

# Artikel 1

*by* Suyanto Faba 2021

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**Submission date:** 12-Oct-2021 10:49AM (UTC+0700)

**Submission ID:** 1671682044

**File name:** ors\_on\_Stock\_Prices\_in\_Pharmaceutical\_and\_Cosmetic\_Companies.pdf (576.46K)

**Word count:** 3306

**Character count:** 17229

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## **Fundamental and Technical Factors on Stock Prices in Pharmaceutical and Cosmetic Companies**

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### **Info Articles**

History Article:  
Submitted 30 January 2021  
Revised 29 March 2021  
Accepted 16 April 2021

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Keywords:  
Earnings Per Share, Agency  
Theory, Debt to Equity Ratio

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### **Abstract**

In investing in the capital market, investors need accuracy in making decisions related to stocks. Accurate stock valuation can minimize the risk of being wrong in decision-making. Therefore, investors need to analyze conditions corporate finance for decision making in investing stock. To evaluate the company's financial condition, investors can do it by calculating the company's financial ratio, namely Earning Per Share (EPS), Debt to Equity Ratio (DER), and Return on Equity (ROE) and for determining the appropriate timing of the investor's transactions will also be considering technical factors such as the Rupiah exchange rate against the US Dollar, Inflation and Bank Indonesia Interest Rates. This study aims to determine the effect. Earnings Per Share, Debt to Equity Ratio, Return on Equity, Exchange Rates, Inflation, and Bank Interest Rates Indonesia to Stock Prices. The population in this study are Go-Public companies from the Pharmaceutical sub-sector and the cosmetics sub-sector household goods, which are listed on the Indonesia Stock Exchange as long as 2014-2019 period. The sample selection technique in this study is purposive sampling. Thirty-six companies were acquired which complied research sample criteria. This study uses secondary data analyzed by descriptive method and multiple linear regression tested with classical assumption experiments, T-Test and F-Test. The results showed that the test results: EPS had an effect significant and partially affect the share price., DER is not has a significant and partial effect on stock prices., ROE has a significant effect simultaneously and partially share price., Exchange rate has no significant effect simultaneously and partially has no effect on stock prices, inflation has no significant effect Simultaneously and partially it has no effect on stock prices. Tribe Interest has no significant effect simultaneously and partially not take effect.

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## INTRODUCTION

Capital market (capital market) is a market for various long-term financial instruments that can be traded, both debt securities (bonds), equities (stocks), mutual funds, derivative instruments and other instruments. The capital market is a means of funding for companies and other institutions (such as the government) and as a means for investing activities. Thus, the capital market facilitates various facilities and infrastructure for buying and selling activities and other related activities (Stern, 2012).

The Capital Market Law No. 8 of 1995 concerning Capital Market defines the Capital Market as "Activities related to Public Offerings and Securities trading, Public Companies related to the Securities they issue, as well as institutions and professions related to Securities". The Capital Market has an important role for the economy of a country because the capital market carries out two functions, namely first as a means for business funding or as a means for companies to obtain funds from the investor community, where these funds can be used for business development, expansion, addition working capital and others, both capital markets are a means for the public to invest in financial instruments such as stocks, bonds, mutual funds and others, so that the public can place their funds according to the characteristics of the advantages and risks of each instrument. Investing requires caution because there are risks that must be calculated (Kumar, 2009).

Stock risks as an investment instrument are: capital loss, and liquidation risk, so investors must be observant before deciding on a transaction, where there is a price in stock transactions (Nassirzadeh et al., 2012). Share prices increase and decrease depending on various factors, including company and economic fundamentals. Fundamental factors (company internal factors) consist of financial performance itself, including: Earning Per Share (EPS), Debt to Equity Ratio (DER), Return on Equity (ROE) while technical factors (company external factors) include: Value Exchange, Inflation and Interest Rates.

