Abstract

Suryandari, Ilsa Haruti (2006). Analyzing the Relationship between Stock Split and Profitability, Yogyakarta. International Program, Faculty of Economics, Islamic University of Indonesia.

Several research about stock split have been conducted. The research are Fama, Fisher, Jensen, and Roll (1969), Copeland (1979), Asquith, Paul, and Palepu (1989), Baker and Gary (1993), Amoruso and Gaver (1998), Louis and Robinson (2003), show the motives of stock split and information contained in the decision of doing stock split. Research conducted by Huang, Liano, and Pan (2002) shows little evidence that stock splits is related to future profitability.

This research is a replication from the research of Huang, Liano, and Pan (2002) and tries to confirm the relationship between stock split and profitability as the measurement of corporate performance. The population for this research was only the companies listed on Jakarta stock exchange (JSX) that announced stock split in the period of 1999 – 2002. This period is chosen because there was a lot of company doing stock split in this period.

In this research, stock split is represented by stock price and stock ratio while profitability is represented by return on equity, earning per share, and price earning ratio. This research include market value of equity as the explanatory variable of stock price. The result of this research shows that stock split has no relationship to return on equity and earning per share.

Key Word: ***stock split, profitability, return on equity, earning per share, price earning ratio, stock price, stock ratio***

This research is expected to be additional reference for similar research in the future

1.6. Definition of Terms

Definition of terms is needed to make readers understand about the meaning of the main term of this thesis

1. Stock split is the issuance of additional shares of stock to stockholders according to their percentage ownership. It is accompanied by a reduction in the par or stated value per share.
2. Profitability ratios are the measures of performance that show how much the firm is earning compared to its sales, assets or equity.
3. Return on equity (ROE) measures how well management is doing for investors.
4. Earning per share is a measure of the net income earned on each share of common stock.
5. Price earning ratio is a measurement of the market price of each share of common stock to the earning per share.
6. Company earnings are the sum of income from sales or investment after paying its expenses
7. Split ratio is the ratio between changes in the number of shares before and after split and the number of shares before split.

before splitting. For example, stock split 2:1 means that one sheet of shares must be split into two sheets of shares or could be determined that the par value of the shares is split into half of previous par value. Hence, the total number of the shares will be twice larger than the previous number.

- **Split down** is splitting the shares to the higher value in accordance with split factor. The value is also determined by $n_1:n_0$, n_1 that is the number of split after splitting and n_0 is the number of shares before splitting.

Practically, in Indonesia split up is the most common stock split done by company. Therefore, we will only use sample of the companies that doing split up.

Stock split is commonly used in the cases where company reduces par value of the stock and give the shareholders a larger number of shares but a lower value to replace their previous shares

Stock split may be accompanied by an increased cash dividend. The announcement of stock split may attract more buyers. It is used to place the stock in a lower and more popular trading range. The occurrence of stock split also affects mix shareholders. Individual holding tends to increase, while institutional holdings decrease. The reason of the tendency of mix shareholder is that the higher the trading costs, and the more shares are available. If the logic of a stock split holds true, however, and the price

Yosef and Brown (1977) stated that stock split has several benefits. Those benefits are:

a. To increase company shares marketing

b. To convey information in relation to a bigger investing opportunity.

c. To increase the sale of product.

d. To increase the relationship between the owner and the company employees.

According to Weston and Copeland (1979), stock split has a relationship with security price liquidity and the conveyed signal to public. The announcement of stock split could be considered as a positive signal because company management will deliver good future prospect from the company to public. The reason of the signal, in fact, the companies that have done stock split are the companies that have a good performance.

Other explanation came from McGough (1993). There are the advantages of the investor.

a. With the occurrence of stock split, the number of shares will be increased appropriately with the split factor. Hence, it will be possibly and easily selling and keeping a complete number of shares. Indeed, investors have more opportunities to obtain dividend and the increasing price appropriately with the multiple number of the previous shares.

NYSE, AMEX, and NASDAQ. In fact, stock splits are in general negatively related to future profitability in subsequent years after the announcement. These negative relations hold regardless of future profitability measure. Therefore, their empirical finding suggests that stock splits are not useful signals of a firm's future earnings prospects.

In this research we use the previous study by Huang et.al (2002) as the basic idea to build the assumption that stock split have effect on profitability. Research that is done by Huang et.al (2002) limited only to the split that has split factor less than 0.5 which is equivalent to a 3-to-2 split. They use three measures of future profitability, including earnings change, raw earnings, and abnormal earnings.

