

THE EFFECT OF PROFITABILITY AND INFLATION ON STOCK RETURN AT PHARMACEUTICAL INDUSTRIES AT BEI IN THE PERIOD OF 2011-2014

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Abstract

This study examines the influence of profitability ratios (ROA, ROE, NPM, GPM) and inflation as macro variable on stock return. Analysis Methods used are descriptive and verificative with panel data regression. Objects used in this study were pharmaceutical industry at BEI in the period of 2011-2014. The sampling technique used purposive sampling with 9 industries as samples. The results showed that partially ROA and NPM have a significant effect on stock return, while ROE, GPM and inflation have no significant effect on stock return. Simultaneously, ROA, ROE, NPM, GPM and inflation have a significant effect on stock return.

Keywords: pharmaceutical industry, profitability, inflation, stock return

1. Introduction

Investors will certainly only invest in companies that have a good performance in order to provide profits to them (Meythi & Rusli, 2011). The main purpose of the investment is to gain profit (return). (Arisandi, 2014) Investors use various means to obtain the expected return, whether through their own analysis of the behaviour of stock market and by utilizing advice provided by the capital market analysts such as brokers, dealers, investment managers and others.

Investors can invest by buying stocks of companies, one of which is on the Pharmaceutical industry. Pharmacy is one of the industries listed on the Stock Exchange for a long time, It is an industry which has excellent prospects in the future and is able to develop today (Asnita, 2013). The pharmaceutical sector will be an appeal for investors in 2015 because it has been supporting program of Social Security Agency (BPJS). Recorded by the Ministry of Health of Indonesia since 2011, the increase in the national pharmaceutical market is growing at the rate of 9% - 12% per year (BUMN, 2014). (Nurfitriani, 2014) According to the director of PT Phapros, Iswanto, the market of pharmaceutical industry in Indonesia, until 2014, reached Rp 53 trillion, with growth of 12.93%, while the GDP (Gross Domestic Product) Singapore 4.3%, Malaysia 3.5%, and Indonesia still by 2.5%.

The company's performance can be affected by micro-economic and macro-economics factors. (Rusliati & Fathoni, 2011) According to Samson in Rusliati and Fathoni (2011), macro factors are

factors that are outside the company, but have an influence on the increase or decrease in performance, either directly or indirectly. Some macro-economic variables that can directly affect the performance of the company among others are interest rates, foreign exchange rates, international economic conditions, the country's economic cycle, inflation rates, tax laws, and money supply (Riantani & Tambunan, 2013).

An inflation indicator must be observed by issuers and used as a basis for the decision, both on the calculation of the cost of production and for setting the selling price inflation of post-production. As for investors, inflation will affect the profits and losses they have (Rusliati & Fathoni, 2011). The high pressure of inflation at the end of 2014 came from the increase in the price of subsidized fuel, electricity tariff adjustments for households and industry, the increase in the price of 12 kg of LPG, and air fare adjustments (Nasrul, 2015).

Inflation rose at the end of 2014 and did not make the growth of the pharmaceutical industry decline. Pharmaceutical companies always grow each year. The majority of pharmaceutical companies had the positive growth of revenue in the second half of 2014 (Royan, 2014). Although the economic and political conditions were difficult in 2014, the pharmaceutical industries still recorded the sales with a total value of US\$53 billion overall (Infovesta, 2015).

Internal factors can be seen from the fundamental analysis relating to the financial performance of companies that appear on financial statements (Arisandi, 2014). Fundamental analysis of the financial statements used in this study is the ratio of profitability. Profitability ratio is the ratio used to assess the ability of a company with regards to profit (Safitri et al., 2015). If the number of corporate profitability is low, then investors tend not to invest funds into the company, After the company's stock demand decreases, it will affect the declining stock prices and stock returns of the company (Asyik, 2011).