This study examines the company's fundamental factors, for the market price ratio, namely EPS (Earning per Share) as variable X1, for the solvency ratio DER (Debt Equity Ratio) as variable X2, and the profitability ratio ROE (Return on Equity) as variable X3. Based on research conducted by Chang & Chen (2008), EPS (Earning Per Share) partially affects stock prices, in contrast to Manoppo's research (2015) where EPS (Earning Per Share) partially has no effect on stock prices. According to Kamar (2017) ROE (Return on Equity) partially affects stock prices, and is different from Utami & Darmawan's research (2019) where ROE (Return on Equity) has no effect on stock prices. Whereas in Akbar & Afiezan's (2019) research, DER (Debt to Equity Ratio) partially affects stock prices, in contrast to research (Pangemanan2, 2014) where DER (Debt to Equity Ratio) has no effect on stock prices.

Agency Theory (Agency theory) developed by Jensen, M. C, and W. H. Meckling (1976). According to Eisenhardt (1989) Agency Theory is the theoretical basis that underlies the company's business practices during this time. The theory is rooted in the synergy of economic theory, decision theory, sociology, and organizational theory. The main principle of this theory states that there is a working relationship between the party giving the authority, namely the investor, and the party receiving the authority (agency), namely the manager. The separation of owner and management in the accounting literature is called Agency Theory.

Morris & Morris (2012) Signaling Theory is an action taken by the management of a company that provides guidance to investors on how management views the company's prospects. Companies with favorable prospects will try to avoid selling shares and seek any new capital needed by other means, including the use of debt. Signaling Theory suggests how a company should provide signals to users of financial statements. This signal is in the form of information about what management has done to realize the owner's wishes. Signals can be in the form of promotions or other information stating that the company is better than other companies. Signal theory explains that signaling is done by managers to reduce information asymmetry. Managers provide information through financial reports that they apply conservatism accounting policies that produce higher quality profits because this principle prevents companies from exaggerating profits and helps users of financial reports by presenting quality earnings and assets.

The development of this research hypothesis can be defined as a temporary answer to the problem under study, it still needs to be verified through the research concerned. In principle, this hypothesis is useful to help make research more focused. Based on the description above, the authors can draw temporary conclusions through research hypotheses based on problem identification, namely: 1. EPS has a significant effect on stock prices 2. DER has a significant effect on stock prices 3. ROE has a significant effect on stock prices 4. Exchange value has a significant effect on stock prices 5 Inflation has no significant effect on stock prices 6. Interest rates have a significant effect on stock prices.

**METHODS**

The research was conducted at Pharmaceutical and Cosmetics & Household Supplies Companies listed on the Indonesia Stock Exchange for 6 (six) years from 2014 to 2019 with a sample population of 13 companies. The population used in this study were 17 companies from the Consumer Goods Industry sector, the Pharmaceutical and Cosmetics & Household Supplies sub-sector which were listed on the Indonesia Stock Exchange from 2014 to 2019. Sampling used purposive sampling technique, namely the sample selection method using some criteria.

**Operational Variable**

**Variable Y**

The share price is the price on the real market, and is the easiest price to determine because it is the price of a share in the ongoing market or if the market is closed, the market price is the closing price (Manoppo, 2015).

**Variable X**

According to Hanifah (2019) Earnings Per Share (EPS) is a "ratio to measure the success of management in achieving benefits for shareholders." The higher the EPS value, of course the shareholders are happy because the greater the profit provided to the shareholders. The earnings ratio shows the combined impact of liquidity and asset and liability management on a company's ability to generate profits. So, it can be concluded that EPS is a ratio that shows the amount of profit earned from each existing share.

$$EPS = \frac{\text{Net Profit}}{\text{Number of shares outstanding}}$$

Debt to Equity Ratio is a ratio used to determine the ratio between total debt and capital (Utami & Darmawan, 2019).