In this research we have some differences with the previous research that is done by Huang.et.al (2002). Considering the small number of sample companies in Indonesia, this research does not limited to the split that has split factor less than 0.5. The profitability is derived from Earning per Share, Return on Equity, and Price-Earning Ratio.

2.3. Hypotheses Formulation

Huang et.al (2002) introduced the idea that stock split has relation to future profitability. They stated that there is little evidence shows that stock split have positive relation to the future profitability.

1. The samples announced stock split during the time period 1999-2002.
2. Sample did stock split only no more than once in three years.
3. Stock prices and number of shares outstanding are available from one year prior to and three years after the announcement date.
4. Indonesian Capital Market Directory files contain information on the firm's Return on Equity, Earning Per Share, and Price-Earning Ratio for the years of the split announcement year up to three years after split.
5. The company that has cased with missing data is deleted from the sample.
6. The sample is initially set by the number of companies in population that has completed data.

Some data are insufficient, incorrect, incomplete data and extreme data. So this research used 33 data set as shown in table 3.1.

Table 3.1.

Research Object

	Notes	Number of companies
1.	Total companies that announced stock split during 1999-2002	78
2.	Less :	
	- Companies that did stock split more than one in two order years	19

5. Split Ratio

Split ratio is the ratio between changes in the number of shares before and after split and the number of shares before split.

3.5. Tests for the Classical Assumptions

3.5.1. Multicollinearity Test

Multicollinearity originally means the existence of a "perfect", or exact, linear relationship among some or all explanatory variables of a regression model. According to Gujarati (1995), multicollinearity bring consequences as follows:

If there is perfect collinearity among the dependent variables, their regression coefficients are indeterminate and their standard errors are not defined.

If collinearity is high but not perfect, estimation of regression coefficients is possible but their standard errors tend to be large. As a result, the population values of the coefficients cannot be estimated precisely.

Detecting the existence of multicollinearity could be defined by examining the value of R^2. A research could achieve high R^2 but few significant t ratios (Gujarati, 1995). If R^2 is high, for instance 0.8, the F test in most cases will reject the hypothesis that the partial slope

The Durbin-Watson test provided by SPSS in multiple regression analysis. The interpretation of Durbin-Watson value could be determined from table 3.3. below.

Table 3.3.
Durbin Watson

	If	Decision
For positive autocorrelation (0 > p > 1)	D > du	Ho accepted
	D < di	Ho rejected
	di < d < du	No conclusion
For negative autocorrelation	(4 - d) > du	Ho accepted
	(4 – d) < di	Ho rejected
	di < (4 – d) < du	No conclusion

3.5.3. Heteroscedasticity Test

Heteroscedasticity means a situation in which the variance of the dependent variable varies across the data. Heteroscedasticity complicates analysis because many methods in regression analysis are based on an assumption of equal variance. Heteroscedasticity is caused by nonnormality of one of the variables, an indirect relationship between variables, or to the effect of a data transformation. Heteroscedasticity is not fatal to an analysis, the analysis is weakened, not invalidated.

Heteroscedasticity is detected with Park, Glejser, or Spearman test. Instead of the test, we can use visual inspection. Heteroscedasticity is detected by scatter plot. If the scatter plot does not show a specific pattern for example increase or decrease, then the assumption of homoscedasticity is fulfilled.

Based on the partial test, we conclude that market value of equity significantly influences return on equity. The evidence of this assumption is showed by the t-test result with the value of sig-t less than 0.05. On the other hand, split ratio has low significant influence to predict return on equity. It is shown by the value of sig-t 0.161.

According to table 4.4. above, the F-value is 6.711 with the probability value of 0.004. Adjusted R square shows that independent variables have ability of 26.3 % to predict previous return on equity. The rest 73.7 % is influenced by other factors. In this study, market value of equity acts only as an explanatory variable of price. Thus, we accepted Ho. The conclusion is stock split has no significant influence to return on equity.

4.3.2. Second Hypothesis

This step is used to determine the relationship between earning per share and stock split. The hypothesis is formulated as follows :

Ho_2: There is no relationship between stock split and earning per share

Ha_2: There is a relationship between stock split and earning per share

The second hypothesis use mathematical models of multiple regression analysis stated below:

$$EPS_t = \alpha_0 + \alpha_1 MVE_t + \alpha_2 split\_ratio_t + \varepsilon$$

Where: