

FUNDAMENTAL FACTORS INFLUENCE ON STOCK PRICE VOLATILITY EX-DIVIDEND DATE PRIOR TO THE INDEX LQ45 INDONESIA STOCK EXCHANGE IN 2014-2017

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Abstract: Stock price volatility is a statistical measurement of stock price fluctuations. This study was conducted to determine the influence of fundamental factors, they were return on assets (ROA), Debt to Equity Ratio (DER), and current ratio (CR) to the volatility of the stock price before the ex-dividend date. The samples in this research was LQ45 Indonesian Stock Exchange (BEI) during the period of the study (2014-2017). The number of samples in this study were 20 companies by using purposive sampling technique. This study used regression analysis of panel data, with some electoral test model chow, Hausman test, test lagrange multiplier, and hypothesis testing by using t-test to test the coefficient of partial regression and F-test to test the effect of co-sam with significant levels 5%. The results obtained in this study was the Debt to Equity Ratio (DER), and the current ratio (CR) has an influence on the volatility of the stock price before the ex-dividend date. Return on Assets (ROA) had no effect on the volatility of the stock price before the ex-dividend date. But both of the independent variables affect the volatility of the stock price before the ex-dividend date on the LQ-45 index of the Indonesia Stock Exchange (BEI).

Keywords: Return on Assets, Debt to Equity Ratio, current ratio, and volatility of stock price before the ex-dividend date.

1. INTRODUCTION:

The LQ45 or Liquid 45 index in the Indonesia Stock Exchange which is a combination of 45 companies that excel and shares a favorite for investors. These shares became a favorite of investors because of having a low risk compared to other stocks. The LQ45 Index is one of the stock price index in the Indonesia Stock Exchange, and is a fairly well-known index besides the Composite Stock Price Index (CSPI)

The LQ45 index is calculated by calculating the average share prices of 45 companies LQ45, while the Composite Stock Price Index (CSPI) is calculated by calculating the average stock price of all companies listed on the Indonesia Stock Exchange. In addition LQ45 experienced better growth than the Composite Stock Price Index (CSPI) in 2017. Where LQ45 index grew by 22.02%, while the Composite Stock Price Index (CSPI) only rose by 19.9%. With this growth will reflect a good performance on the index LQ45 it can be seen with its dividend payout ratio. The following comparison table 5 companies LQ45 payment its dividend payout ratio greater than a year from 2014 to 2017 is shown in Table 1 below:

Table 1. Paying a dividend payout ratio is always great year 2014-2017

NO	COMPANY NAME	YEAR			
		2014	2015	2016	2017
1	Surya Citra Media Tbk (SCMA)	70.41	79.66	71.11	53.48
2	AKR, Tbk (AKRA)	62.80	45.74	47.39	39.81
3	Astra International Tbk (ASII)	45.59	49.54	44.87	11.79
4	United Tractors Tbk (UNTR)	64.95	66.89	10.66	49.08
5	Unilever Indonesia, Tbk (UNVR)	44.67	99.88	99.69	44.66

source: www.idx.co.id

From Table 1 it can be seen that the movement of five companies LQ45 dividend payments from year 2014 to 2017 has fluctuated. Where the movement of dividend payment is influenced by several factors, both internal and external factors. Can be seen in the company of Unilever Indonesia, Tbk, fluctuations in dividend payments are significant from year to year, the 2014 dividend payment of 44.67 and in 2015 climbed or jumped size able be 99.88 and then in 2016 dropped to 44.66, with the fluctuation of this dividend will be more at risk than stable dividend. This dividend

fluctuations will affect the stock price. Stock price fluctuations indicates the amount of investment risk that would be faced by investors.

Companies must have realized that the investor will pay attention to repatriation of dividends, and the risk level of their investments (stocks) will affect the value of the company in the long term. In addition, the increase in dividends paid higher than expected was the signal for investors that the company's management expects future profits increases, it will cause a positive reaction so that the stock price rises. Conversely, a decrease in dividend or a dividend increase smaller than expected is an indication that the management foresees earnings in the foreseeable future is low, this will cause a negative reaction to the stock price fell. Changes up and down of the stock price is called the stock price volatility.