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}}$$

ROE is a ratio used to measure net income after using own capital (Manoppo, 2015).

$$ROE = \frac{\text{Net Profit After Tax}}{\text{Total Capital}}$$

Exchange rate is the price of a currency relative to the currencies of other countries. The exchange rate plays an important role in spending decisions (Weske & Benuto, 2015).

$$KURS = \frac{\text{Selling Rate} + \text{Buying Rate}}{2}$$

Inflation is the tendency to increase the price of goods and services. Inf =  $\frac{IHK_n - IHK_{n-1}}{IHK_{n-1}} \times 100\%$  Ratio in general and continuously (Alhagbi, 2017).

$$\text{Inflasi} = \frac{IHK_n - IHK_{n-1}}{IHK_{n-1} \times 1}$$

Central Bank Interest Rate, in this case Bank Indonesia or BI Rate, is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public. According to (Safitri et al., 2020) data on interest rates and rates of return provide information for financial managers to be able to determine the opportunity cost of investment.

**Result and Discussion**

**Descriptive Statistics**

**Table 1.** Deskriptive Statistics

|                 | N  | Mean       | Std. Deviation | Minimum  | Maximum   |
|-----------------|----|------------|----------------|----------|-----------|
| Harga Saham (Y) | 78 | 6038.7436  | 11477.83369    | 100.00   | 55900.00  |
| EPS (X1)        | 78 | 2500.9803  | 18336.06871    | -106.66  | 162060.00 |
| DER (X2)        | 78 | .7031      | .68631         | .02      | 2.90      |
| ROE (X3)        | 78 | 22.8472    | 43.47791       | -37.98   | 224.46    |
| Kurs (X4)       | 78 | 13600.1667 | 620.42956      | 12440.00 | 14481.00  |
| Inflasi (X5)    | 78 | 3.0533     | 2.73197        | .16      | 8.36      |
| Suku Bunga (X6) | 78 | 5.9800     | 1.27945        | 4.00     | 7.54      |

Source: Processed data of SPSS Output, 2021

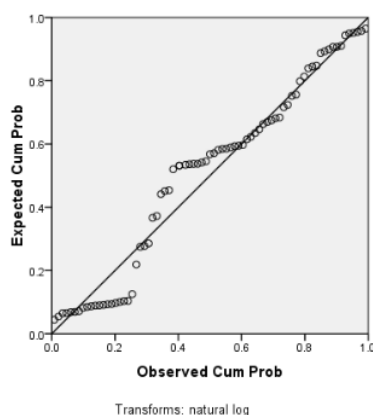
From the table above, the lowest value of Earning per Share (EPS) is -106.66 and the highest

value is 162.060. EPS is an important measuring tool, especially for investors who have the motivation to invest in pursuing dividends. Because logically, the greater the EPS value, the greater the chance of getting dividends. Furthermore, the lowest value of Debt to Equity Ratio (DER) is 0.02 and the highest value is 2.9. The higher the DER value a company has, the greater the company's debt to the company's capital. Conversely, if the lower the DER value, the lower the company's debt. The table above states that, the lowest value of Return on Equity (ROE) is -37.98 and the highest value is 224.46. ROE (Return on Equity) can also be used as an indicator, to assess how effectively a company manages to use equity financing to fund operations at the company in the success of the company. Return on Equity (ROE) is also used as a real return on the capital invested by investors. The lowest value of the Rupiah exchange rate against the US Dollar is 12,440 and the highest value is 14,481. The standard deviation value of 620.42 is smaller than the mean value of 13,600, so it shows that the data deviation is good and the mean value can represent the research data. The lowest inflation rate is 0.16% and the highest is 8.36%. The standard deviation value of 2.73 is smaller than the mean value of 3.05, so it shows that the deviation of the data is good and the mean value can represent the research data. Bank Indonesia Interest Rate The lowest Bank Indonesia Interest Rate is 4% and the lowest value is 7.54. The Standard Deviation value of 1.27 is smaller than the Mean value of 5.98, thus indicating that the data deviation is good and the mean value can represent the research data. Share Price The lowest value of the share price is 100 and the highest is 55,900.

