The 2nd International Students Conference on Economics and Business Excellence (ISCEBE) 2025
e-ISSN: 3090-4811
Vol. 2 No.1/BM-ISCEBE (2025)

THE EFFECT OF DEBT TO EQUITY RATIO (DER), NET PROFIT MARGIN (NPM), AND EARNINGS PER SHARE (EPS) ON STOCK PRICES OF MANUFACTURING COMPANIES IN THE BASIC AND CHEMICAL INDUSTRY SECTORS LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) FROM 2014 TO 2017

Taufik Hidayat[1)], Linna Ismawati[2)]

[1)] Magister Manajemen, FEB Universitas Widyatama, Bandung, Indonesia
[2)] Manajemen, FEB Universitas Komputer Indonesia (UNIKOM) Bandung, Indonesia

Corresponding author: taufik.2116@widyatama.ac.id

Abstract

The goal of this research is to determine the evolution of each variable examined between 2014 and 2017, as well as to observe the partial and simultaneous effects of DER, NPM, and EPS on the stock price of manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange. The methodology takes a quantitative approach, combining descriptive and verification methodologies. Secondary data, such as DER, NPM, EPS, and stock prices, were employed. Purposive sampling was utilized to choose samples from eight organizations over a four-year period (2014-2017), resulting in 32 data points in total. The statistical tests used include multiple regression analysis, classical assumption testing, correlation analysis, determination coefficients, and SPSS 21 hypothesis testing. The findings show that the DER variable has a substantial negative impact on the stock price of manufacturing businesses listed on the Indonesia Stock Exchange (IDX) in the basic and chemical industries, while NPM and EPS have a considerable positive impact. When combined, these elements have a large favorable influence.
Keywords: Debt-to-equity ratio (DER), net profit margin (NPM), earnings per share (EPS), and stock price.

Introduction

The stock market is an excellent place to invest in the modern era, when technology is rapidly expanding and making investment easier. According to Sutrisno (2013), the stock market serves as a place for share trading.

According to Fahmi (2015), shares are letters that serve as proof of ownership in the study conducted by Lili AS and Bambang HS (2017). Because of their numerous advantages, shares are popular among investors. For investors, stock prices are important because they reflect the state of the business. The process of purchasing or selling shares on the stock market determines stock prices, according to Darmadji and Fakhrudi (2012) in their study of Neneng Tita Amalya (2018).

Investors consider both the company's success and its stock price. DER, NPM, and EPS are only a handful of the ratios that reflect the company's performance.

According to Sutrisno (2013), the DER ratio is calculated by dividing debt by the company's capital. NPM is a ratio that is considered alongside DER. According to Vera Ch. O. Manoppo et al. (2017) and Harahap (2010), NPM is a ratio calculated as a percentage of net profit from each sale made by the business. A company's performance is expected to improve when its NPM is high, boosting investor confidence in the industry.

Along with the increase in investor confidence, these investors will be significantly more likely to make purchases and invest their money in companies with proven track records and long-term investment possibilities. Before making an investment, investors consider a variety of factors to assess the sector's performance and aspirations. This includes keeping an eye on the EPS figure. According to Mehta (2016), Edhi Asmirantho, and Oktiviani Kusumah Somantri (2017), the higher a company's EPS, the more probable it is to receive investor bonuses. In other words, the greater the EPS, the more people are willing to buy the company's stock.

Literature Review

1. Debt Ratio (DER)

According to Darsono and Ashari (2010), the DER ratio is used by investors to forecast a company's ability to pay its obligations to the proper parties. In contrast, Sutrisno (2013) claims that DER is the result of dividing the business's capital by its debt. When a company's capital is less than its debt, it indicates that its fixed load is modest; the debt should not exceed the capital.

$$DER = \frac{Total\ Hutang}{Total\ Modal}$$

2. Net Profit Margin (NPM)

NPM is a ratio used to assess the proportion of net profit on sales, claims Hery (2015). According to Agus Harjito and Martono (2011), net profit margin (NPM) is the amount of money made from sales after taxes and expenses are subtracted.

$$NPM = \frac{Laba\ Setelah\ Bunga\ \&\ Pajak}{Penjualan}$$

3. Earnings Per Share (EPS)

Sutrisno (2013) asserts that EPS is a metric that assesses a business's capacity to turn a profit on each share.

$$EPS = \frac{Laba\ Setelah\ Bunga\ \&\ Pajak}{Jumlah\ Saham\ Beredar}$$

4. Stock Price

According to Sawidji Widoatmodjo (2012), EPS is the amount of money that is willing to be paid in exchange for shares. According to Sri Ratna Hadi (2013), the stock price is determined by an agreement between the buyers and sellers of a share on the stock market. The stock price, on the other hand, is the price listed on the stock exchange and is determined by the selling price of shares from one investor to another, both on the main exchange and in the OTC (Over the Counter market), according to Widoatmodjo in Ade Prima and Linna Ismawati's (2018) study.