Fundamental factors used in this study is that the profitability of the company which, if the company's profitability is high then surely that would be obtained company profits will also be high, and vice versa. Profitability is also often used by investors to consideration of investment decisions, to measure the profitability of these companies use ratios profitability is proxied by Return on Assets (ROA), financial leverage is very important for investors to see how much the company meet long-term liabilities, to measure leverage using proxied by the leverage ratio debt to equity ratio (DER), and liquidity of the company is one of the considerations of investors to see how big the company's ability to repay short-term obligations, to measure liquidity using the liquidity ratio in proctions with Current Ratio (CR). The indicator is very important because with the financial indicators of investors can find good company growth was seen from its profits, the level of debt held and the level of the company's ability to meet its obligations.

Based on the description above, the writer moved to do research on LQ45 listed on the Indonesia Stock Exchange with the title "Fundamental Factors Influence Of Stock Price Volatility Prior to the ex-dividend date on the company LQ45 Indonesian Stock Exchange Year 2014 to 2017"

1.1 Formulation of the problem

- How is the effect of profitability to the volatility of stock price before the ex-dividend date on LQ45 companies listed in Indonesia Stock Exchange?
- How to leverage influence on stock price volatility before the ex-dividend date on LQ45 companies listed in Indonesia Stock Exchange?
- How to influence liquidity to the volatility of stock price before the ex-dividend date on LQ45 companies listed in Indonesia Stock Exchange?

1.2 Research purposes

- To determine whether the effect on the profitability of the volatility of stock price before the ex-dividend date on Integration LQ45 listed on the Indonesia Stock Exchange.
- To determine the effect on leverage to price volatility stocks before the ex-dividend date on Integration LQ45 listed on the Indonesia Stock Exchange.
- To determine the effect on the liquidity of the volatility of stock price before the ex-dividend date on Integration LQ45 listed on the Indonesia Stock Exchange.

2. LITERATURE REVIEW:

2.1 Efficient Market Hypothesis (EMH)

One of the financial theory that is essential for investors and financial managers is efficiency market hypothesis or the effecient markets hypothesis (EMH). The concept of efficient markets is that current stock prices reflect all available information. This means that good information is based on information from the past, the present and the information from the company itself (Fama, 1970).

In 1970 Fama suggests refinement and classification of market efficiency, are: (1) Weak Form, refined into the classification of a general nature to test the predictability of returns. (2) Semi-Strong Form, converted into a study of events. (3) Strong Form, called the testing of private information. According to Husni (2005) the central idea of the efficient market hypothesis is that information will unbiasedly and instantaneously be reflected into the prices of assets traded.

2.2 Stock price

According to Brigham and Houston (2010) stock price determines the wealth of shareholders. Shareholder wealth maximization interpreted if it maximizes the company's stock price. The stock price at a particular time will depend on the expected cash flows received in the future by the average investor if investors buy the stock. Darmadji and Fakhruddin (2012) said the share price occurred in the stock at a particular time. The share price could change up or down in a relationship so quickly. The stock price can change in a matter of minutes even be changed in seconds. This is possible because it depends on supply and demand among stock buyers with sellers of shares.

2.3 Stock price volatility

Volatility is the large distance between Fluctuations in stock prices, High volatility means higher prices rise quickly and then abruptly dropped in quickly as well, giving rise to a very large difference between the lowest price and the highest price in a given time. Stock price volatility according to Bittman been translated by Munaf (2009) Volatility is a measure of the price change regardless of its direction. Sartono (2010) argues that the stock price volatility is one of the factors that affect the price of the option, because if the stock price fluctuates more, the higher the price of the option.

2.4 Fundamentals

Fundamental approach is done by identifying the underlying factors that may affect the stock price. In this study, one of the fundamental factors for assessing the financial performance recorded in the financial statements and measured with a measuring instrument in the form of the ratio between its profitability ratios, leverage or solvency ratio and liquidity ratio.

Sartono (2011) said that the profitability ratio is ratio to measure a company's ability to earn profits, both in relation to sales, assets or equity. One of the financial ratios that are widely used to measure the performance of companies particularly with regard to the company's profitability is return on assets (ROA). According to Gitman (2012) ROA is used to measure the effectiveness of management in generating profits with the assets available.

