Abstract

Purpose – The purpose of this paper is to examine the influence of earnings persistence and earnings power on equity valuation.

Design/methodology/approach – The purposive sampling method was applied to determine the samples of selected 100 firms. This study employed secondary data obtained from the annual reports and financial statements of consumer goods firms listed on the Indonesian Stock Exchange for the period 2010–2014. The analysis technique used a multiple regression analysis.

Findings – The study result shows that, partially, earnings persistence and earnings power affect equity valuation by investors. Earnings persistence has a negative influence, whereas earnings power has a positive influence on equity valuation.

Originality/value – This study throws additional lights on equity valuation specific to consumer goods industries.

Keywords – Earnings persistence, Equity valuation, Consumer goods firms, Earnings power

Paper type – Research paper

Introduction

Realistically, investors would expect to gain revenue from investment activities which are potentially profitable. This is a key consideration for investors. One of the reliable instruments to take investment decisions is the financial report of a firm. Information on earnings is one of crucial components in the financial statement. This is due to investors’ belief that a firm which generates relatively good profits will show good prospects and, thus, would expectedly provide optimal return to them.

The desires of firms to redefine profit and to implement an aggressive interpretation on accounting standards start from the assessment mechanism of stock prices. The higher the income is, the higher the price of its shares. Thus, a firm describes its business as gaining the most profit and would do so as much as possible in its future. It is important for financial statement analysts to understand the earnings persistence, determinants and their relevance to forecast earnings. Additionally, understanding these aspects would inform the financial statement analysts on the earnings power as well as its function so as to forecast and assess potential activities. Therefore, analysts can assess the performance of firm financial statements effectively and are able to recommend or take the right decision in investing.

Earnings persistence has always been under the spotlight for the finance report users, especially those expecting high earnings persistence (Fanani, 2010; Artikis and Papanastasopoulos, 2016; Jin, 2017; Sixpence and Adeyeye, 2018; Yao et al., 2018). Earnings persistence reflects the quality of the profit of a firm and shows that the firm can retain...
earnings over time instead of in the event of a particular activity. Earnings persistence broadly includes stability, prediction, diversity and earnings trends. Forecasting earnings takes into account the earnings power, estimation techniques and control mechanisms. A good financial analysis enables its users to recognize stable and persistent income components. Then, components that can survive are separated from non-repetitive components.

This analysis will assist its users to form earnings persistence forecasts for a reliable assessment. Analysts should also be aware of management activities that cause reasonable irregularity that had previously gone undetected. This may result from the business cycle and is a part of the firm’s environment and experience. Therefore, to understand the effects of these activities, it is important to evaluate the equity of a firm. We have used consumer goods industry as this is one of the industries with most fluctuating earnings as it mostly depends on consumer wealth.

The results of the study indicate that earnings persistence and earnings power partially influence investors’ equity valuation quite significantly where earnings persistence affects equity valuation negatively, whereas the earning power affects it positively. The next section explains the agency theory, the equity valuation using price-to-book value ratio and price-to-earnings ratio, earnings persistence, earnings power and their respective influence on equity valuation. Later, a section on research methodology describes the methods applied in the study. Finally, the results, discussion, final results description, conclusions and study limitation are elaborated.

**Literature review**

*The agency theory*

To some extent, agency problems can be overcome by designing a reward to motivate directors to act in accordance with the investors’ interests. This approach can be seen in practice as some companies disburse bonuses to their directors or allocate the shares of the firm to the directors for their achievements.

Agency issues can also be resolved by monitoring the directors’ behavior. This reinforces the need for accounting statement functions. If the investors have the access to credible and informative financial statements, they can monitor the directors’ performance. If the directors do not perform well enough, they are at risk to be replaced.

The firm ownership by an institution also encourages a more effective monitoring because the institution consists of a professional board that is capable of evaluating the performance of a firm. Pozen revealed that institutional owners use several methods that can affect managerial decision making by informal discussions with the management to control the firm’s overall operation and decision making.