The stock price at pharmaceutical companies show a fluctuating movement. However, from 2011-2014, pharmaceutical stock prices was rising. According to Munjin (2015) David Sutyanto, research analyst at First Asia Capital, pharmaceutical stocks should still be prospective, especially if you look at the stock movement of PT Kalbe Farma (KLBF) and PT Indofarma (INAF). This is because of the fairly positive financial performance. Stocks that have a large capitalization are KLBF and PT Kimia Farma Tbk (KAFF) because their stocks are still rising. In the research of PT Mandiri Investa Saran, PT Kalbe Farma Tbk tends to be a leader in the pharmaceutical sector. Based on the financial statements of PT Kalbe Farma Tbk, it is recorded that the incomes in 2012 with amount of Rp807.30 billion increased to Rp921.98 billion in 2013 (Liputan6, 2013).

By analyzing financial reports, investors can determine a company's financial performance which affects stock prices by analyzing financial ratios. The ratio examined in this study is the profitability ratio based on the background above, the study aims to analyze the influence of ROA, ROE, NPM, GPM, and the inflation on stock return of pharmaceutical industry partially and simultaneously.

2. LITERATURE REVIEW

2.1 Profitability

Profitability ratios are financial ratios for assessing the company's performance in getting profits from its sales. Profitability ratio, According to Kasmir (2010), is the ratio for assessing the ability of the enterprise for profit. Accordingly, Asyik (2011) it is used to gain profitability from the sales production. According to Prihadi (2010) the profitability ratio is a group of ratio that indicates the combination of the effect of liquidity, asset management, and debt on operating results.. According to Prihadi (2010) profitability is the ability to generate profits. Profitability ratios are ROA, ROE, NPM and GPM.

Return on Assets (ROA) according to Brigham and Houston (2010) is the ratio of net income to total assets that measure the return on total assets after interest and taxes. ROA, according Prihadi (2010) measures the rate of return on assets used in generating the profits.

ROA =

Return on Equity (ROE) is a ratio that measures the effectiveness of the company's performance viewed from gains or profits obtained by utilizing the capital or equity owned. According to Prihadi (2010), the calculations of ROE can use an after-tax basis, or before taxes.

ROE =

The NetProfit Margin(NPM), according to Kasmir (2010), is the size advantage by comparing the profit after interest and tax compared with sales. This ratio shows that the company's net income on the sale. Meanwhile, according to Prihadi (2010), NetProfit Margin(net profit) measures the ability of the company in order to provide returns to shareholders.

Profit Margin =

GrossProfit Margin(NPM) is a financial ratio that assesses the performance of the company's revenue before operating expenses, marketing expenses, tax expenses and other expenses to sales. According to Prihadi (2010), the ratio of gross profit to sales(gross margin, grossprofit margin) is the ratio of gross profit and sales.

Gross Margin =

2.2 Inflation

Inflation describes the condition in which the price of goods has increased and the value of the currency weakens and may result in a worsening of the overall economic conditions. According to Brigham and Houston (2010), inflation has a significant impact on the level of interest because it will reduce the purchasing power of the currency and lower real investment returns. According to Iskandar (2013) inflation is the tendency of prices to rise in general and continuously. The increase in the price of one or two things is not called inflation, unless the increase is extended to (or result in increases) most of the prices of other goods.

2.3 Return stock

Stock return is the rate of return expected by investors on their investment. According to Darsono (2009), the outcome is the rate of return on investment. In the analysis results and risk in financial assets, outcome (return) is a result of the dividend added by the profit (capital gain) or reduced by losses of the capital, in this case the stocks. According to Jogiyanto in Riantani

and Tambunan (2013), the level of benefits enjoyed by investors from investment activities consists of the capital gain(loss) and yield. In this research, stock return is measured by:

Return saham:

Description: P_t =stock price in the current period; P_{t-1} =The stock price in the previous period

2.4 Hypothesis

The hypothesis in this study is that there is a significant difference between ROA, ROE, NPM, GPM, and inflation on stock return.

3. RESEARCH METHODS

The method used in this research is descriptive method of analysis and verification method. The research variables consist of: Return On Assets, Return On Equity, Net Profit Margin, Gross Profit Margin, and inflation as the independent variables and the stock return as the dependent variable. The unit of analysis includes all companies included in the pharmaceutical industry that are listed on the Indonesia Stock Exchange during the period of 2011-2014. Secondary data sources in this study came from the official website of Indonesia Stock Exchange (www.idx.co.id) to obtain the financial statements of pharmaceutical industries which have been audited. The official website of the Bank of Indonesia(www.bi.go.id) is used to obtain the annual inflation data. Lastly, www.finance.yahoo.com is aimed at getting the stock price data of the pharmaceutical industries.

