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COMPANY'S FINANCIAL PERFORMANCE ANALYSIS BY USING DUPONT SYSTEM METHOD AT PHARMACEUTICAL COMPANY LISTED ON INDONESIA STOCK EXCHANGE: A STUDY AT PT MERCK TBK OVER THE PERIOD 2012-2016

Husaini Achmad, **Supriono**, **Firmansyah Alif Iqbal***
Faculty of Administrative Science, University of Brawijaya, Malang
*E-mail: iqbalalif15@gmail.com

ABSTRACT
Every company really competes against other companies, especially the common one. It needs to develop many things related to the company's performance that the company is able to compete or even have a better performance than another one. One of the aspects to assess the company's performance is through financial performance. Return on Investment and Return on equity is a point rated good by investor or internal company as a benchmark of company's good or bad. As with the DuPont system that becomes one of the measurement methods of a company's financial performance. The ROI and ROE of PT Mercks decreased in 2013-2016 so that needs to observe by using DuPont System analysis. This research aims to determine the company's financial performance with DuPont analysis method. This was a descriptive research with a quantitative approach. Data collection method used in this research was documentation technique. An analysis used in this research was tendency analysis and time series analysis. The result of this research is: (1) profitability analysis shows the downtrend; (2) activity ratio shows fluctuation trend; (3) liquidity ratio shows fluctuation trend, and (4) solvability ratio shows fluctuation trend that tends to decrease.

KEY WORDS
Financial performance analysis, return of investment, return on equity, DuPont system.

Financial performance measurement can be done by an analysis commonly called financial report analysis. “Financial report analysis itself comprises a study of a relationship and tendency or trend to determine whether financial condition, business results and company's financial improvement satisfy or not” (Djarwanto, 2011). Through financial statement analysis, a company is able to understand performance development and to serve as a basis of decision-making. In addition, management side can understand abilities that can be maximized by a company to make its competitiveness is getting more increase, the company is also able to understand weaknesses that later will be used as an improvement.

Data required to make a financial analysis derives from a balance sheet and profit and loss available in the financial statement. Any measurement frequently used to make financial analysis is a financial ratio. Financial ratio analysis is “An analysis method to notice the relationship of particular posts in the balance sheet or profit and loss report individually or jointly from those two reports” (Munawir, 2012).

A company is able to conduct financial performance measurement by using financial ratio, with the focus on the calculation of Return on Investment (ROI) and Return On Equity (ROE) because “The Calculation of ROI and ROE can be seen how much the effectiveness of efficiency of a company's financial performance” (Munawir, 2011:89). The calculation of ROI and ROE in the profitability ratio is used to measure financial performance using DuPont System method. “DuPont System method is actually almost same as a common financial statement analysis, but the approach is more integrative and using financial statement composition as an element of its analysis” (Djarwanto: 2011).

The result of DuPont System from ROI resulted from the multiplication between profit and sales components (profitability ratio) and the efficiency of the total asset (activity ratio). DuPont System is able to gain benefit to the assessment of a company's financial performance because DuPont System can wholly illustrate financial performance result at a

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company. DuPont System method combines activity ratio/asset circular with profit ratio/profit margin over the sales and shows how both interact in determining Return on Investment (ROI).

Actually, DuPont System is a whole relationship among ratio that combines data from the balance sheet and the calculation of Profit and Loss into the summary of capability measurement tool generating profit (profitability), which is ROI. The size of pharmaceutical industry development in Indonesia is due to the influence of competition among sectors in creating a new innovation which is more quality. The intended pharmaceutical industry is PT Kalbe Farma Tbk, PT Merck Tbk, PT Pyramid Farma Tbk, PT Darya-Varia Laboratoria Tbk, PT Tempo Scan Pasific Tbk, and PT Kimia Farma Tbk. Based on the matter so can be evaluated the performance condition of company's financial that can be found the strength and the weakness in a financial performance which will help to improve company's performance in the future.

An implication which is able to give to the company is to make it able to maintain the good condition and try to increase sales and handle company's cost. Therefore, the profits made will later improve and impact on a better company's performance. DuPont System is a method used to assess the effectiveness of a company's operational since this analysis covers the element of sales and assets used and the profits generated by the company.

