Equity Ratio</td>
<td>1.731</td>
<td>4.583</td>
<td>0.010</td>
</tr>
<tr>
<td>LN_Firm Size</td>
<td>0.189</td>
<td>3.564</td>
<td>0.012</td>
</tr>
<tr>
<td>Growth</td>
<td>2.330</td>
<td>1.050</td>
<td>0.207</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.371</td>
<td>0.716</td>
<td>0.643</td>
</tr>
<tr>
<td>F-statistic</td>
<td>13.105</td>
<td>16.622</td>
<td>10.331</td>
</tr>
<tr>
<td>Prob.</td>
<td>0.000</td>
<td>0.000</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Source: Data processed (2017)

Partial estimation of panel data regression model
Based on stock return estimates of large-cap companies on the IDX from 2014–2015, a better fixed-effect model is used, as shown in Table 4.3, in the form of this equation:

\[
RS = 0.415 + 1.051 \text{ROA} + 3.054 \text{ROE} + 1.570 \text{DER} + 2.005 \text{LN_Firm Size} + 2.897 \text{EG}
\]

Cᵢ = constant a fixed effect company to-i, i = 1, ....41.

The obtained equation based on the results of statistical tests in Table 4.3 is the interpretation for C=0.415. This means that, if there is no independent variable, the stock return is valued at 41.5%. Therefore, we can draw the following conclusions:
4.1 The effect of return on asset (ROA) on stock return

Based on a t-test, the ROA variable, with a regression coefficient of $\beta_1=1.051$ positively influences the stock returns of firms with significant capitalized value on the IDX positively, and a stock’s ROA influences stock returns with a confidence level of 95%. A t-statistic probability value is 0.049 rather than $\alpha = 0.05$, which means the alternative hypothesis (Ha) is accepted and the null hypothesis (H₀) is rejected. The interpretation of $\beta_1=1.051$ is, if there is an increase of ROA of 1%, assuming other variables do not change (ceteris paribus), the stock return of a large-cap company on the IDX will increase by 1.051%. These empirical results support the research of Haghiri and Haghiri (2012), Kabajeh et al. (2012), Natarsyah (2000), Nugroho and Daljono (2012) and Har and Ghafar (2015). Thus, every company tries to keep their ROA values high (Arista & Astohar, 2012). The higher the ROA, the better the company uses assets to earn profits. With increasing ROA, the company’s profitability is growing. Therefore, the higher the ratio, the better the productivity of assets in obtaining net profits, which enhances the company’s attractiveness to investors because the rate of return is higher and affects the company’s stock price. These empirical findings mean an increase in ROA due to the increase in compressive profit generated by most firms with capitalisations derived from company-owned assets.

4.2 Effect of return on equity (ROE) on stock returns

Based on the t-test, the ROE variable with the regression coefficient of $\beta_2=3.054$ means that the ROE affecting the stock return has a positive, substantial capitalisation value on the IDX, with a confidence level of 95%. The probability value of the t-statistic being 0.001 is smaller than $\alpha = 0.05$, which means the alternative hypothesis (Hₐ) is accepted and the null hypothesis (H₀) is rejected. The interpretation for $\beta_2=3.054$ is, if ROE increases 1%, assuming other variable does not change (ceteris paribus), then a stock return of a large-cap company on the IDX will increase by 3.054%. These empirical results support the research of Limbong (2006), Nasution (2006) and Natarsyah (2000). ROE is a necessary calculation for a company. A high, consistent ROE indicates the company has a strong advantage concerning its competition and investment, which will lead to a high stock price (Fahmi, 2012:99). This empirical finding means an increase in ROE is due to the increase in the overall profit of companies that gain capitalisation from their capital.