Research Object and Methods

Research Object

According to Umi Narimawati et al. (2010:29), Husein Umar defines the object of research as the specific entity or subject being investigated, as well as the circumstances surrounding the research's date and location. The analysis focuses on the DER, NPM, EPS and stock price.

Research Methods

This is descriptive quantitative research. The analysis results are obtained utilizing a quantitative technique approach, and the answers to the study objectives—specifically, the development of each variable—are discussed descriptively. The verification technique provides an explanation for the results of the problem formulation analysis. The sample includes data on DER, NPM, EPS, and stock prices from eight issuers in the basic and chemical industries. With an annual computation, the data used spans four years, from 2014 to 2017, totaling 32 data points. Purposive sampling was utilized to select samples for this study. Data is acquired by downloading firm financial data that meets particular specifications, which is then released by www.idx.com.

Results and Discussion

Multiple Regression Analysis

Table 1. Multiple Regression Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,803	,253		22,913	,000
	DER (X1)	-,256	,112	-,322	-2,282	,030
	NPM (X2)	,044	,015	,389	2,888	,007
	EPS (X3)	,002	,001	,334	2,469	,020

a. Dependent Variable: Ln Harga Saham (Y)

$$\hat{Y} = 5.803 - 0.256X\ 1 + 0.044X\ 2 + 0.002X\ 3$$

The following interpretation applies to the results for every variable:

a. The original Y value was 5.803, which is the expected value of the estimated stock price in the event that all three independent variables are zero or static.
b. The debt ratio value is -0.256, meaning that the stock price is predicted to drop by 0.256 rupiah if the debt ratio rises by 1 while the other two independent variables remain unchanged.
c. A 1% rise in the net profit margin is expected to boost the stock price by 0.044 rupiah, while the other two independent variables stay constant. The value of earnings per share is 0.002, implying that if profits per share increase by one rupiah and the other two independent variables remain constant, the stock price will grow by 0.002 rupiah.

Therefore, it can be said that if the debt ratio rises, the share price is expected to decline, and vice versa; if the net profit margin and earnings per share are higher, the share price is expected to rise.

Classical Assumption Test

a. Normality test

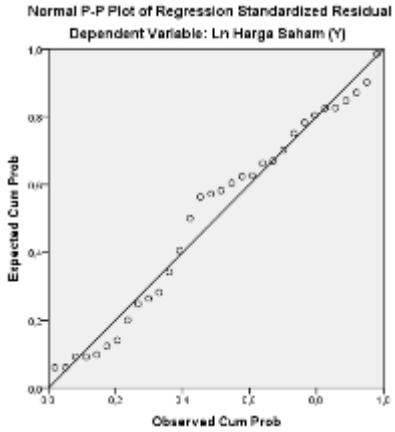

Figure 1. Normal Probability Plot Graph

The graph indicates that the regression model is viable for application in this study since it satisfies the assumption of normalcy. The normal graph pattern is observed from the points dispersed around the diagonal line, and its distribution follows the line's direction.

b. Multicollinerity Test

Table 3. Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	DER (X1)	,830	1,206
	NPM (X2)	,910	1,099
	EPS (X3)	,901	1,110

a. Dependent Variable: Ln Harga Saham (Y)

Since the VIF is less than 10 and the tolerance value is greater than 0.10, the computed results indicate that there is no multicollinearity. As a result, this study can employ any variable.

c. Heteroscedasticity Test

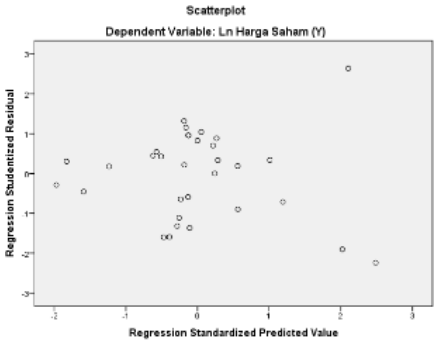

Figure 2. Heteroscedasticity Test

Because the spots are dispersed, indicating that the data fluctuates, the preceding graphic shows that there is no heteroscedasticity. As a result, this study can employ any variable.

d. Autocorelass Test

Table 4. Autocorrelation Test

Runs Test

	Unstandardized Residual
Test Value[a]	,13487
Cases < Test Value	16
Cases >= Test Value	16
Total Cases	32
Number of Runs	17
Z	,000
Asymp. Sig. (2-tailed)	**1,000**

a. Median

According to the preceding table, the sig. is 1.000, which is greater than 0.05, indicating that there are no issues with autocorrelation between residual values.

Hypothesis Testing

Table 5. Partial Hypothesis Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,803	,253		22,913	,000
	DER (X1)	-,256	,112	-,322	-2,282	,030
	NPM (X2)	,044	,015	,389	2,888	,007
	EPS (X3)	,002	,001	,334	2,469	,020

a. Dependent Variable: Ln Harga Saham (Y)

According to these findings, stock prices are significantly impacted negatively by the debt ratio, but positively by the net profit margin and earnings per share.

