



## ARTÍCULO

# Factors Affecting Financial Performance of Pharmaceutical Companies Listed of Indonesia

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**Abstract:** The financial performance of an organization has increasingly become a necessary element for organizational success and has been widely considered by scholars and practitioners alike. Thus, the current study investigates into the impact of various financial factors such as net profit margin, debt to equity ratio, return on assets, return on equity, and firm size, on the financial performance of listed pharmaceutical companies in Indonesia. The secondary data is extracted from secondary sources such as the Indonesian Stock Exchange (IDX) database and the financial statements of selected companies from 2016 to 2020. The current study has used the robust standard error and fixed effect model (FEM) to test relationships among the variables. The results indicate that net profit margin, debt to equity ratio, return on assets, return on equity, and firm size have a positive association with the financial performance of listed pharmaceutical companies in Indonesia. This research is potentially valuable for upcoming researchers while examining this area in future and is also particularly helpful for policymakers while formulating policies related to the financial performance of pharmaceutical companies.

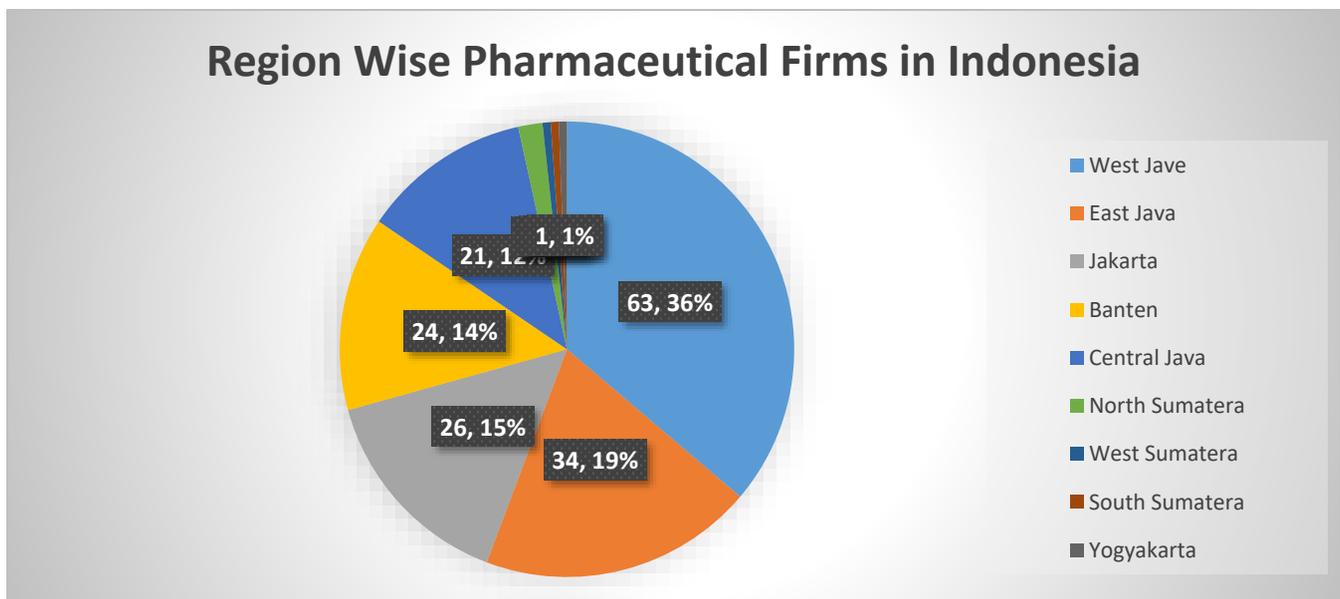
## Introduction

The concept of capital markets has remained an important research area for scholars through the ages. The term *capital market* describes as the financial system part concerned with raising capital using shares, bonds, and other instruments. As the capital market's performance plays a vital role in the development of any country economy, the capital market has increasingly assumed strategic role in national economic development. Literature shows that the capital market meets with excess and insufficient funds by trading stocks and bonds (Robiyanto, Santoso, Atahau, & Harijono, 2019). One of the sectors in which companies are listed on the Indonesia Stock Exchange to obtain funds is the pharmaceutical sector. The pharmaceutical sector is usually considered important for any country as it is related with a country's health sector. In the recent era, the pharmaceutical companies are growing in Indonesia, one of which is the expansion of the reach of participants for the National Health Insurance (JKN) or BPJS Health. The extent of JKN's reach to the community indicates that more and more people have access to health services. It contributes positively to the growth of drug consumption. The Covid-19 pandemic has provided a further opportunity for the pharmaceutical industry to expand its business to a larger scale to meet the high demand for medicines. According to statistics pertaining to the national pharmaceutical market in 2012, there is increased consumption of medicines and other pharmaceutical items to strengthen people's buying power. According to the Association of Indonesian Pharmaceutical Companies (AIPC),