4.3 Effect of debt-to-equity (DER) ratio on stock returns

Based on the t-test, the DER variable with a regression coefficient of $\beta_3=1.570$ affects the firm's stock return and has considerable capitalisation value on the IDX, with a confidence level of 95%. The probability value of the t-statistic 0.026 is smaller than $\alpha = 0.05$, which means the alternative hypothesis (Hₐ) is accepted and the null hypothesis (H₀) is rejected. The interpretation for $\beta_3=1.570$ is, if there is an increase of the DER of 1%, assuming other variables do not change (ceteris paribus), then the stock return of a large-cap company on the IDX will increase by 1.570%. This empirical result supports research by Natarsyah (2000) and Panjaitan and Lubis (2015), who stated the DER research result has a positive, significant effect on stock returns. Additionally, low DERs have a small risk of loss when the economy suffers, but as the economy improves, the opportunity for profit is too little (Eugene & Houston, 2006:103). Conversely, firms with high leverage ratios also bear the substantial risk of losses as an economy is declining, but when an economy is in good shape, it will have the opportunity to earn large profits.

Companies with high profits can pay higher dividends, so earnings per share will rise due to higher debt levels. Next, leverage can raise stock prices (Eugene & Houston, 2006:24). This empirical finding means the increase in DER is due in large part to the increasing indebtedness of large-cap companies. Besides, the company’s substantial profits can also provide confidence for investors to own its shares. Generally, the more a stock is in demand, the more investors will buy shares, which affects stock returns’ increase.

4.4 Effect of firm size on stock return

Based on the t-test, firm size variables shown with the regression coefficient of $\beta_4=2.005$ mean that stock returns positively affect, and firm size significantly affects, stock returns with a confidence level of 95%. Statistically, the effect can be seen from the t-statistic probability value of 0.033 being less than $\alpha=0.05$, which means the alternative hypothesis (Hₐ) is accepted and the null hypothesis (H₀) is rejected. The interpretation of $\beta_4=2.005$ is, if there is an increase in the firm size of 1%, assuming other variables do not change (ceteris paribus), then the stock return of large-cap companies on the IDX will increase by 2.005%. This empirical result supports the research of Sugianto (2011) and Fransiska (2013), who asserted that firm size has a positive, significant effect on stock returns.

Firm size is used to determine company size because it can represent how big the company is. That is, the greater the total assets, the more capital is invested, with more sales, the more often velocity of money, higher market capitalisation and more public recognition. The general public that makes investments generally knows that, if ROA increases, the company also can generate profits from assets. These empirical findings mean the assets of firms with capitalisation, mainly through their increased sales, can minimise the cost of obtaining
maximum profit. Thus, existing assets can reflect whether the company is large or small and affects investors in the interests of the company's shares.

4.5 Effect of growth on stock return

Based on a t-test, a growth variable with a regression coefficient of $\beta_5 = 2.897$ means that a firm’s stock return has significant capitalisation value on the IDX. The company’s significant growth affects the stock return with a confidence level of 95%. The probability value of the t-statistic is 0.021, which is smaller than $\alpha = 0.05$. Hence, the alternative hypothesis ($H_1$) is accepted, and the null hypothesis ($H_0$) is rejected. The interpretation for $\beta_5 = 2.897$ explains that, if there is a growth increase of 1%, assuming other variables do not change (ceteris paribus), then the stock return of companies with considerable capitalisation value on the IDX will increase by 2.897%.

The results of this empirical study support the research of Suryana (2014) and Barton, Hill and Sundaram (1989), which states that growth positively and significantly affects stock returns. Thus, the growth rate of an enterprise will affect its ability to maintain profits by funding future opportunities. The sales increase shows a company’s growth. Investors will pay attention to companies with a reasonable level of transactions so investors are assured the company can sell, generate profits and distribute dividends. In the end, it will attract investors to invest capital, which increases share price. This empirical finding means that, every year, some companies with considerable capitalisation value have an increase in sales.

5. CONCLUSION AND SUGGESTIONS

The fixed effect model is better by generating value with the R-squared value of 71.6%, compared to pooled least squares and random effects. This research model can be used to analyse the internal determinants that affect a stock return by using the variables tested. Specifically, ROA, ROE, DER, firm size and growth positively and significantly affect the stock returns of firms with large capitalisation values as recorded on the IDX.

The next research suggestion must be more varied. So more diverse findings support the empirical results of this study by adding external factor variables such as interest rates, inflation, exchange rates and economic growth to produce the company's financial performance that influences stock returns more comprehensively. Further research can use more sample companies, for example all companies listed on the IDX, to provide strong recommendations and suggestions to interested parties, to strengthen and generalise the findings, and to become a reference for investors and academics to understand the financial performance of companies that affects stock returns.

References


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