LITERATURE REVIEW

Company's Financial Condition. Through his book, Jumingan (2005) explained that financial performance is an illustration of a company's financial condition at a particular period involving both the aspect of fund collection and fund channeling, commonly measured by the indicator of capital sufficiency, liquidity, and profitability. Rudianto (2013) explained that financial performance is the result or achievement that has been held by the company's financial management in running its function to manage the company's asset effectively during the particular period. Financial performance is very needed by a company to determine and evaluate how far the level of company's success based on the activity that has been done.

Financial Statement Analysis. James C Van Horne (in Kasmir, 2008) explained that "The definition of a financial ratio is an index that connects two numbers of accounting and obtained by dividing one number with another". However, based on Jumingan, financial ratio analysis is "An analysis by comparing one post of a report with another one, both individually and jointly to know the relationship between a particular post, either in the sheet balance or in the profits and loss report" (Jumingan, 2006).

Liquidity Ratio. "A ratio to measure company's ability in paying for short-terms obligation or the debt comes due when billed wholly. A common standard of industrial average is minimum 200% (2:1) or two times, which means such ratio will make a company to feel in the safe position even in a short term.

$$\textit{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \times 100\%$$

"Quick Ratio is ratio that shows company's ability to fulfill or pay its obligation of current liabilities (short-term debt) with current asset without considering inventory. A common standard of industrial average is 150% or 1.5 times by which company's condition is better than another. This condition shows that the company does not have to sell the stock if want to pay off current liabilities, but can sell securities or action of debt" (Kasmir, 2008).

$$\textit{Quick Ratio} = \frac{\text{Cash + Debt + Securities}}{\text{Current Liabilities}} \times 100\%$$

"A ratio used to measure how much cash available to pay the debt. A common standard of industrial average for cash ratio is 50% or 0.5 times where company's condition

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is better than another one. However, cash ratio condition which is too high is also less good because there are unemployed funds or not utilized optimally. On the other hand, if the cash ratio is under industrial average, a not good condition of cash ratio is because to pay obligation still needs time to sell part of another current asset" (Kasmir, 2008).

$$\textit{Cas Ratio} = \frac{\text{Cash and Cash equivalen}}{\text{Current Liabilities}} \times 100\%$$

Activity Ratio. "It is a ratio to measure how long collection of receivables over the one period or how many times funds planted in these receivables rotates in one period. A common standard of industrial average for receivable turnover is 15 times. The higher the ratio, the lower the working capital planted in this debt and actually this condition brings a company to have a better condition. On the contrary, if the ratio is getting lower, there is over-investment in a debt" (Kasmir, 2008).

$$\textit{A/R Turnover} = \frac{\text{Sales (credit)}}{\text{Debt Average}} \times 1 \text{ time}$$

Total Asset Turnover (TATO). "Measuring the turnover of all assets owned by a company and how much sales total obtained from each rupiah of assets. A common standard of industrial average for this ratio is 2 times, if under standard means the company is not able to maximize assets owned and the company is expected to increase its sales or decrease several assets which are less productive" (Kasmir, 2008).

$$\text{TATO} = \frac{\text{Sales}}{\text{Total Assets}} \times 1 \text{ time}$$

Fixed Assets Turnover. Fixed Assets Turnover is a ratio used to measure how many times funds planted in fixed assets circulates in one period. In other words, to measure whether a company has already used fixed assets capacity fully or not. To find this ratio, it has to compare net sales and fixed assets in one period. An industrial standard for this ratio is 5 times (Kasmir, 2012).

$$\textit{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Total Fixed Assets}} \times 1 \text{ time}$$

Inventory Turnover. Kasmir explained, "Inventory turnover is a ratio used to measure how many times funds planted in this inventory circulate in one period. An industrial standard for this ratio is 20 times." Kasmir (2013).

In addition, Harahap (2009) proposed that "inventory turnover shows how quick inventory turnover is in the normal production cycle". Inventory turnover can be calculated by this formula:

$$\textit{Inventory Turnover} = \frac{\text{Sales}}{\text{Inventory}} \times 1 \text{ time}$$

Profitability Ratio of Gross Profits Margin. "Gross Profits margin shows a relative gross to the company through reducing net sales by cost of goods sold. This ratio is a method to determine cost of goods sold. A common standard of industrial average for marginal profit is 30%, if above the average so the gross margin of a company is good" (Kasmir, 2008).

$$\text{EPS} = \frac{\text{Total Net Profit}}{\text{Tottal Issued Stock}} \times 100\%$$

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$$\textit{Gross Profit Margin} = \frac{\text{Gross profit}}{\text{Sales}} \times 100\%$$

Net Profit Margin. “Net profit margin is a profit measurement by comparing profit after and before tax and sales. This ratio shows the company’s net profits of sales. A common standard of industrial average for net profit margin is 20%, if it is under average so company’s profit margin is good and vice versa” (Kasmir, 2008).

$$\textit{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales}} \times 100\%$$

Return on Investment (ROI). “A ratio that shows the result of total assets used in the company. ROI is also a measurement of management activity in managing its investment. A common standard of industrial average is 30%. If it is under the average so that the company’s condition is good and vice versa” (Kasmir, 2008).

$$\text{ROI} = \frac{\text{Net profit (EAIT)}}{\text{Total Asset}} \times 100\%$$

Return on Equity (ROE). “ROE is a ratio to measure net profits after paying tax with self-funded. The higher the ratio, the better the ROE.

$$\text{ROE} = \frac{\text{Net profit (EAIT)}}{\text{Total Equity}} \times 100\%$$

Company’s owner position is getting higher and vice versa. A common standard of industrial average for ROE is 40%” (Kasmir, 2008).

Earning per Share (EPS). “EPS also known as book value ratio is a ratio to measure management’s success in achieving profits for a shareholder. A low ratio means the management does not succeed yet to satisfy the shareholder, in contrary, the high ratio will increase shareholder’s welfare. In other words, rate of return is high” (Kasmir, 2008).

Solvability ratio (leverage). “A debt ratio is used to measure comparison between total debt and total assets. If the ratio is high, the funding and the debt is getting higher, which means it would be more difficult for the company to obtain the loan because feared the company is not able to cover its debt with the assets owned. The lower the ratio, the smaller the possibility of a company to be financed with debt. Measurement standard of industrial average is 35%” (Kasmir, 2008).

$$\textit{Debt To Total Asset} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\%$$

“Debt to equity ratio is a ratio used to assess debt with equity. A common standard of industrial average is 90%, if under the average, the company is considered mediocre” (Kasmir, 2008). The following is the formula of Total Debt to Equity:

$$\textit{Total Debt To Equity} = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\%$$

DuPont System. As one of the tools to measure performance interactively, based on Djarwanto, DuPont System is actually almost same as the analysis of a common financial statement, but its approach is more integrative and uses a composition of the financial statement as its analysis element. Financial statement analysis of DuPont System is meant to show the relationship between "Return on Equity (ROE)", "Return on Investment (ROI), "Profit Margin (NPM)", and "Assets Turnover (TATO)" (Djarwanto, 2010).

Later on, Gitman and Zutter argued that DuPont analysis system is used to dissect the company's financial statement and assess its financial condition. The method is by combining profit and loss report and balance sheet into two measurement results, i.e. ROA (Return on Assets) and ROI (Return On equity) (Gitman and Zutter, 2012).

Next, Keown concludes that DuPont Analysis is an approach to evaluate profitability and rate of equity return (Keown, 2011).

METHODS OF RESEARCH

This was a descriptive research with a quantitative approach. This study was conducted at PT Merck Tbk listed on Indonesia Stock Exchange over the period 2012-2016. This research and the secondary data was conducted and collected at Investment Galery of Faculty of Economy and Business Brawijaya University Malang located at MT. Haryono 165 street, Malang. This research focuses on:

- Financial statement of PT Mercks Tbk over the period 2012-2016 to commonly notice the tendency of financial statement;
- Financial ratio used to calculate DuPont System method for PT Mercks Tbk over the period 2012-2016;
- Calculation method of DuPont System.

RESULTS AND DISCUSSION

Company's financial statement assessment actually uses financial ratio analysis and Du Point System. Those two methods jointly analyze ROI and ROE focusing to assess a company's financial performance that to achieve a good result. A common way frequently used by a company in assessing performance is financial ratio including liquidity ratio, leverage ratio, activity ratio, and profitability ratio.