the national pharmaceutical market increased by 14 per cent in 2012 to IDR 43.7 trillion, up from IDR 43.08 trillion in 2011 (Asmirantho & Somantri, 2017; Zhang, 2017). In 2013, pharmaceutical businesses were still reliant on import transactions to fulfil raw material needs, which accounted for 90 per cent of total demand, even though the IDR currency increase had an impact on the industry.

Later on, the industry formalized the independence of medicine raw materials, as already declared by the Ministry of Health, owing to the efficacious medicinal plants in Indonesian natural resources (Daryanto & Daryanto, 2019). The entire pharmaceutical market reached IDR 53.81 trillion, a 12.93 per cent rise over 2012 when the domestic industry recorded sales of IDR 39.45 trillion or 73.32 per cent of the total market. Moreover, branded pharmaceutical sales totaled IDR 48.32 trillion, or 89.81 per cent of the overall market, while unbranded medicine sales totaled IDR 5.49 trillion, or 10.19 per cent of the total market. Due to the GOI's proposed changes to the National Health Security System, market growth slowed to 4.86 per cent in 2014, compared to 16.27 per cent the previous year. This is shown in the growing amount of medicine used while the value is dropping. Furthermore, all industries were affected by the IDR's depreciation against the USD, which was exacerbated subsequently by higher gasoline prices (Kimia, 2014). According to the Central Bureau of Statistics, GDP per capita reached IDR 45.20 million in 2015, an 8.13 per cent rise from IDR 41.80 million in 2014. An illustration of region-wise pharmaceutical firms in Indonesia in 2018 is given in Figure 1.

Figure 1: Region-wise Pharmaceutical Firms in Indonesia



All public companies registered in the Stock exchange must issue financial reports that investors use to review the updated performance. These financial statements show net income, the investor's parameter in assessing profit prospects: EPS. In addition, economic performance is also indicated by the company's size, as judged by assets and sales (Li et al., 2017; Vu, Phan, & Le, 2018). EPS is the company's benchmark for generating earnings per share for a period. If the acquisition value of the shares is significant, profits and dividends will usually increase, affecting

investment behavior (Almira & Wiagustini, 2020). Studies also propose that EPS shows the prospects of a company and the future profits in the eyes of investors (Al Umar & Savitri, 2020; Bustani, Kurniaty, & Widyanti, 2021). In line with that, studies also proposed that EPS describes the number of investors will be interested in (Estiasih, Prihatiningsih, & Fatmawati, 2020).

The present study seeks to address gaps in existing literature. These gaps include: 1) although the Earning per

Share along with other financial variables has been addressed in past studies, a lot remains to be done, 2) lack of conclusive evidence regarding testing the nexus/equation between earning per share, return on assets, return on equity, net profit margin, debt to equity ratio and firm size particularly in Indonesia, 3) in a past study by Utami and Darmawan (2019), the relationship between debt to equity ratio, earning per share, return on assets, return on equity in Indonesian Sariah stock index is focused whereas the present study is testing the equation with addition of a new variable, i.e. firm life etc., 3) in the past, Bustani et al. (2021) test the equation between earning per share, book value, dividend payout ratio, and net profit margin whereas the present study also adds and considers variables like return on equity, return on assets, debt to equity ratio and firm size. The significance of the present study is that it helps highlight the importance of earning per share and its impact on the pharmaceutical firm's index. Moreover, the study also helps professional related to the Indonesian pharmaceutical sector understand the importance of different factors such as earning per share etc. in terms of financial decision making.