Fahmi (2012) said that the use of the debt is too high will harm the company because the company will be included in the category of extreme leverage (debt extremes), a company stuck in debt levels are high and difficult to let go of the burden of the debt. One measure to calculate the leverage ratio can be measured by using debt to equity ratio (DER). This ratio is used to determine the amount of funds provided the borrower (creditors) to the owner of the company. In other words, this ratio serves to determine every penny of their own capital used for the loan guarantees (Kashmir, 2014).

According Harahap (2010), the liquidity ratio describes the company's ability to settle its short-term obligations. One of the indicators used in this study is the current ratio. Current ratio is a ratio to measure a company's ability to pay short-term obligations or debts maturing during ditangih overall (Harahap, 2010).

3. METHOD:

a) Panel Data Regression Analysis

Panel data regression is a combination of time series data and cross section data. According Windarjono (2009) panel data regression method has several advantages when compared with the time series data or cross section, namely:

- Data panel is a combination of two data time series and cross section able to provide more data so that it will produce a degree of freedom is greater.
- Time series data and cross section may resolve the problem if the information is combined due to problems relievers variables (variables ommitted).

The general models of panel data regression is as follows:

$$Y = \alpha + B1 + b2 X1it + b3X3it + X2it + + e$$

Where :

- Y = Share Price Volatility firm i in year t
- α = Coefficient constant
- X1 = Return On Asset
- X2 = Current Ratio
- X3 = Debt to Equity Ratio
- e = Standard error (variable spam)
- t = time
- i = Company

b) Panel Data Estimation Method

According to Basuki and Nano (2016) there are three approaches to the estimation method with panel data regression model where. First, *Common effect model* is the panel data model approach that combines the data time series and cross section no dimension of time and individual attention. Second, the fixed effect models assume inter-individual differences and the differences can be accommodated on the intercept. Third, the random effect model is the panel data where possible disturbance variables interconnected across time and between individuals.

c) Model Selection Method

- a. Test Chow (Chow test) which is testing to determine the model Fixed or Random Effect Effet most appropriately used in estimating panel data. In the chow test, data is regressed using common effect and fixed effect first and then made the hypothesis to be tested. The hypothesis to test chow was as follows:
 H0 = if the value of the probability of cross-section $F \geq \alpha$ (0:05), then Ho is accepted means Common Effect accepted.
 H1 = if the value of the probability of cross-section $F < \alpha$ (0:05), then Ho is rejected it means Fixed Effect accepted.
- b. Hausman test is a statistical test to select whether the model Fixed Effect Random Effect or the most appropriate use. To test this, the data also regressed in advance using random effects models were then compared between the fixed effect with random effect.
- c. Lagrange Multiplier test to see if the model Random Effect is better than the common method Effect (OLS) test was used Lagrange Multiplier (LM). LM test based on the chi-squares with a degree of freedom for the number of independent variables. If the value of LM statistic is greater than the critical value of chi squares then the random effect is more appropriately used and vice versa.

4. ANALYSIS :

a) Classic Assumption Test

Prior to the panel data regression model to be fully tested prior classical assumptions. In general stages used classical assumption test include:

1) Normality Test

Prior to testing the next ketahap normality test is conducted prior. The test aims to determine the normality of diversity patterns variance possessed by each study variable. Each of the variables to be formed into a regression model must first be normally distributed. In this study, normality testing done using Jurgue Bera test Test. Where in each variable will be distributed normally if it has a probability of above 0.05.

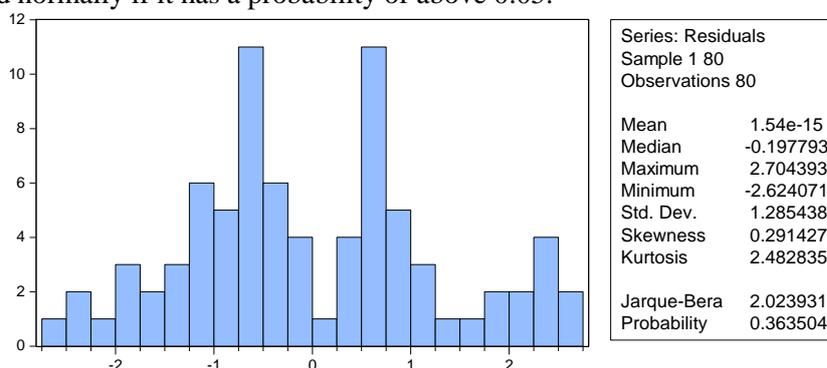


Figure 1. Residual Normality Test

Based on testing normality of residuals obtained value of 0.3635 probability that value above 0.05 so it can be concluded that all the variables have normal distribution, therefore further data processing can be done.