**Normality test**

Normality test aims to test whether the dependent variable and independent variable have a normal distribution. (Ghozali, 2011). A good distribution model is if the data is normally distributed or close to normal. The results of the Normality test are shown in the image below.

Lognormal P-P Plot Test Dependent Variable : Harga Saham (Y)



**Figure 1.** Normalitas Test

Source: Processed data of SPSS Output, 2021

It can be seen from the chart Normal P-P plot of Regression Standardized Residual showing the points spread around the diagonal line, and the distribution follows the direction of the diagonal line. Then the regression model fulfills the normality assumption and is fit for use. To further test the level of normality of the data, the normality test was added using the Kolmogorov - Smirnov test using SPSS version 16 software to determine whether the data was normally distributed or not seen on the Asymp. Sig (2-tailed). The basis for decision making is if Asymp. Sig (2-tailed) is more than 0.05 or 5%, then the data is said to be normally distributed, and vice versa if Asymp. Sig (2-tailed) is less than 0.05 or 5%, then the data are not normally distributed. If the data is not normally distributed, then steps can be taken to eliminate extreme data or what is known as data outliers. However, there are some experts who disagree with how to delete extreme data, another way that can be taken is by transforming data. Data transformation is done by changing the data with certain formulas depending on the shape of the graph. Before transforming the data, the shape of the graph must be known to determine the formula.

**Kolmogorov Smirnov Test**

**Table 2.** Kolmogorov Smirnov Test

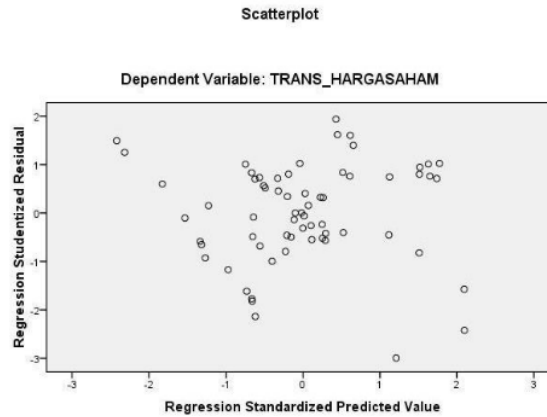
|                                |                | TRANS SAHAM | TRANS EPS | TRANS DER | TRANS ROE | TRANS KURS | TRANS INFLASI | TRANS SUKUBUNGA |
|--------------------------------|----------------|-------------|-----------|-----------|-----------|------------|---------------|-----------------|
| N                              |                | 77          | 66        | 78        | 67        | 78         | 78            | 78              |
| Normal Parameters <sup>a</sup> | Mean           | 3.2054      | 2.0314    | -.3772    | 1.0846    | 4.1331     | .1840         | .7663           |
|                                | Std. Deviation | .73340      | .95299    | .50899    | .81910    | .02013     | .62393        | .09693          |
| Most Extreme Differences       | Absolute       | .130        | .082      | .137      | .153      | .239       | .349          | .205            |
|                                | Positive       | .130        | .082      | .070      | .137      | .144       | .205          | .131            |
|                                | Negative       | -.098       | -.077     | -.137     | -.153     | -.239      | -.349         | -.205           |
| Kolmogorov-Smirnov Z           |                | 1.144       | .667      | 1.208     | 1.254     | 2.108      | 3.083         | 1.809           |
| Asymp. Sig. (2-tailed)         |                | .146        | .765      | .109      | .086      | .000       | .000          | .003            |

a. Test distribution is Normal.

Source: Processed data of SPSS Output, 2021

Based on the results of the normality test above, the Kolmogorov - Smirnov test value for the dependent variable (Y) is 1.144 and the significance value is 0.146, it can be concluded that the data is normally distributed ( $0.146 > 0.05$ ).