The sampling technique used the purposive sampling technique with the following criteria:(1) The pharmaceutical companies listed on the Indonesian Stock Exchange(BEI), (2) the pharmaceutical industry companies that publish financial statements that have been audited by an independent auditor in 2011-2014. Based on these criteria, it is obtained pharmaceutical companies that become samples in this study.

Statistical analysis includes panel data regression analysis using E-views 6.0 application (Rosadi, 2012). According to Setiawan (2010), the data panel will be drawn from the value of a certain period, for example several years. The first test is the Chowtest to determine which model is best used in the study between the common effect and fixed effect. The next is Hausmann test to test which model is best between the fixed effect and random effect. This research is using fixed effect. Statistical testis using the F test to test variables simultaneously and using the t test to test variables partially. By estimating the model research:

Stock Price :

4. RESULTS AND DISCUSSION

The results of the panel data model can be seen in the following table:

Tabel 1. Model Fixed Effect

Cross-sections included: 9

Total pool (balanced) observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.340865	1.073777	-1.248737	0.2249
ROA?	12.03227	3.714458	3.239308	0.0038
ROE?	0.223818	0.272847	0.820304	0.4208
NPM?	-14.46652	5.231447	-2.765300	0.0113
GPM?	1.540958	1.471784	1.047000	0.3065
INFLASI?	-0.298359	1.478590	-0.201786	0.8419

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.999190	Mean dependent var	4.081636
Adjusted R-squared	0.998712	S.D. dependent var	10.93870
S.E. of regression	0.392568	Akaike info criterion	1.253087
Sum squared resid	3.390411	Schwarz criterion	1.868900
Log likelihood	-8.555569	Hannan-Quinn criter.	1.468022
F-statistic	2088.692	Durbin-Watson stat	2.575574
Prob(F-statistic)	0.000000		

Source: Eviews 6.0 data has been processed

Based on the table, it is obtained an equation:

Stock Price: $-1.340865 + 12.03227 \text{ ROA} + 0.223818 \text{ ROE} - 14.46652 \text{ NPM} + 1.540958 \text{ GPM} - 0.298359 \text{ Inflation}$

The test results showed that the profitability ratio (ROA, ROE, NPM, GPM), and inflation simultaneously have a significant effect on stock returns, with a probability value of 0.000 and using a significance level of 5%.

4.1 Effect of Return On Asset (ROA) on stock return

Based on the test results in this study, Return on Assets has a probability value (p-value) of 0.0038 where the value is less than the significance level of 5% ($0.0038 < 0.05$). It can be concluded that H_0 is rejected. ROA has significant effect on stock return of pharmaceutical industry. These results are consistent with research conducted by (Arisandi, 2014), which stated that the net income and the share capital of the company led to a rise or fall of stock prices. ROA also shows the rate of return generated from the total assets of the company. Thus, the greater the ROA, the more efficient the rotation of the company's assets and the greater the profit margin obtained by the company.

4.2 Effect of Return On Equity (ROE) on stock return

Based on the test results in this study, Return on Equity has a probability value (p-value) of 0.4208 where the value is more than the significance level of 5% ($0.4208 > 0.05$). It can be concluded that H_0 is accepted, which means that the ROE does not have a significant effect on stock return of pharmaceutical industry. In contrast to the results, Asyik (2011), Carlo (2014) states that the ROE has a significant effect to the stock return. This difference may be due to differences in sample selection and duration of the study. From the research, it is stated that the ROE has no significant effect on stock return. ROE cannot be used as a major benchmark in assessing the profitability of the company to increase stock returns since the coefficient of ROE is just 0.22%. This shows that the ROE only contributes a small consideration for investors in analyzing profit in an investment. Thus, investors still need to consider other factors in addition to ROE to be taken into consideration in predicting future stock returns.