2) Test Multicollinearity

Multikolinieritas testing conducted to examine the relationship between the independent variables. Multikolinieritas symptoms will not occur if each independent variable used free of symptoms multikolinieritas if it has a value of Variance Inflation Factor (VIF) of less than 10.

Table. 2. The test results Multikolonieritas

variables	coefficient variance	Centered VIF
Constant	0.8490	1.3920
ROA	0.0015	1.3743
DER	0.3748	1.0166
CR	0.0394	1.5104

From the table above shows each variable no problem multikolenieritas, it is seen from the VIF at VIF centered on three independent variables is less than 10.

3) Test Heteroskidastity

In detecting the presence or absence of heteroscedasticity problem that we use this research using Glejser Test. In the model heterokedastisitas symptoms will not occur if the probability value is generated in the test are above 0.05.

Table 3. Test Results Heteroskidastity

F-statistic	0.3358	Prob. F (3,76)	0.7994
Obs * R-squared	1.0468	Prob. Chi-Square (3)	0.7899

Based on the above test results obtained that there is no problem of heteroscedasticity. This is because the value of Obs * R-squared of 1.0468 > 0.05, so it can be concluded that all variables used in this study heteroskedastisitas free of symptoms.

4) Autocorrelation Test

To determine whether the regression model established whether or not the symptoms are then tested autocorrelation autocorrelation using Durbin Watson test (DW).

Table 4. Test Results autocorrelation

R - squared	Adjusted R-squared	Durbin Watson Stat
0.0130	-0.0258	1.6952

Based on the table it can be seen the value of Durbin Watson stat is at 1.095221. Where the value of Durbin Watson stat generated is located at 1.74 <DW <2.46 (1.74 <1.6952 <2.46). So it can be concluded that all the variables in this study which is a pooling of data free of symptoms autocorrelation.

b) Panel Data Regression

In panel data regression there are three alternative approaches that are used in the processing method. Such approaches are: (1) Test Chow (Fixed Effect / Random Effect), (2) Test Hausman (Fixed Effect / Random Effect), (3) Test Lagrange multiplier (Random Effect). After all the testing, the test is the most appropriate is use chow test because it has a small probabily value of alpha.

Chow test

Chow test is a test to determine whether the fixed effect model or random effect most appropriate for estimating panel data.

Table 5. Test Results Chow

Effects Test	statistics	df	Probability
Cross-section F	99.8301	(19.57)	0.0000
Cross-section Chi-square Fixed	282.7573	19	0.0000
Cross-section Chi-square Random	7.512803	3	0.0572

From the above table it can be seen that the probability of the chi-square value is fixed at 0.0000 where the value is smaller than the alpha value of 0.05. Based on these results it can be concluded that the model is more appropriate to use the fixed effect model because the probability value obtained by using the fixed effect model is smaller than using a random effect model.

c) Hypothesis Testing

The coefficient of determination Test (Adjusted R2)

Derteminasi coefficient aims to determine the extent of the relationship the dependent variable (Y) of the independent variable (X).

Table 6. Test Results coefficient of determination

R-squared	0.1671
Adjusted R-squared	0.1342
SE of regression	1.3105
Sum squared resid	130.5358

In accordance with the results of data analysis showed that the coefficient of determination value generated in this test worth 0.1671 or 16.71%. The results obtained show that the Return On Asset(X1), Debt to Equity Ratio (X2), the Current Ratio (X3) are not able to contribute in influencing the value of the stock price volatility.

Feasibility Model (Test Statistic F)

F statistical test aimed to see if all the independent variables affect the dependent variable.

Table 7. Test Results Statistics F

F-statistic	Prob (F-statistic)	Alpha	Conclusion
5.0847	0.0029	0.05	Significant

Based on the test results show the value of probability (F-statistic) of 0,0029, The error rate is used by 0.05. The results obtained show that the probability value generated by 0,0029 < Alpha 0.05 then the decision is Ho refused and Ha accepted.

Individual Significance Testing (Test Statistic t)

T statistical test used to verify the effect of each individual independent variable on the dependent variable.

Table 8. Test Results Statistics t

variable	coefficient	Std. Error	t-Statistic	Prob.	Alpha	Conclusion
C	10.7419	0.9214	11.6580	0.0000	0.05	Significant
ROA	0.01964	0.0394	0.4978	0.6200	0.05	Not significant
DER	-1.7958	0.6122	-2.9332	0.0044	0.05	Significant
CR	-0.6616	0.1986	-3.3307	0.0013	0.05	Significant

Based on statistical test table t t-statistics showed return on assets (ROA) of 0.4978 with a probability value of 0.6200 where the value of this probability is not significant at the 0.05 level of significance alpha. So the result return on Asser (ROA) was not significant positive effect on stock price volatility.

The second t statistic test shows that the debt to equity ratio (DER) t-statistic is -2.9332 with a probability value of 0.0044 where the probability value is significant at the alpha significance level of 0.05. So the results of the debt to equity ratio (DER) are significantly negative effect on stock price volatility.

The third dependent variable t-statistics showed current ratio (CR) of -3.3307 with a probability value of 0.0013 where the value of this probability is significant at a significance level of alpha 0.05. So the results obtained current ratio (CR) significant negative effect on stock price volatility.

5. CONCLUSION:

- Based on hypothesis testing showed that the return on assets, debt to equity ratio and current ratio is jointly affect the volatility of the stock price before the ex-dividend date on the index LQ-45 Indonesia Stock Exchange, but in partial return on assets does not affect the volatility stock price. While the debt to equity ratio and current ratio of the partial effect on volatility of stock price before the ex-dividend date.
- Variation factors that affect the volatility of the stock price before the ex-dividend date on the LQ-45 index is explained by the independent variable is return on assets (ROA), debt to equity ratio (DER) and the current ratio (CR) is jointly influenced by 16.71%. The results obtained show that the Return On Asset(X1), Debt to Equity Ratio (X2), the Current Ratio (X3) are not able to contribute in influencing the stock price volatility value before the ex-dividend date, while the remaining 83.29% is influenced by other variables that are not used in this study ,

REFERENCES:

1. Brigham, Eugene F Dan Houston, Joel f. 2010. *Financial Management*. 1.Jakarta 8. Buku Edition: Erland.
2. Bittman, James B. 2009. *Tranding Options as a Professional dialih bahasakan Dwin Gideon Sitohang*. Jakarta: Elex Media Komputindo.
3. Brigham, Eugene f Dan Houston, Joel f. 2010. *Manajemen Keuangan*. Edisi 8.Buku 1.Jakarta : Erlangga.
4. Darmaji, Tjiptono dan Fakhruddin. 2012. *Pasar Modal di Indonesia*. Edisi Ketiga. Jakarta : Salemba Empat.
5. Fahmi, Irham. 2012. *Pengantar Manajemen Keuangan Teori Dan Soal Jawaban*. Bandung : Alfabeta.
6. Fama, E. F. (1970, May). Efficient capital markets: A review of theory and emperical work. *Journal of Finance*, 25(2), 383-417.

7. Gitman, J, Lawrence. 2012. *Principles Of Managerial finance*. 13th Edition. Pearson Education, Inc. United States.
8. Harahap, Sofian Safri. 2010. *Analisis Kritis Atas Laporan Keuangan*. Jakarta : Rajawali Persada.
9. Husni, Tafdil. 2005. Price Randomness, Contrarian And Momentum Strategies: A Study Of Return Predictability In The Malaysian Stock Exchange. *Journal Thesis doctoral dissertation*.
10. Kasmir. 2012. *Analisis Laporan Keuangan*. Rajawali Pers: Jakarta.
11. Sartono, Agus. 2010. *Manajemen Keuangan Teori dan Aplikasi*. Edisi ke 4. Yogyakarta: BPFE.
12. Sartono, Agus. 2011. *Manajemen Keuangan Teori dan Aplikasi*. Yogyakarta: BPFE.