**Heteroscedasticity Test**



**Figure 2.** Heteroscedasticity Test  
Source: Processed data of SPSS Output, 2021

Based on the scatterplot pattern above, it can be seen that the points spread randomly, do not form a certain clear pattern, and are spread either above or below the number 0 on the Y axis. So it can be concluded that there is no heteroscedasticity problem in this regression model.

**Simultaneously Test (Test F)**

**Table 3.** Simultaneously Test (Test F)

| ANOVA <sup>a</sup> |            |                |    |             |        |                   |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model              |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
| 1                  | Regression | 24.247         | 6  | 4.041       | 29.883 | .000 <sup>b</sup> |
|                    | Residual   | 7.843          | 58 | .135        |        |                   |
|                    | Total      | 32.090         | 64 |             |        |                   |

a. Predictors: (Constant), TRANS\_SUKUBUNGA, TRANS\_DER, TRANS\_EPS, TRANS\_KURS, TRANS\_ROE, TRANS\_INFLASI

b. Dependent Variable: TRANS\_HARGASAHAM

Source: Processed data of SPSS Output, 2021

From the table 3 shows that the value of F count = 29.883 with a probability of Sig = 0.000. Because the probability of Sig is smaller than the level of the research test (Sig 0.000 <0.005), thus simultaneously the independent variable affects the dependent variable. Or independent variables (EPS, DER, ROE, exchange rates, inflation and interest rates) have a simultaneous significant effect on the dependent variable (stock price).

**Tabel 4.** Summary of Test Results F

| Variable         | F Test Results | Result          |
|------------------|----------------|-----------------|
| EPS              | 0,000          | Significant     |
| DER              | 0,009          | Not significant |
| ROE              | 0,000          | Significant     |
| Kurs             | 0,997          | Not Significant |
| Inflasi          | 0,929          | Not Significant |
| BI Interest Rate | -0,416         | Not Significant |

Source: Processed data of SPSS Output, 2021

From table 4 above shows that there is a significant effect of the EPS and ROE variables and there is no significant effect of the DER, Exchange Rate, Inflation and BI Interest Rate variables.

#### Goodness of Fit Test

**Table 5.** Goodness of Fit Test

| Index Criteria | Size | Cut of Value *) | Result | Information |
|----------------|------|-----------------|--------|-------------|
| Chi Square     |      | Close to Zero   | 0,431  | Fit         |
| Probability    |      | >0,05           | 0,753  | Fit         |
| CMIN/DF        |      | <2,00           | 1,819  | Fit         |
| GFI            |      | >0,90           | 0,971  | Fit         |
| AGFI           |      | >0,90           | 1,019  | Fit         |
| TLI            |      | >0,90           | 1,35   | Fit         |
| CFI            |      | 0-1,0           | 0,897  | Fit         |
| RMSEA          |      | 0,05-0,08       | 0,124  | Marginal    |

Source: Processed data of SPSS Output, 2021

These results indicate that the model used is acceptable. The values of Chi Square, Probability, CMIN / DF, GFI, AGFI, TLI, CFI show a good structural equation model. Although RMSEA is accepted on a marginal basis.

#### CONCLUSION

The purpose of this study is to prove and explain the variables Earning per Share, Debt to Equity Ratio, Return on Equity which is the company's fundamental factor and the Rupiah exchange rate against the US Dollar, inflation, and BI interest rates which are economic fundamental factors on stock prices of pharmaceutical sub-sector companies. and the cosmetics and household supplies sub-sector listed on the Indonesia Stock Exchange with a research period from 2014 to 2019. By using statistical analysis tools using Statistical Product and Service Solutions (SPSS) version 16 software. From the results of hypothesis testing it is concluded that simultaneously EPS and ROE has a significant effect while DER, Exchange Rate, Inflation and Interest Rates do not have a significant effect on stock prices. And from the partial test results, it is concluded that EPS, DER and ROE have a significant effect on stock prices, while exchange rates, inflation and interest rates do not have a significant effect.

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# Artikel 1

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