Eisenhardt (1989) stated that the agency theory is divided into two viewpoints, which are positive agency theory and principal–agent research theory. Positive agency theory discusses the objective differences that restrict the behavior of self-interest satisfying behaviors by the agents. The principal–agent research theory discusses the possibilities which may occur in the relationship between employers and employees, lawyers and their clients, buyers and suppliers and other agency relationships.

*Equity valuation*

Future profitability is important to determine estimated net income and future book value of a firm. Nevertheless, without taking into account the aspects of earnings persistence and earnings power, the estimation of net profit and future book value would become less accurate. This is due to accounting-based valuation method, which may allow for some income manipulation and compromise by the management for their own interests. Thus, such accounting data manipulation may affect the value forecasting of a firm.
The commonly applied equity valuation measurement is the price-to-book value ratio and price-to-earnings (PE) ratio (Subramanyam et al., 2014).

**Price-to-book ratio.** The stock market value is commonly utilized to estimate the value of a firm as the stock market value constitutes the price that prospective investors are willing to pay.

**Price-to-earnings ratio**

\[
\text{Price to earning ratio} = \frac{\text{Equity market value}}{\text{Net profit}}.
\]

The price-to-earnings ratio illustrates the appreciation of a market to the ability of a firm to generate profits. A high-price-to-earnings ratio indicates investors’ willingness to pay a higher share price than the book value of a firm’s shares. However, this ratio is not related to the absolute nominal income, and therefore, it does not indicate whether the nominal of earnings per share is high or low. In fact, it only illustrates the degree to which earnings per share is expected to increase relatively to growth estimation.

**Earnings persistence.** Earnings persistence reflects the profit quality of a firm and shows that a firm can retain earnings over time instead of just due to a particular event. In addition, earnings persistence is also a property income describing the ability of a firm to maintain profits from current time to a foreseeable future. Penman and Zhang defined earnings persistence as revisions in the expected accounting profit in the future based on the profit of current earnings of the year. Hayn (1995) stated that such value is irrelevant in the earnings components as a result of temporary event or the application of the concept of accrual accounting write-downs, write-offs or provisions for loss. These aspects would lead to limitation on its relevance when applied in the evaluation of a company.

Earnings management practices have become more of a problem of form than substance. In this case, although any selection would result in no effects on actual transactions (i.e. delaying spending of the next period), it may influence the re-distribution of the credit or the liabilities over the next several periods. The main goal here is to lower the income variability over several periods through the transfer of income between the good and bad periods, between the current and the future periods or any combination. The forms of earnings management are in fact very diverse. Subramanyam et al. (2014, p. 623) mentioned some forms of earnings management that should be noticed are as follows: the change of accounting methods or assumptions, the removal of extraordinary (and unusual) gains and losses, big baths, impairment and the determination of timing of the revenue and expense recognitions:

\[
\frac{\text{Earnings}_{jt}}{\text{Outstanding stocks}_{jt}} = \beta_0 + \beta_1 \frac{\text{Earnings}_{j,t-1}}{\text{Outstanding stocks}_{j,t-1}} + e_{jt}.
\]

The formula above was applied by Francis et al. and Pagalung (2006) in Fanani (2010) to calculate earnings persistence. Fanani (2010) used $\beta_1$ as a proxy for persistence, whereas this study utilizes the formula to forecast income.

**Earnings power.** Earnings power refers to the corporate profit level which a firm is expected to gain in the future. Earnings power is also recognized as a major factor in a firm valuation. Earnings power is a concept derived from financial analysis. This concept oversees stability and earnings persistence and earnings component. Profit is the most reliable and relevant measure for the assessment purpose. Although the assessment is future oriented, evaluating the relevance of the performance of a firm for the current and
Estimating future performance is the actual task. Assessment is highly important for taking some decision regarding investments, leasing, tax planning or court’s verdict on a dispute assessment. Looking at the importance, the value estimation should be credible and sustainable. If there is a norm deviation, it should be thoroughly investigated:

\[
\text{Earnings power} = \frac{\text{Operating income}}{\text{Total assets}} \times 100\%.
\]

Earnings power demonstrates the ability of a firm to increase operating income from assets used. The higher the earnings power owned by the firm, the lower the chances of profit warning to be issued (Elayan and Pukthuanthong, 2009). Factors such as the long-term investing and financing activities, impacts of business cycle and various non-recurring factors have resulted in the fact that the best measuring period of earnings power analysis of a firm is by using the average (cumulative) profit of several years. The time span to measure earnings power varies for each industry and other factors. Longer period would reduce distortion, irregularity and other temporary effects that in turn also decrease the relevance of one year earnings. The calculation of five years earnings often emphasizes on the recent experience while avoiding irrelevant performance.

The influence of earnings persistence on equity valuation
Kormendi and Lipe and Collins and Kothari (1989) indicated that profit with higher persistence would have greater share price response. Barth et al. (2001) pointed out that profit is value relevant that is predicted to have correlation to equity value, and thus, earnings persistence could be expected to illustrate the firm capability of keeping profits from time to time instead of just due to a particular event:

\[ H1. \text{ Earnings persistence affects equity valuation.} \]

The influence of earnings power on equity valuation
Ohlson (1995), Dwimulyani (2010) and Briliane and Harahap indicated that the operating profit of the current period holds information to predict the performance of earnings in the subsequent periods and, at the same time, indicated that profit has a significant relationship with stock returns. Based on these studies, earnings power can be presumably utilized to estimate the value of a firm in the future:

\[ H2. \text{ Earnings power affects equity valuation.} \]

Conceptual framework
Dependent variables (\(Y\)) are the factors observed and measured to determine their influence on the independent variables. In this study, the dependent variable is the equity valuation. Independent variables (\(X\)) examine the effects on the dependent variables. In this study, the independent variables are earnings persistence and earnings power (Figure 1).

![Figure 1. Conceptual framework](source: Processed data)
Research methodology

Data types
This study employed secondary data with the quantitative method. The secondary data were the source of the research data obtained from data collecting agency. These data were published to data user communities. The secondary data used in this study were in the forms of income statements, notes on financial statements, other financial statements and also management discussion and management analysis on consumer goods firms in the period of 2009–2014. These data were required to determine the earnings persistence, earnings power and equity valuation in forms of cross-section data. These data were obtained from the participating firms’ financial statements in the aforementioned period. Meanwhile, the financial statements of a firm were obtained from the Indonesian Stock Exchange (BEI) website (www.idx.co.id) and from the official websites of each sampled consumer goods firms, whereas the share prices were obtained from www.yahoofinance.com.

Sampling technique
This study employed samples with the following criteria:

1. firms that were listed on the Indonesian Stock Exchange in the year 2007–2014;
2. firms that published the financial statements as of December 31 each year, during the period 2010–2014;
3. firms that did not perform stock split in the period of 2010–2014;
4. firms that did not suffer from losses in the period of 2010–2014; and
5. firms that had the data needed for the study.

The firms that met the sample criteria reached 20 firms. Having five-year period, the total amount of data reached 100 samples (Table I).

Research variables
In this study, the independent variables were earnings persistence and earnings power. The dependent variable was equity valuation.

Model data analysis
The hypothesis test in this research was conducted by using multiple regression analysis. The multiple regression equation was used to test the proposed hypothesis. The regression equation of dependent variables is as follows:

\[ Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + e, \]

Target population

Non-eligible criteria
1. Firms not listed on the Indonesian Stock Exchange in the period of 2007–2014 (10)
2. Firms making stock split in the period of 2007–2014 (2)
3. Firms suffering losses in the period of 2010–2014 (7)
Total firms 20
Total Number of observation samples in the period 2010–2014 100

Source: Data processed from Indonesia Stock Exchange
where \( Y \) is PER; \( \alpha \) is the constant; \( \beta \) is the regression coefficient; \( x_1 \) is the earnings persistent; \( x_2 \) is the earnings power; and \( e \) is the error.