Table 6. Simultaneous Hypothesis Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15,581	3	5,194	10,850	,000[b]
	Residual	13,402	28	,479		
	Total	28,983	31			

a. Dependent Variable: Ln Harga Saham (Y)

b. Predictors: (Constant), EPS (X3), NPM (X2), DER (X1)

The F-table and F-calculation values will be compared. The aforementioned results show that 10.850 F-calculation values were obtained. Given that the F-table is 2.947, it is clear that the F-calculation (10.850) is

more than the F-table (2.947), indicating that H0 is rejected and H1 is accepted by the hypothesis test. This means that the three independent variables of debt ratio, net profit margin, and profits per share all influenced the stock price.

Conclusion

1. Stock prices are significantly impacted negatively by the Debt-to-Equity Ratio (DER); a higher DER suggests that the company is depending more on debt than equity, which usually results in lower stock prices.
2. Stock prices exhibit a strong positive correlation with the Net Profit Margin (NPM); as NPM rises, stock prices typically do as well, indicating that the business is attaining ideal profitability.
3. The ability of the company to provide big returns for investors is reflected in the rising stock prices, which are positively correlated with a growth in earnings per share (EPS).
4. To sum up, DER, NPM, and EPS ratios have a notably beneficial impact on stock values. When taken together, these three factors have a significant impact on stock prices for manufacturing firms in the chemical and basic industries.

Suggestion

To attract investors or shareholders, the company should increase its Net NPM, EPS and lower its DER. Product innovation and determination can help you compete and increase your sales volume. Other considerations include expanding the market and improving product quality so that the company can engage in activities such as exporting to new countries to increase sales and improve business performance.

References

Prima, P. & Ismawati, L. 2018. The Impact of Total Asset Turnover (TATO) and Return on Equity (ROE) on Stock Prices of IDX-Listed Textile and Garment Companies. Journal of Financial and Banking Sciences. 2018. pp. 33-42.

Harjitto, A.; Martono. 2011. Financial Management: Second Edition, First Printing. Yogyakarta: EKONISIA.

Darsono and Ashari (2010): Practical Guidelines for Understanding Financial Reports (Tips for Investors, Directors, and Shareholders). Yogyakarta: Andi.

Asmirantho, E.; Somantri, O. K. 2017. The impact of financial performance on stock price of a pharmaceutical sub-sector company listed on the Indonesian Stock Exchange. JIAFE (the Journal of Accounting, Faculty of Economics). E-ISSN 2502-4159. Volume 3 No. 2, 2017. Pages 94-107.

Hery. 2015. Financial Report Analysis. Yogyakarta: CAPS.

Lili AS and Bambang HS. 2017. The Effect of Earnings Per Share, Debt to Equity Ratio, Price to Book Value, and Net Profit Margin on Property Stock Prices. Journal of Management Science and Research. ISSN: 2461-0593. Vol. 6 No.8 August 2017.

Amalya, N.T. 2018. The Impact of Return on Assets, Return on Equity, Net Profit Margin, and Debt to Equity Ratio on Stock Prices. Security Journal (Stocks, Economics, Finance, and Investment). ISSN (online): 2581-2777; ISSN (print): 2581-2696. Vol. 1, No. 3 March 2018. Pages 157–181.Widoatmodjo, S. 2012. How to Quickly Start Stock Investment: A Beginner's Guide. Jakarta: PT. Elex Media Komputindo.

Hadi, S. R. 2013. Success in Buying Shares Without Capital Automatically. East Jakarta: Laskar Aksara.

Sutrisno. 2013. Financial Management. First Edition. Yogyakarta: ECONISIA.

U. Narimawati, S. D. Anggadini, and L. Ismawati (2010). Writing Scientific Papers: First Edition, Genesis, Pondok Gede, Bekasi.

Vera Ch. O. Manopo, Benhard Tewwal, and Arrazi Bin Hassan, January 2017. The Effect of Current Ratio, DER, ROA, and NPM on the Stock Prices of IDX-Listed Food and Beverage Companies (2013-2015). EMBA Journal. ISSN 2303-1174. Volume 5, Number 2, June 2017. Pages 1813–1822.

e-ISSN: 3090-4811
Vol. 2 No.1/BM-ISCEBE (2025)

Authors' Bibliography

Taufik Hidayat
Born in Sumedang, August 13, 1995.
I hold a Bachelor's degree in Financial Management from the Faculty of Economics and Business, Universitas Komputer Indonesia (UNIKOM), Bandung, which I obtained in 2019. I am currently employed at the Department of Trade and Industry of Bandung City (Dinas Perdagangan dan Perindustrian Kota Bandung), where I serve in the Secretariat Division. My academic interests primarily focus on financial management, trade policy, and public administration.