The structure of the present study is outlined as follows. In the first section, the introduction and the background to the research study is presented. After an introduction, the second section of the study (literature review) reviews evidence regarding earning per share, return on assets, return on equity, net profit margin, debt to equity ratio, and firm size indices considering past studies. The third section of the study sheds light on the methodology applied to collect the data regarding earning per share, return on assets, return on equity, net profit margin, debt to equity ratio and firm size and analyze its validity. The fourth sections compare the study results with the findings of other authors about the same subject and thus, help corroborate these results based on evidence in previous literature. The last section of the paper presents several study implications, conclusions, and recommendations for future research work.

## Literature Review

The involvement of sales and purchases generates income after accounting for the overall costs involved in goods and services. These services and goods are the leading indicators of net profit margin that enhance the earnings per share. Gomes Leite, Estombelo Montesco, and Sakuraba (2018)<sub>2</sub> investigate into the approaches in companies that led them in the competitive market to generate more value and earn maximum margins of profit. The main aim of the companies is to induce better approaches that reduce the losses and increase the net profit margin. Using different factors on which various statistical approaches have been applied asserted prominent influences of profit margins on EPS. Study shows that lean six sigma and net profit margin impacts the earning per share of companies. Allain (2021)<sub>2</sub> examines the relationship between net profit margins and labor costs that interlink with each other and exert a significant impact on capital and earnings. Economic grounds could not be omitted while using the net profit indicators upon the earning per share. Different components are used to assert profitability and its impact on earnings per share with the neo-Kaleckian model being a prominent one. The result indicates that increasing effective demand of net profit margin increases earning per share.

While minimizing the expenses of goods, the stocks could be

attractive and promote more net profit, leading to earnings per share. Durand and Gueuder (2018)<sub>2</sub> assess the nexus among profit, investment, monopolization, globalization, and financials to know the perspectives of profits. Domestic investment and profits are usually weakened due to the economies of higher incomes. Along with the elected factors, numerous statistical and financial techniques have been applied. Studies shows that to achieve the financial and profitable perspectives, certainty is mandatory, and it assures an enhanced level of earnings per share of companies. Deren and Ke (2018)<sub>2</sub> analyze the pledging of shares by the shareholders to accumulate better and prominent earning management in most of the listed firms. Usually, the controls of shares that are pledged endorse a significant impact on the natural earning management and earning per share of listed firms. Using various models and techniques, the earnings depicted upward and downward movements due to the net profit margins associated with actual earning activities. McConville, Arnold, and Smith (2020)<sub>2</sub> explore the ownership schemes of shares that are directly dependent on an increment in net profit margins because of participants' experience. Net profit margin is also dependent on employees' performance, commitment, and motivation, all of which significantly contribute towards retained earnings. Statistical and econometric approaches state positive indications of financial pay offs that are due to positive net profit margins and raised earnings/ per share.

The companies usually incur high amounts of debts to run their operations in the global markets. Therefore, an increase in debt probably reduces the earning of the shareholders where the debts stood at a higher category than the equity. Lim (2020)<sub>2</sub> examines the relationship between public debt and performance of equity markets extended by the earning per share and debt to equity ratios. When equity increases, debts pose a loss to the earnings per share, while effective handling of equity could positively reduce debts. Theoretical and financial models have been applied to estimate the threshold levels in asserting earning per share. The results indicate the significance of the debt to equity ratio on the earning per share in different economies. Morgan and Nasir (2021)<sub>2</sub> assess the gambling of debts led to considerable losses to the economies in general as well as companies that enhance the needs of equity capital in the organization. The financial optimism perspective explores different opportunities for the companies to scale their earning management to prominent levels. These levels are maintained by the applicability of elected factors and because of the application of statistical and econometric techniques. Findings indicate that positive external environment of debt-to-equity ratio can itself promote the significant earnings per share.

The higher debts also hike the interest rates and increase the expenses, resulting in profit and earning reductions. Samour, Isikal, and Gonsel Resatoglu (2020)<sub>2</sub> investigate into the transmission effects of interest rates in equity markets and external debts that reduce the earning per share due to loans' payoff. Several tests have been initiated to assess the effects on earning per share although auto regressive distributed lag and co-integration have been the most prominent ones. Studies shows that the debt to equity ratio is the main spillover that pushes the policies toward handling debts to improve the earnings per share. Willows and Rockey (2018)<sub>2</sub> explore the reaction of share prices to the integrated financial reports of various companies, showing the dominance of debt and equity relatedness. Notably, the

debt-to-equity ratio describes the financial performance of companies and their earning management. Using the selected variables, the capital asset pricing model and other statistical approaches have been used. The result shows that a decrease in debt to equity considerably increased the earning per share. Kumar, Goyal, and Mitra (2021)<sub>1</sub> checked the relationship between financial instability globally and round up and downs in earning management among the markets of BRICS countries. The shareholders are found to be more concerned about their dividend and income as opposed to debts. Financial figures and financial components are checked by the applicability of ratios and using statistical observations. Findings indicate that debt to equity is an important factor that helps in ensuring stability of earning per share in the stock markets.