4.3 Effect of Net Profit Margin (NPM) on stock return

Based on the test results in this study, Net Profit Margin has a probability value (p-value) of 0.0113 where the value is less than the significance level of 5% ($0.0113 < 0.05$). It can be concluded that H_0 is rejected. Thus, NPM has a significant effect on stock return of pharmaceutical industry. This result is consistent with research conducted by Asyik (2011). The higher net profit margin of a company, investors will receive the higher the level of income on their investment.

4.4 Effect of Gross Profit Margin (GPM) on stock return

Based on the test results of this study, Gross Profit Margin has a probability value (p-value) of 0.3065 where the value is more than the significance level of 5% ($0.3065 \geq 0.05$). It can be concluded that H_0 is accepted. GPM has no significant effect on stock return of pharmaceutical industry. In contrast to the result Asyik (2011) which states that the GPM has a significant effect to the stock return. This difference may be due to differences in sample selection and duration of that study. Before investing, investors still need to consider other factors in addition to GPM to

be taken into consideration in predicting future stock return, This is because GPM simply illustrates the gross profit that can be achieved in any sale of the company that have not been reduced by operating expenses, sales and marketing expenses, the tax burdens, and others.

4.5 The effect of inflation on stock returns

Based on the test results in this study, inflation has a probability value (p-value) of 0.8419 where the value is less than the significance level of 5% ($0.8419 \geq 0.05$). It can be conclude that H_0 is accepted, meaning that inflation has no significant effect on stock return of pharmaceutical industry. Inflation does not affect the pharmaceutical industry stock returns because there are other factors that affect stock return of pharmacy. This condition occurs because the Indonesian people's purchasing power to pharmaceutical products is not affected by the rise and fall of inflation. In addition, the pharmaceutical industry is an industry that supports BPJS program which is a national health insurance program commenced at the beginning of January 2014. It is evident that when there is inflation by an average of 6.42% in 2014, stocks of the pharmaceutical industry were still increasing. Thus, the inflation rate which is relatively high does not affect the decision of investors to invest in the pharmaceutical industry.

5. Conclusions and Recommendations

ROA and NPM partially have a significant effect on stock return of pharmaceutical industry. ROE, GPM and partially Inflation have no significant effect on stock return of pharmaceutical industry. Simultaneously, variable Return on Asset (ROA), Return on Equity (ROE), Net Profit Margin (NPM), Gross Profit Margin (GPM) and inflation have a significant effects on stock return of pharmaceutical industry.

Based on the results of the study, investors should look at ROA and NPM of the company's financial statements because they have the significant effect on stock return. The higher the ROA and NPM, it can be predicted that the stock return will be higher as well. For further research, it can be expanded the unit of analysis, added the study period, added independent variables and other indicators that are better able to explain stock returns. Next researchers can add internal factors such as financial ratios of liquidity, activity, solvency, and the ratio of market value. As for external factors, the interest rate, GDP, foreign exchange rates or other factors can be used as research variables.