In a financial ratio, the result presented will be served as an illustration of how good the performance of PT Meck Tbk and in the future can be used by the management as the reference in the decision-making. If compared to the DuPont System, it more provides structured information, accurate calculation, able to know the cause and effect and provide methods to improve financial performance of PT. Merck Tbk. The result of ROI and ROE from those two methods indicates an almost similar value, but obtained with different method. *DuPont system shows how NPM and TATO, as the determinant of ROI result and the result of ROI then combined with DR, will determine the ROE result. The following is the summary of those two analysis method explained by that calculation.*

Table 1 – The Summary of Financial Ratio Result and DuPont System PT. Merck Tbk over the period 2012-2016

n/n		Year		
		2012	2013	2014
Liquidity Ratio	*CURRENT RATIO*	387.12%	397.95%	458.59%
	QUICK RATIO	188.86%	229.28%	317.07%
Activity Ratio	TATO	1.63	1.71	1.20
	FATO	8.81	10.98	7.12
	ITO	3.91	4.79	4.70
Profitability Ratio	NPM	11.59%	14.69%	21.02%
	ROI	18.93%	25.17%	25.32%
	ROE	25.87%	34.25%	32.78%
Solvability Ratio	DAR	26.81%	26.51%	22.73%
	DER	28.75%	28.86%	23.45%
Dupont System	ROI	18.89%	25.12%	25.22%
	ROE	29.82%	39.29%	35.74%

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n/n		Year		An average from 2012-2016
		2015	2016	
Liquidity Ratio	*CURRENT RATIO*	365.22%	421.66%	406.11%
	QUICK RATIO	243.56%	229.98%	241.75%
Activity Ratio	TATO	1.53	1.39	1.49
	FATO	6.23	4.40	7.51
	ITO	6.10	4.48	4.80
Profitability Ratio	NPM	15.13%	14.88%	15.46%
	ROI	23.19%	20.69%	22.66%
	ROE	31.43%	26.42%	30.15%
Solvability Ratio	DAR	26.20%	21.68%	24.79%
	DER	27.07%	20.70%	25.95%
Dupont System	ROI	23.15%	20.68%	22.61%
	ROE	35.89%	28.60%	33.87%

Source: Data processed, 2018.

From that summary, it can be known that the difference of calculation result between financial ratio and the DuPont system is only a little. If rounded off, the value indicated will be the same. DuPont analysis can enlarge profitability analysis, especially on ROI and ROE value. Based on the result of financial ratio calculation or DuPont system, the achieved ROI tends to decrease and also the company's ROE tends to be fluctuating. In the DuPont System calculation, ROI increases when the value of NPM and TATO also increases as in 2013. The increase result of ROE is due to the ROI value increasing too. The higher the ROI value, the higher the ROE value. The ROE measured with profitability ratio shows net profit generated by self-funded invested in the company, while the ROE measured by DuPont system gives some benefits, which is able to directly see factors that influence ROE, i.e. NPM, TATO, and the use of DR to change ROI into ROE that reflects the influence of leverage of the return gained from company's owner.

If only calculated from financial the analysis ratio, the financial performance analysis is not sufficient since its assessment only focuses on the bad or good condition of a company. The use of Dupont System analysis by the management is able to enlarge analysis and improve the company's performance. It is known that there is an ROI decrease in 2015 and 2016 due to the result of NPM decreases. That matter is due to the company's financial crisis, net income decrease (caused by the increase of total HPP, operational cost, and tax increasing compared to the sales increase in that year).

Based on the research result, it can be known that the financial ratio analysis and DuPont system can provide an illustration of the financial performance of PT Merkc Tbk that deals with fluctuation condition whose meaning is good enough. Using those two methods is able to help management to notice financial condition covering liquidity level, activity, profitability, leverage, and provide methods to improve company performance that able to achieve value targeted by a company in obtaining profits.

If reviewed from the financial ratio analysis, the ratio that generates a good performance is at the ratio of liquidity and leverage, while the ratio of profitability and activity shows a less maximum result. The result of profitability ratio shows that a company is still able to manage asset to generate profits to the company's owner. Later on, activity ratio indicates that a company never achieved maximal sales rate and costs that are not pressured as maximum as possible that the matter impacts on the net profits owned by a company.

In terms of assessing the company's financial performance, DuPont System usage helps the management to know the condition of a company wholly, structured, and shortly and able to give an improvement method. The result of DuPont System is not fatherly different from the financial ratio. It is only there is a difference of obtaining the result of ROI and ROE by combining NPM, TATO, and DR.

CONCLUSION

Financial ratio calculation of PT Merck Tbk over the period 2012-2016 was conducted by Trend and Time Series Analysis including four financial ratios, i.e. liquidity ratio, activity, profitability and leverage. Reviewed from the analysis of financial ratio, the result of a good company's financial result is the ratio of liquidity and leverage, while the ratio of profitability and activity indicates a less good result.

- Liquidity ratio from 2012-2016 shows a fluctuating trend. Even though it decreased in 2015, but it increased in the previous year. It was due to the current asset's rate which was getting low in 2013-2016. In addition, the company faces over liquid due to exceeding the standard of liquidity ratio at the quick ratio and cash ratio.
- Company's activity ratio from 2012 until 2016 shows a fluctuating tendency trend by which a company still cannot afford a maximal sales return and the fund allocated is not emphasized as maximal as possible so that the net profits obtained by a company is not maximal.
- Profitability ratio from 2012 until 2016 shows trends that tend to decrease. That matter is seen from the value of ROI and ROE that faces decrease so that the condition shows that the company is not able yet to manage asset to give profits to the company owner well.
- Leverage/solvability ratio in 2012-2016 shown that fluctuating trend decreases. This condition shows that the company's obligation adds more. That calculation result concludes that the company's performance in the assets management influenced by debt can be said good enough because the debt ratio obtained is low enough.

The calculation result of several ratios above can be concluded that financial performance of PT. Merck Tbk over the period 2012-2016 in a good enough condition although dealing with fluctuation.

From the analysis result of DuPont System, financial performance development of PT Merck Tbk over the period 2012 until 2016, considered from ROE achievement, faces fluctuation that tends to decrease which almost of them are influenced by ROI rate (NPM and TATO) resulted. The decrease of leverage level gives a positive influence for PT Merck Tbk because that decrease raises company's ROE value periodically. It can be concluded that company's financial condition is good enough.

Based on the acquisition of ROI and ROE, the use of financial ratio analysis results in a higher value compared to the analysis of DuPont System at ROI value. However, the use of DuPont System can provide a proper improvement method for a company.

SUGGESTIONS

PT Merck Tbk must be able to maintain the rate of liquidity and leverage that the company will not find difficulty in paying off debt due date. The increase of liquidity ability should not make creditor worry to trust its fund, while the investor party should not too worry in investing at the company.

The company has to be able to decrease values that influence profitability ratio fluctuation. Because profitability ratio is a center of DuPont System analysis which there is ROI and ROE inside. Somethings that influence the decrease of ROI and ROE level must be decreased that company performance would be good. In addition, an income made by investor also will increase.

Activity ratio that tends to decrease is due to the cost which has to pay attention too. Because this ratio influences income. A company which is able to manage expenditure or business expense well so can be ensured that the income obtained by the company will too.

The sales increase is one of the solutions that can be done by a company that the income will increase too, and also the value of liquidity ratio can more balance due to the capital used is more liquid and not over liquid.

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REFERENCES

1. Gitman, J. L., and Chad, J. Z. (2012). Principle of Manageria Finance (13th Ed). England: Pearson.
2. Harahap, S. S. (1998). Akuntansi Islam. Jakarta: Bumi Aksara.
3. Harahap, S. S. (2007). Analisa Kritis Atas Laporan Keuangan. Jakarta: Rajawali Pers.
4. Harahap, S. S. (2009). Teori Kritis Laporan Keuangan. Jakarta: Bumi Aksara.
5. Jumingan. (2006). Analisis Laporan Keuangan. Jakarta: PT Bumi Aksara.
6. Jumingan. (2011). Analisis Laporan Keuangan. Jakarta: Bumi Aksara.
7. Keown, et al. (2011). Prinsip dan Penerapan Manajemen Keuangan. Jakarta. Indeks.
8. Kasmir. (2008). Analisis Laporan Keuangan. Jakarta: Rajawali Pers.
9. Kasmir. (2011). Analisis Laporan Keuangan. Jakarta: Raja Grafindo Persada.
10. Kasmir. (2012). Analisis Laporan Keuangan. Jakarta: Raja Grafindo Persada.
11. Margaretha, F. (2005). Teori Aplikasi Manajemen Keuangan Investasi dan Sumber Dana Jangka Pendek. Jakarta: Gramedia Widiasarana.
12. Munawir. (2007). Analisis Laporan Keuangan. Yogyakarta: Liberty.
13. Munawir. (2012). Analisa Laporan Keuangan. Yogyakarta: Liberty.
14. Rudianto. (2013). Akuntansi Manajemen Informasi untuk Pengambilan Keputusan Strategis. Jakarta: Erlangga.