For the generation of profits, assets are required which must be utilized effectively to attract investors from developed countries. Return on assets indicates supportive measures to enhance the sentiments of investors and earnings per share. Chiang (2021)<sub>1</sub> interprets the impact of change in uncertain economic policies and the values of risks through the asset returns on the income from gold, bonds, and stocks. Better use of assets is also an indicator for the rise in earnings per share from the stock markets. While asserting the return on assets, correlation and regression techniques have been used. The results show that all the factors relating to return on assets positively predict the earnings per share. Shukla, Narayanasamy, and Krishnakumar (2020)<sub>1</sub> study the quality of assets and returns on assets along with the board size on the earning of banks in India. The robustness of return on assets effectively works in the companies to assert better incomes through its effective operations and workings. The ordinary least square regression model and other statistical techniques have been used to assess the applicability of return on assets. The findings demonstrate the positive influence of return on assets on the earning per share that expands the size and quality of boards. Furthermore, Houmes, Jun, Capriotti, and Wang (2018)<sub>1</sub> examine the relationship between assets turnover, profit margins and earnings stocks. This also relatively shows the effectiveness of return on assets that predicts the stock returns and earnings per share. Capital asset pricing model and Fama-French models have been applied on the taken factors to check the dominance of return on asset. The study indicates the positive and negative associations among these factors where the return on assets indicates a significant rise in earnings per share. Ghasemzadeh, Heydari, and Mansourfar (2021)<sub>1</sub> study the relationship between financial distress, capital structure decisions and earning volatility among small and medium enterprises. While checking the volatility of earnings per share, the return and outcome of assets significantly dominate. Using capital structure, structural equation modelling techniques have been applied on the earning volatility and return on assets. The study states a significant relationship between the factors and the influence of return on assets on the earning management. Y.-S. Liu (2021)<sub>1</sub> assesses the relationship between trading activities and investor sentiments and the influence of market shares on the characteristics of firms. While demonstrating the impact of these elected factors, statistical and econometric techniques have been used. Findings indicate that return on assets positively affects the level of earnings per share.

Company size is seen as another important factors which poses a significant impact on its consumers in terms of

generating more profits and raising earnings per share. J Delgado, Fernandez-Rodriguez, and Martinez-Arias (2018)<sub>1</sub> explore the relationship between company size and effective tax rates that impact Germany's earnings per share. In emphasizing the company size, political planning is also seen as a necessary element for strengthening the earning management. Using some of these factors, the regression approach has been applied. The results indicate that linear and positive signs of company size help in enhancing the intensity of earning per share. Koo, Lee, and Kim (2019)<sub>1</sub> study the role and implementation of a trading system that expands the company size and increases the earning management. While asserting the importance and implementation of company size, the environmental and economic impacts are certain due to specific policies. Using the CGE model and some statistical techniques, the reduction of policies in company size majorly impacts the earnings and positively associated with the earning per share.

Vörösmarty and Dobos (2020)<sub>1</sub> investigate into the corporate goals, motivation, and management tools with company size on the earning management of companies. These factors are interlinked due to the involvement of economic and management practices. Different econometric and statistical techniques have been applied to the said variables. Findings point to the importance of company size which enhances the earning per share with appropriate threshold values. Sasaki (2017)<sub>1</sub> examine the rational markets that evaluate the importance and significance of company size to design and strengthen companies' economic and financial plans. Using the techniques of accounting and statistics, the company size indicated and delivered positive information about earning management which also affects the earning per share. Kaizoji and Miyano (2019)<sub>1</sub> assess the fundamentals of earning management and company components during the crash of stock markets in various countries. An extensive share prices and balance sheets database shows the financial indicators being assessed by applying panel regression model techniques. Factors associated with company size are a positive indication of the increment of earning management. Finding reveal that company size can lead to a significant increase in the earning per share during the financial global crisis.

Capital is the most important element that determines the company value in the global markets in relation to its competitors. Jamaani (2021)<sub>1</sub> investigated the effects of financial intervention, government policies and return on equity on the earning management in global markets. There are joint and single effects of government interventions with the involvement of return on equity on the earning per share. In the election of various financial and turnover factors, the market index prices are measured using the panel regression analysis. Studies indicate the certainty of return on equity that dominates over the earning per share in most stock markets. French (2019)<sub>1</sub> examines the return on equity and significant gearing on investment in property that specifies the earning management. The role of return on equity is unfortunately misunderstood in terms of the potential in earning management vis-a-vis property investment. By applying the various ratio and statistical approaches, finding enlarges the prominence of return on equity, increasing the earning per share at appropriate levels. Vergara Garavito and Chi6n (2021)<sub>1</sub> seek to explore the relationship between return on equity and holding of cash and capital associated with return on equity. Using multivariate regression and

statistical techniques, various estimations have been proposed on the return on equity that validates its dominance over earnings per share. The study shows a positive relationship between return on equity and earning management, minimizing the risks for investors. Khurshed, Tong, and Wang (2018)<sub>1</sub> analyze the underpricing of share values externally enumerated by the dominance of return on equity. Using potential factors of return on equity and earning per share, the asymmetry of techniques has been used in the stock markets. Findings show that increasing return on equity uplifts the earning per share while reducing the magnitude of return on equity could derail the earning management. Zheng, Dai, Lan, Zhang, and Mou (2021)<sub>2</sub> explore the influence of share pledging and its controls by the shareholders with a productive return on equity. In most cases, the pharmaceutical industry has attained a considerable rise in its earnings per share with an effective return on equity. Different models have been applied on the elected factors that demonstrate the positive and direct impact of return on equity on the increase in earnings per share in capital markets.

**Methodology**

The current study investigates the impact of net profit margin, debt to equity ratio, return on assets, return on equity and firm size on the financial performance of listed pharmaceutical companies in Indonesia. The secondary data

were extracted from secondary sources such as the IDX database and the financial statements of selected companies from 2016 to 2020. The authors have selected twenty-five top trading pharmaceutical companies listed in IDX. The equation for the study is given below:

$$EPS_{it} = \alpha_0 + \beta_1NPM_{it} + \beta_2DER_{it} + \beta_3ROA_{it} + \beta_4FS_{it} + \beta_5ROE_{it} + e_{it} \tag{1}$$

Where;

- EPS = Earnings per Share
- i = Firm
- t = Time Period
- NPM = Net Profit Margin
- DER = Debt to Equity Ratio
- ROA = Return on Assets
- FS = Firm Size
- ROE = Return on Equity

The article has used the financial performance as the dependent variable which is measured as the ratio of net profit and number of shares outstanding. In addition, five financial factors have been used as the independent variables such as the ratio of net profit after tax and sales, the ratio of total debt and total equity, the ratio of net income and total assets, the logarithm of total assets and the ratio of net income and total equity. Table 1 shows the variables with measurements.

**Table 1.** Measurements of Variables

S#	Variables	Measurements
01	Earnings per share	The ratio of net profit and number of shares outstanding.
02	Net profit margin	The ratio of net profit after tax and sales.
03	Debt to equity ratio	The ratio of total debt and total equity.
04	Return on Assets	The ratio of net income and total assets.
05	Firm Size	The logarithm of total assets.
06	Return on Equity	The ratio of net income and total equity.

The present study uses descriptive statistics which show the number of observations used along with mean and standard deviation. Moreover, it also highlights the minimum and maximum values. In addition, the correlation matrix has been run by the researchers to examine the nexus among the variables. Moreover, the authors have also run the variance inflation factor (VIF) to evaluate the multicollinearity in the data. The VIF equations are given as below:

$$R^2_Y \quad Y_{it} = \alpha_0 + \beta_2X_{2it} + \beta_3X_{3it} + \beta_4X_{4it} + \beta_5X_{5it} + e_{it} \tag{2}$$

$$j = R^2_Y, R^2_{X1}, R^2_{X2}, R^2_{X3}, R^2_{X4}, R^2_{X5} \tag{3}$$

$$Tolerance = 1 - R^2_j \quad VIF = \frac{1}{Tolerance} \tag{4}$$

In addition, the appropriateness of the model has been checked using the Hausman test. If the probability value is higher than 0.05, then accepting the null hypothesis related to the random effect model (REM) is appropriate. In contrast, FEM is appropriate if the probability value is lower than 0.05. Moreover, FEM is considered the best model in this study, and it controls the heteroscedasticity and autocorrelation adverse effects on the results. The FEM equation is given as below:

$$Y_{it} = \beta_{1i} + \beta_2X_{2it} + \beta_3X_{3it} + \beta_4X_{4it} + \beta_5X_{5it} + u_{it} \tag{5}$$

In the above equation (5), subscript (i) shows the “individual firm” and makes the “different firms” according to their

“characteristics”. The FEM equation with understudy constructs is given as under:

$$EPS_{it} = \beta_{1i} + \beta_2NPM_{it} + \beta_3DER_{it} + \beta_4FS_{it} + \beta_5ROA_{it} + \beta_6ROE_{it} + u_{it} \tag{6}$$

The current article also used the robust standard error to examine the association between the constructs because it also adjusted the autocorrelation issues. In addition, it also adjusts the “model’s heterogeneity issues” that generally exist. Moreover, it is also suitable when data has cross-sectional dependence as the current study has cross-sectional dependence data because the number of firms (25) is more than the number of years (5). The robust standard error equation is given below:

$$EPS_{it} = \beta_1NPM_{it} + \beta_2DER_{it} + \beta_3FS_{it} + \beta_4ROA_{it} + \beta_5ROE_{it} + \varepsilon_{it} \tag{7}$$

**Research Findings**

The present study has used descriptive statistics showing the number of observations used along with mean and standard deviation. Moreover, it also highlighted the minimum and maximum values. The figures indicated that a total of 125 observations were used (25 firms x 5 years). The figures also exposed that the mean value of EPS is 15.692 while the average value of NPM is 1.169. In addition, the average value of DER is 0.516, while the mean value of FS is 5.359. Finally, the mean value of ROE is 15.317, while the average value of ROA is 0.905. These values are mentioned in Table 2.

**Table 2.** Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
EPS	125	15.692	0.518	12.453	25.733
NPM	125	1.169	0.176	0.811	1.756
DER	125	0.516	0.433	0.467	0.986
FS	125	5.359	0.499	3.913	6.271
ROE	125	15.317	17.148	11.320	25.89
ROA	125	0.905	2.058	0.180	4.060

In addition, the correlation matrix has been run by the researchers to examine the nexus among the variables. The

figures highlighted that all the predictors such as NPM, DER, FS, ROA and ROE have a positive association with EPS. These values are mentioned in Table 3.

**Table 3.** Correlations Matrix

Variables	EPS	NPM	DER	FS	ROE	ROA
EPS	1.000					
NPM	0.042	1.000				
DER	0.482	0.189	1.000			
FS	0.179	-0.394	-0.092	1.000		
ROE	0.508	-0.290	-0.312	0.533	1.000	
ROA	0.471	-0.208	-0.267	0.586	0.892	1.000

Moreover, the authors have also run the VIF to evaluate the multicollinearity in the data. The results indicated that VIF values are not larger than five, indicating no multicollinearity in the data. Table 4 shows the VIF results.

**Table 4.** Variance Inflation Factor

	VIF	1/VIF
ROA	5.607	0.178
ROE	5.284	0.189
FS	1.762	0.567
NPM	1.286	0.778
DER	1.141	0.876
Mean VIF	3.016	.

In addition, the appropriateness of the model has been checked using the Hausman test. If the probability value is

higher than 0.05, then accepting a null hypothesis related to the REM is appropriate. In contrast, FEM is appropriate if the probability value is lower than 0.05. The results indicated that the probability value is lower than 0.05, which shows that FEM is suitable. Table 5 shows these results.

**Table 5.** Hausman Test

	Coef.
Chi-square test value	1.64
P-value	0.006

The results of FEM indicate that net profit margin, debt to equity ratio, return on assets, return on equity, and firm size have a positive association with the financial performance of listed pharmaceutical companies in Indonesia. The results also indicated that 39.2 per cent of changes in EPS are due to the predictors used in the article. Table 6 shows these values.

**Table 6.** Fixed Effect Model

EPS	Beta	S.D.	t-value	p-value	L.L.	U.L.	Sig
NPM	0.431	0.241	1.79	0.077	0.047	0.909	*
DER	0.433	0.093	4.68	0.000	0.617	1.250	***
FS	0.033	0.011	3.00	0.044	0.234	1.168	**
ROE	0.010	0.005	2.00	0.048	0.001	0.020	**
ROA	0.132	0.043	3.07	0.033	0.053	0.117	**
Constant	4.961	0.998	4.97	0.000	2.984	6.938	***
R-squared		0.392	Number of obs				125
F-test		14.808	Prob > F				0.000

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The results of robust standard error also indicated that net profit margin, debt to equity ratio, return on assets, return on equity, and firm size have a positive association with the financial performance of listed pharmaceutical companies in

Indonesia. The results also indicated that 39.17 per cent of changes in EPS are due to all the predictors used in the article. Table 7 shows these values.

**Table 7.** Robust Standard Error

EPS	Beta	S.D.	t	P>t	L.L.	U.L.
NPM	0.431	0.136	3.169	0.023	0.503	1.365
DER	0.433	0.170	2.550	0.063	0.906	1.039
FS	0.033	0.008	4.125	0.003	0.388	2.322
ROE	0.040	0.007	5.714	0.000	0.008	1.029
ROA	0.122	0.051	2.392	0.071	0.111	1.174
_cons	4.961	1.694	2.930	0.043	0.258	9.664
R-squared	0.3917			Prob > F		0.0187

## Discussions and Implications

The study results indicate that net profit margin has a positive relationship to earnings per share. These results are in line with the previous study of Sekhon and Kathuria (2019), which analyzes that net profit margin is the most significant indicator of an organization's performance (operational and financial performance). It is useful for the organizational management when making a judgment that they are generating enough profits from direct revenue after deducting all the operational and overhead costs. In this way, they can announce the amount of profit payable to each shareholder. These results are also supported by the previous study of Robin, Salim, and Bloch (2018), which shows that the per-share earnings, which shows the financial performance of the company to the public or shareholders, is dependent on the amount of profit set aside after making deductions for the distribution of profits among the shareholders. The increase in the net profits of the firm enhances the amount available to distribute among the shareholders. These results are also supported by the past study of T. Liu, Zhang, and Liang (2019), which reveals that net profit margin is the percentage of revenues received, which are the profits after deduction of costs. With the analysis of increase or decrease in the net profit margin, management can assess whether business operations are running smoothly, predict the profits based on revenues, and determine the earnings per share.

The study results have also indicated that the debt-to-equity ratio has a positive relationship with earnings per share. These results are in line with the previous study of Abdel-Basset, Ding, Mohamed, and Metawa (2020), which shows that the debt-to-equity ratio is the comparison of the amount of debt and the amount of equity from shareholders. It points to the financial leverage of the company. High financial leverage allows the company to purchase enough number of resources and assets, which the company can use to expand its business and increase the total productivity and return on equity. Hence, the earnings per share increase with an increase in the debt-to-equity ratio. These results agree with the past study of Nuryani and Sunarsi (2020), which shows that when debt, in large amounts, is utilized to provide funds to the business growth, the organization has the ability to generate more earnings than the earnings it can generate earlier without debt only using equity. If financial leverage enhances the total earnings, the employees can expect high earnings per share.

The study results have also indicated that the return on assets has a positive association with earnings per share. These results are in line with the previous study of Das and Swain (2018), which shows that return on assets points to the efficiency of the company management in terms of generating maximum earnings by using the available assets in an optimal manner. Excessive earnings with the efficient use of assets enhances the companies' ability to provide more

profits to shareholders. These results are also supported by the previous study of Cho, Chung, and Young (2019), which analyzes that the earnings per share are the profits distributed among the shareholders against their investment into the company. Shareholders expect the company to provide increased profits on shares which is only possible if assets are efficiently used to generate high net profits. Thus, higher return on assets drives higher earnings per share.

The study results have also shown that firm size has a positive relationship with earnings per share. These results are supported by the previous study of Kallmuenzer and Peters (2018), which states that an organizations having efficient entrepreneurial skills, a large number of quality assets, large sales, and market value of equity which cumulatively means large firm size, carry out business operations more effectively and can therefore, attain more profits on sales. In this way, an increase in the firm size enhances the earnings per share. These results agree with the previous study of Lin, Cheah, Azali, Ho, and Yip (2019), which shows that businesses having large firm size have a large number of assets and a large number of resources along with an efficient business administration. For this reason, these businesses have the capacity to increase marketing and total profits. As a result, earnings per share increase.

The study results have also indicated that return on equity has a positive association with earnings per share. These results are supported by the past study of Puni and Anlesinya (2020), which states that if the amount of money invested into the company is utilized efficiently in performing business processes like business management, operations, production, and marketing procedures, the companies' profitability is enhanced, and a result, its earnings per share increase. These results are also supported by the past study of Patel (2018), which shows that high return on equity increases the earnings per share because when the available resources or capital generate more profits, the financial position of the organization is strengthened, expanding the scope of the business. As a result, the organization can distribute more profits among the shareholders.

The present study carries several theoretical and empirical implications. This study has a great theoretical significance on account of its considerable contributions to existing literature. The current study analyzes the significance of a company's financial performance in a competitive era by addresses different factors affecting financial performance. This study represents financial performance with the term earnings per share, which is a great contribution to the literature. This study examines the influence of five significant factors, that is, net profit margin, debt to equity ratio, return on assets, firm size, and return on equity on earnings per share. a=All these factors; net profit margin, debt to equity ratio, return on assets, firm size, and return on equity, have long been discussed by past authors and scholars in the context of earnings per share in separate

research frameworks. There is only limited effort to study the impacts of net profit margin, debt to equity ratio, return on assets, firm size, and return on equity on earnings per share at the same time. For instance, a study by Harahap, Septiani, and Endri (2020), have discussed the influence of net profit margin on earnings per share but paid no attention to other factors like debt to equity ratio, return on assets, firm size, and return on equity for the analysis of earnings per share. So, our study is an initiation in the literature. One of the great theoretical contributions of this study is the selection Indonesian economy for the analysis of earnings per share. This study also has great significance in emerging economies like Indonesia, which is a fast-developing economy. This research is suitable for the upcoming researchers while examining this area in future and helpful for the policymakers while formulating policies related to the financial performance of pharmaceutical companies. This study is useful to economists and financial management of listed companies in developing financial policies and strategies to achieve high financial performance. This study provides a guideline to economists and organizational management on how to enhance earnings per share and the financial performance of the firm. The study guides those earnings per share and financial performance can be improved with a high net profit margin increase in debt-to-equity ratio, high return on assets, large firm size, and high return on equity.

### Conclusion and Limitations

Nowadays, there is intense competition in the market, and every organization seeks to be more successful than its counterparts. In the marketplace, the position of an organization is determined by financial performance. The current study has been an effort to elaborate on how high financial performance can be achieved. This empirical research was made to analyze the impact of net profit margin, debt to equity ratio, return on assets, firm size, and return on equity on earnings per share. The study includes an empirical survey of the stock market in the economy of Indonesia and analyzes net profit margin, debt to equity ratio, return on assets, firm size, and return on equity, and their respective impacts on earnings per share. This empirical analysis provides a basis for the study results. The study results show that the increase in the net profit enhances the earnings per share as it is the portion of available profits which is set aside for distribution among shareholders. The results also indicate that an increase in return on equity and return on assets improves the earnings per share as it points to the efficiency of the business management in terms of achieving more profits with a limited amount of capital and assets, which ultimately increases sales and profitability. The results also show that the increase in a debt-to-equity ratio which shows an increase in financial leverage, which in turn, means there are more opportunities for the firm, hence accelerating the earnings per share. The study concludes that an organization with high firm size can increase earnings per share.

The current study has specific limitations which future authors are encouraged to address and overcome. This study analyzes the impact of only financial factors like net profit margin, debt to equity ratio, return on assets, firm size, and return on equity on earnings per share. Other managerial and organizational factors which also determine the earnings per

share have been ignored. This puts a limit to the scope of the study, and future authors are recommended to address the managerial and organizational factors along with the financial factors. The data collects data about the impacts of net profit margin, debt to equity ratio, return on assets, firm size, and return on equity on earnings per share from the Indonesian economy for the period of 2015-2018. The researchers in future are recommended to collect data pertaining to factors which affect the financial performance of firms for more countries and for a longer period.

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