References

- i. Arisandi, M. 2014. Pengaruh Roa, Der, Cr, Inflasi dan kurs terhadap return saham (Studi kasus industri makanan dan minuman yang terdaftar di BEI periode 2008-20). *Jurnal Dinamika Manajemen*, ISSN:2355-8148.
- ii. Asnita. 2013. Pengaruh Kinerja Keuangan Terhadap Harga Saham Pada Industri Farmasi Di Bei Periode 2008-2010. *Jurnal Dinamika Manajemen*, 2(1), ISSN: 2338 –123X.
- iii. Asyik, N. F., 2011. Reaksi Pasar Atas Variabel Makro dan Profitabilitas: Kajian Perusahaan di Bursa Efek Indonesia Terkategori Devensife dan Cyclical industry. *Ekuitas Akreditasi No.110/DIKTI/Kep/2009*. ISSN 1411- 0393
- iv. Brigham, E. F. & Houston, J. F., 2010. *Dasar-Dasar Manajemen Keuangan Edisi 11*. Jakarta: Salemba Empat.
- v. BUMN. 2014. *Mendongkrak daya saing Industri Farmasi Melalui Quadruple Helix*. Available at: <http://www.bumn.go.id/biofarma/berita/3182/Mendongkrak.Daya.Saing.Industri.Farmasi.Melalui.Quadruple.Helix> (Accessed Oktober 26, 2015)
- vi. Carlo, M. A., 2014. Pengaruh Return On Equity, Dividend Payout Ratio, Dan Price To Earnings Ratio Pada Return Saham. *E-Jurnal Akuntansi Universitas Udayana*, 7(1), ISSN: 2302 –8556.
- vii. Darsono. 2009. *Manajemen Keuangan Pendekatan Praktis*. Jakarta: Nusantara Consulting.
- viii. Dermawan. 2012. *Pengantar manajemen keuangan*. Jakarta: Mitra Wacana Media.
- ix. Infovesta. 2015. *Industri farmasi bisa raih penjualan US\$6 M*. Available at: <http://www.infovesta.com/infovesta/news/readnews.jsp?id=9536e21f-2df4-4575-a9ef-db8fod35df06> (Accessed Agustus 26, 2015)
- x. Iskandar, M., 2013. *Pengantar Ilmu Ekonomi*. DEEpublish. Naglik Sleman.
- xi. Kasmir. 2010. *Pengantar Manajemen Keuangan*. Jakarta: Kencana.
- xii. Liputan6. 2013. *Meneropong Prospek Kalbe Farma di Antara Saham Farmasi*. Available at: <http://bisnis.liputan6.com/read/706989/meneropong-prospek-kalbe-farma-di-antara-saham-farmasi> (Accessed Oktober 29, 2015)
- xiii. Meythi, En, T. K. & Rusli, L., 2011. Pengaruh Likuiditas dan Profitabilitas Terhadap Harga Saham Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia. *Jurnal Bisnis Manajemen dan Ekonomi*, 10(2), pp. 2671-2684, ISSN:1693-8305.
- xiv. Munjin, A., 2015. *Inilah Target Harga Saham Farmasi Akhir Tahun 2014*. Available at: <http://m.inilah.com/news/detail/2132062/inilah-target-harga-saham-farmasi-akhir-2014> (Accessed Oktober 29, 2015)
- xv. Nasrul, E., 2015. *Desember 2014, Inflasi Melebihi Perkiraan BI*. Available at: <http://republika.co.id/berita/ekonomi/keuangan/15/01/04/nhmz04-desember-2014-inflasi-melebihi-perkiraan-bi> (Accessed September 27, 2015)
- xvi. Nurfitriani, A. 2014. *BPJS dan MEA 2015 BuatPasarFarmasiMasihMenjanjikan*. Available at: <http://wartaekonomi.co.id/berita30635/bpjs-dan-mea-2015-buat-pasar-farmasi-masih-menjanjikan.html> [September 03, 2015]
- xvii. Prihadi, T., 2010. *Analisis laporan keuangan teori dan aplikasi*. Jakarta: PPM.

- xviii. Riantani, S. & Tambunan, M., 2013. Analisis Pengaruh Variabel Makroekonomi dan Indeks Global terhadap Return Saham. *Seminar Nasional Teknologi Informasi & Komunikasi Terapan 2013*, 3(1), pp. 532-537. ISBN: 979-26- 0266-6.
- xix. Rosadi, D., 2012. *Ekonometrika & Analisis Runtun Waktu Terapan*. Yogyakarta: Andi.
- xx. Royan, A., 2014. *Mari Intip Saham Sektor Konsumsi Yang Menarik*. Available at: http://www.seputarforex.com/analisa/lihat.php?id=208100&title=mari_intipsaham_sektor_konsumsi_yang_menarik (Accessed Agustus 31, 2015)
- xxi. Rusliati, E. & Fathoni, S. N., 2011. Inflasi, Suku Bunga Deposito dan Return Pasar Terhadap Return Saham pada Industri Barang Konsumsi yang Terdaftar di BEI 2006-2009. *Jurnal Bisnis dan Akuntansi*, 13(2), pp. 107-118.
- xxii. Safitri, O. et al., 2015. Analisis pengaruh profitabilitas, likuiditas, dan leverage terhadap return saham Pada perusahaan manufaktur yang terdaftar di bei tahun 2009-2013. *E-journal S1 Ak Universitas Pendidikan Ganesha*, 3(1), Tahun2015.
- xxiii. Setiawan, D. E. K., 2010. *Ekonometrika*. Yogyakarta Sjahrial: Andi.