The multiple regression equation was formulated by using SPSS output by interpreting the figures provided in the unstandardized coefficients \( B \).

Results and discussion

Subject and research object description

The subject of this study was the effects of earnings persistence and earnings power to the equity valuation. The research objects were consumer goods firms listed on the Indonesian Stock Exchange in the period of 2010–2014 which met the criteria. The population employed in this study were consumer goods firms listed on the Indonesian Stock Exchange in 2010–2014. The sampling criteria of consumer goods firms have to meet the following requirements: the consumer goods firms were listed on the Indonesian Stock Exchange in the year 2007–2014; the annual reports of firms were published in the period of 2007–2014; the firms did not perform stock split; did not experience a loss during the period of 2010–2014; and possessed the required data for the study. Upon applying the criteria, there were 20 companies that met the requirements. The data from the period of 2007–2009 were used to calculate earnings persistence, especially the beta value (\( \beta_1 \)).

Description of research results

The population in this study was 39 consumer goods firms listed on the Indonesian Stock Exchange in the period of 2010–2014. The information was based on the Indonesia Stock Exchange (www.idx.co.id). The samples were 20 consumer goods firms in the Indonesian Stock Exchange of every year within the period of 2010–2014 which met the criteria. Thus, the whole amount of 100 samples were obtained. The data can be seen in Table II where the number of the companies which did not meet the pre-determined criteria reached to 19. The following is a list of companies that did not meet the criteria.

<table>
<thead>
<tr>
<th>Criteria samples not met</th>
<th>Firm code</th>
<th>Sub-sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not successively listed in the period of 2007–2014</td>
<td>ALTO</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>AQUA</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>BATI</td>
<td>Tobacco manufacturers</td>
</tr>
<tr>
<td></td>
<td>DAVO</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>ICBP</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>MBTO</td>
<td>Cosmetics and household</td>
</tr>
<tr>
<td></td>
<td>PROD</td>
<td>Cosmetics and household</td>
</tr>
<tr>
<td></td>
<td>BREAD</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>SKBM</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>WIIM</td>
<td>Tobacco manufacturers</td>
</tr>
<tr>
<td>Stock split</td>
<td>DVLA</td>
<td>Pharmaceuticals</td>
</tr>
<tr>
<td></td>
<td>MLBI</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>INAF</td>
<td>Pharmaceuticals</td>
</tr>
<tr>
<td></td>
<td>KETCH</td>
<td>Housewares</td>
</tr>
<tr>
<td></td>
<td>LMPI</td>
<td>Housewares</td>
</tr>
<tr>
<td></td>
<td>MRAT</td>
<td>Cosmetics and household</td>
</tr>
<tr>
<td></td>
<td>PSDN</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>PSDN</td>
<td>Food and beverages</td>
</tr>
<tr>
<td></td>
<td>RMDA</td>
<td>Tobacco manufacturers</td>
</tr>
<tr>
<td></td>
<td>SCPI</td>
<td>Pharmaceuticals</td>
</tr>
</tbody>
</table>

Table II. List of firms not meeting the sample criteria

Source: Processed IDX statistical report data
**Statistical analysis on research result description**

The description of the research variables in this study aimed to observe general descriptions of the value of each variable in the study sample. The values included the mean, standard deviation, variance, and maximum and minimum values of each study. These values are presented in Table III.

The followings are the explanation of descriptive statistical analysis of each research variable, which are the earnings persistence, earnings power, and equity valuation.

**Earnings persistence**

The mean value of earnings persistence value on consumer goods firms in the sample was 2,017.99 with the standard deviation of 4,110.31 in the period of 2010–2014. The highest earnings persistence was achieved by the firm Delta Djakarta Tbk by 18,089.35 in 2014, whereas the lowest was 5.14 by the firm Pyridam Farma Tbk in 2014.

**Earnings power**

The mean value of earnings power in consumer goods firms in the study sample was 0.1933 with a standard deviation of 0.1669 in the year of 2010–2014. The highest earnings power was achieved by Delta Djakarta Tbk with the value of 0.6981 in 2013, whereas the lowest was achieved by Sekar Laut Tbk 0.0095 in 2010.

**Price earnings ratio (PER)**

The PER value on the consumer goods firms in the research samples was 19.3094 with a standard deviation rate of 10.2994 in the period of 2010–2014. The highest PER value was achieved by Kimia Farma Tbk with 46.3094 in 2014, whereas the lowest was 0.6436 by Pyridam Farma Tbk in 2014.

**Analysis of multiple linear regression model**

The analysis model used in this research was the multiple linear regression analysis. This analysis was conducted to determine the effects of earnings persistence and earnings power of the equity valuation of 20 consumer goods firms listed in the Indonesian Stock Exchange in the period of 2007–2014 (Table IV).

The data processing was performed using SPSS 18.0. The followings are the regression analysis results of earnings persistence and earnings power toward the equity valuation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constants</td>
<td>16.716</td>
</tr>
<tr>
<td>Earnings Persistence</td>
<td>-0.001</td>
</tr>
<tr>
<td>Earnings power</td>
<td>27.105</td>
</tr>
</tbody>
</table>

**Note:** Dependent variable: equity valuation (Y)
Based on the table above, the resulting regression model is:

\[
Y = 16.716 + 0.001 \text{Earnings persistence} + 27.105 \text{Earnings power}
\]

The explanation of each variable from the regression equation above is described as follows.

The coefficient value of earnings persistence. The regression coefficient value of earnings persistence was -0.001 which indicated that if the level of earnings persistence changed by one unit, the PER value would change by 0.001 percent, assuming that other variables remained independent. The negative mark indicated that the relationship between earnings persistence and the PER were of the opposite direction. If the value of earnings persistence increased (decreased), then the PER value would decrease (increase).

The coefficient value of earnings power. The regression coefficient value of the earnings power variable is 27.105 which indicated that if the level of earnings power changed by one unit, the PER would change by 27.105 percent with the assumption that the other variables remained independent. The positive mark showed that the relationship between the earnings power and the PER was unidirectional. If the value of earnings power increased (decreased), then the value PER would increase (decrease).

Hypothesis test

\(t\)-Test was applied to determine the effect of independent variables on the dependent variable partially. The \(t\)-test results are shown in Table V.

Based on the \(t\)-test results above, the influence of each independent variable can be explained as follows.

\(R = \text{The effect of earnings persistence toward equity valuation.}\) Earnings persistence showed \(t\)-value of -4.359 with the significance level of 0.000 which is smaller than \(\alpha = 0.05\). Thus, the first hypothesis (\(H_1\)) is accepted and \(H_0\) is rejected. In other words, it can be concluded that the persistence earnings variable significantly influences the equity valuation of the consumer goods firms listed in the Indonesian Stock Exchange (BEI).

\(\text{The effect of earnings power towards the equity valuation.}\) Earnings power has \(t\)-value 3.659 with the significance level of 0.000 that is smaller than \(\alpha = 0.05\). Thus, the first hypothesis (\(H_1\)) is accepted and \(H_0\) is rejected. In other words, it can be concluded that the variable of earnings power has a significant impact on the equity valuation of the consumer goods firms listed in the Indonesian Stock Exchange (BEI).

Discussion

Based on the aforementioned explanation, it can be concluded that the earnings persistence and earnings power significantly affect equity valuation on consumer goods firms listed on Indonesian Stock Exchange (BEI). These results were consistent with the theory underlying the research that earnings and other accounting information may influence the investors' decision making. Nevertheless, based on the discussions on model analysis and hypothesis verification, it can be concluded that earnings persistence has significant negative effect on equity valuation. Previous study by Kormendi and Lipe, Collins and Kothari (1989), and Easton and Zmijewski found that earnings persistence is

<table>
<thead>
<tr>
<th>Variables</th>
<th>(t)-calculate</th>
<th>Significance</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings persistence</td>
<td>-4.359</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Earnings power</td>
<td>3.659</td>
<td>0.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Table V. \(t\)-test results

Source: Processed data
appreciated by the market and indicates that companies with higher persistence have
greater stock price responses.

Francis and Schipper in Sulistiawan et al. (2011, p. 12) published a study describing data
on accounting firms in the USA during the period 1952–1994. Francis and Schipper
concluded that the change in net income and the value of income had positive correlation to
stock returns.

Juniarti and Limanjaya (2005) compared the relevance value on net profit and cash flow
to the life cycle of manufacturing firms in the period of 1993–1996, especially in the growth
and mature stages. Juniarti and Limanjaya (2005) concluded that companies experiencing
growth phase had higher relevance value of cash flow than the relevance value of net profit.

Parawiyati et al. found in their research that the ability of financial information, such as
earnings and cash flow, in predicting the benefits of investment was beneficial to predict
changes in profit and cash. Profit and gross profit ratio to sales was significant
in predicting changes in earnings over the following year. However, it was not significant in
predicting cash flows. Significant variables in predicting changes in earnings and cash flow
included selling and administrative expenses as well as gross profit.

Earnings power positively and significantly affected equity valuation. The analysis result
is based on research conducted by Briliane and Harahap on companies listed on Indonesian
Stock Exchange. In the research, the profit for the current period which was calculated by
dividing operating income to average total assets had caused a significant positive correlation
with the earnings on the following period, indicating that the profit for the operating income
provided information to predict the performance of earnings in the following periods.

In her study on the relevance of the value in Indonesian Stock Exchange conducted on
companies listed on the Indonesian Stock Exchange within the period of 2003–2007,
Dwimulyani (2010) found that the accounting information contained in the statement of
financial condition had a moderate correlation with the market value of a firm. The
information contained in the statement of financial position, especially assets and liabilities
was moderately capable of explaining the market value of a firm by 56.37 percent. On the
contrary, the second model provided the information value contained in the financial
statements which were the book value of equity supplemented with the information on the
operating profit. In this latter model, the market value of a firm had stronger correlation,
amounting to 84.58 percent.

Investors make investment decisions on consumer goods firms listed on the Indonesian
Stock Exchange by considering the earnings power indicating the ability of a firm to generate
operating income from asset management. However, they may not consider the earnings
persistence to anticipate lower persistence which may cause security mispricing. This can
occur due to increased investor interest in the consumer goods sector as a consequence of the
demographic bonus and an increase in middle income class and supported by the results of a
survey conducted in the year 2013 on consumer confidence index (CCI) which stated that
Indonesia was the country with the highest consumer confidence in the globe. These aspects
resulted in the index of consumer goods to continuously grow and be sustainable to support
the manufacturing sector.

**Conclusion**

The results of this study empirically proves that earnings persistence and earnings power
significantly influence equity valuation. By implication, it may assist investors in estimating
future earnings so that it becomes useful for investors as an instrument in making decisions
to avoid security mispricing. Nevertheless, the results show that earnings persistence
negatively affects equity valuation in consumer goods sector. This can occur due to
increased investor interest in the shares of the consumer goods sector due to the
demographic bonus and increasing middle income class. This is also supported by the
results of a survey conducted in 2013 that the CCI of Indonesia was considered to be the highest in the globe.

The variability of equity valuation caused by earnings persistence and earnings power amounted to 17.3 percent. On the contrary, 82.7 percent was caused by external factors from the model that influences equity valuation. Although only explaining a small part of the overall equity valuation, these two variables add a lot of benefits in making investment decisions by the investors of consumer goods companies when combined with other information.

Having all the results above, this study is limited to examining the effect of earnings persistence and earnings power in equity valuation on consumer goods firms listed on the Indonesian Stock Exchange (BEI) so that the result is not necessarily the same when applied to samples of other sectors. Further research may examine the effects of earnings persistence and earnings power in other sectors. Research can then apply different time period and data which are different from this study. Therefore, research variation may complement one another to enrich the existing theories.

References
Further reading


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