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Economic Value Added (EVA): A Better Performance Indicator- The Case Study of Square Pharmaceuticals Limited

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Abstract: *Economic Value Added (EVA) attempts to understand whether a business creates sufficient surplus to cover the cost of its capital or to fulfill the shareholders expectation into value creation. The concept of EVA is better than that of the concept of accounting profit as a tool of value creation because it considers the overall cost of capital. The purpose of this study is to examine and analyze the financial performance of Square Pharmaceuticals Limited (SPL) on the basis of traditional measurement tools like ROCE, ROE, EPS etc and the new performance measure EVA. The study also includes the empirical findings of a few research work done on the theoretical relationship of EVA to other financial fundamentals. Finally, the study findings that the relationship between ROCE and EVA highly positive correlation and the traditional performance indicate are showing high value compared to EVACE.*

Keywords: *Economic Value Added, Financial Performance Cost of Capital.*

2. Introduction:

Economic Value Added (EVA) measures the profitability of a company after considering the cost of all capital employed including the equity. It is an estimate of business's true economic profit for the year and it differs sharply from accounting profit. EVA is the post tax returns on capital employed (operating profit less company tax) in the business less the cost of capital employed. It also represents the value added to the shareholders by generating operating income in excess of the cost of capital employed in the business. In other words if the EVA is positive the business is taken to have generated wealth in excess of what is expected by the shareholders and vice versa, but if the figure of EVA for a year drops to zero or turns negative this indicates that the shareholders expectations have not been met by the company. Management scholar Peter Drucker introduced 'EVA is based on something we have known for a long time: what we call profits, the money left to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind it pays taxes as if it had a

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genuine profit. The enterprise returns less to the economy than it devours in resources until then it does not create wealth, it destroys it'. The shareholder value measures which the company has added with the help of EVA, the manager will help to ensure that they operate in a manner that is consistent with maximizing shareholder wealth.

3. Objectives:

The objectives of the study are as follows:

i) To examine whether the Square Pharmaceuticals Limited (SPL) has been able to generate value for its shareholders.

ii) To compare the performance of the company applying traditional techniques such as ROCE, EPS and ROE with the EVA.

iii) To find out the relationship between ROCE and EVA as a percentage of Capital Employed (EVACE).

4. Scope:

The scope of the study was confined to one pharmaceutical company Square Pharmaceuticals Limited (SPL) of Bangladesh and selected data from the annual reports from 2005-2006 to 2009-2010. The reasons for selecting SPL was the consideration that it would fully represent the picture of all pharmaceuticals company in Bangladesh and be homogeneous in terms of location and establishment in the pharmaceutical industries.

5. Methodology:

The study consists of a type of empirical research and a literature survey. The empirical research work in this study is based on the secondary information collected from the published annual reports of SPL for the periods 2005-06 to 2009-10.The literature provides description of some interesting comments by few authors. The study involves an examination of financial performance of the company analyzed by making a use of some traditional measurement tools such as Return on Capital Employed (ROCE), Earning Per Share (EPS) and Return on Equity (ROE). In our study statistical techniques of co-efficient of correlation and Regression analysis has been used to the value of EVACE and ROCE. Referring to variables are used also non-parametric tests or distribution free test of hypothesis. The Chi-square test of goodness fit have also been applied to test weather there is a significant difference between observed and estimated values of EVACE.

The null hypothesis (Ho) that, there is no significant difference between observed and expected values of EVACE.

The value of α, the level of significance for the testing of hypothesis is 0.05.

6. EVA: Some theoretical issues:

The EVA is not a new concept, the idea has been around for about100 years (M. Thenmozhi, 1999). The EVA was developed and trade marked EVA® by financial consultants, Stern Stewart Consulting Co. in 1983 (Gitman, 2004). EVA is easy to understand and measure that recognizes improvement in earning to the extent this exceeds the cost of the capital employed to secure it. EVA has become a very popular tool for measuring performance because the application of it has some powerful impacts on organizational behavior.

The EVA is the residual income with the company after charging for the cost of capital provided by lenders and shareholders (K. Sharma, 2000. Van Horne, 2005).

The EVA represents “real” profit and provide a more accurate measure than accounting profits over time, It also has better correlation with stock prices than earning per share (EPS). (Gitman, 2004).

“As a measure of performance, EVA comes too closer than any other tool to represent the true economic profit of an enterprise. It is directly linked to the creation of the shareholders wealth over time. EVA based financial management and incentive system gives manager superior information and motivation to make decisions that will create the greatest shareholder private enterprise”-(Stern, J,1990).

“We like to invest in companies that use EVA and similar measures. Making higher return than the cost of capital is how we look at the world” (Vessel, E.1993).

“EVA is a powerful new management tool that has gained growing international acceptance as the standard of corporate governance. It serves as the centerpiece of a completely integrated framework of financial management and incentive compensation (Steart, and Benett, G. 1994).

“The EVA approach revealed many insights about the performance of business units which had been unnoticed or obscured by the more traditional measures of profit growth, profit margin, revenue growth and EPS growth (Ruggier, A.W. 1996).

EVA measures the required economic return on all invested capital. It makes you to invest in positive spread projects, and it gets you to eliminate operations though the return is negative. It gets management to think about how you manage the capital in the business” (Jackson, A. 1996).

“Godrej company fully captivated by EVA for the reasons , they are benefited of EVA as management, improvements in capital efficiency, greater focus on tax optimization, greater focus on optimal capital structure, improved strategic and scenario planning, and more robust acquisition analysis tools” (Dusgupta, A. 2002).

“The Godrej company adopted EVA for four reasons to improve capital efficiency and overall business performance, ii) To encourage greater owner-like and entrepreneurial behaviour among employees, iii) To reduce the “hockey-stick” feature in corporate plans and budgets (i.e. to even out performance) and iv) to avoid “undesirable behaviours” seen in the previous multi-step variable bonus plan” (Godrej, Adi. (2002).

The literature shows that, EVA has been used to measure shareholder value of the firm, to determine how stocks will perform in the future, for valuing companies at the time of takeover, to evaluate returns from projects, to design EVA based incentive compensation and bonus scheme and even assess the achievement of the strategic goal of a company.

7. Square Pharmaceuticals Limited as a Case:

EVA measures corporate performance in terms of change in value. The term “maximizing value” in the EVA context, refers to maximizing long term yield on shareholder investment. The financial performance of SPL is one of the largest business conglomerates of Bangladesh. Stewart defines EVA as the surplus of net operating profit after tax (NOPAT) after adjusting for coat of capital cost.

EVA= NOPAT- Capital Cost

Where capital cost = Cost of capital X Equity capital.

The cost of equity capital (COE) is calculated by using the following formula:

$$COE = \frac{\text{Dividend per share}}{\text{Market value per share}} + \text{Retention ratio X ROE}$$

It is evident from the Table-1 that the EVA statement of SPL for five year from 2005-2006 to 2009-2010 the absolute figures of EVA continuously marked an increasing trend during the period of study.

Table -1
Economic Value- Added Statement

Year ended 31st March	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
1. Capital employed	6402	7333	8417	9949	11554 (Tk. in Million)
2. Cost of equity	13.52	13.73	13.68	13.62	13.64
3. PAT as a percentage of average	18.20	17.77	16.41	18.99	18.07 capital employed (%)
4. Economic value-added (EVA)					
Operating Profit	1533	1722	1868	2511	2825
Less: Tax	368	419	487	621	738
Less: cost of capital	865.55	1006.82	1151.44	1355.05	1575.96
Economic value-added	299.45	296.18	229.56	534.95	511.04
5. EVA as a percentage of average capital employed (%)	4.68	4.04	2.73	5.38	4.42

Source: Annual reports and Accounts of Square Pharmaceuticals ltd. 2005-2006 to 2009-2010.

Regression analysis and Chi-square test:

Statistical techniques of correlation and regression equation have been used for the purposes of analysis whether Return on Capital Employed (ROCE) and the EVA as a percentage of Capital Employed (EVACE) have any relationship between ROCE and EVACE. The co-efficient of correlation (using Karl Pearson's Co-efficient correlation) between ROCE and EVACE come to 0.99, which indicates that both ROCE and EVACE have a high degree of positive correlation. On the other hand, relationship between EPS and EVA come to 0.87 which indicates high positive correlation. The co-efficient of correlation has been further extended to establish a cause and effect relationship between the two variables by using the technique of EVACE (Y) on ROCE (X) which comes to Y= 1.03722x-14.28946. The original value of EVACE and the estimated values of EVACE on the basis of above regression equation and also application of Chi-Square test are given below

Table-2
Original and Estimated values of EVACE and calculation of Chi-square

Year ended 31st December	Original Values(O)	estimated Values(E)	(O-E)	$(O-E)^2$	$\frac{(O-E)^2}{E}$
2005-06	4.28	4.59	+0.09	0.0081	0.001765
2006-07	4.04	4.07	- 0.03	0.0009	0.000221
2007-08	2.73	2.73	0.00	0.0000	0.0
2008-09	5.38	5.41	-0.03	0.0009	0.000166
2009-10	4.42	4.45	-0.03	0.0009	0.000202
Total	21.25	21.25	$\sum \frac{(O-E)^2}{E}$	= 0.002354	

In testing hypothesis stating the problem symbolically, Ho: there is no significance difference between original and estimated values of EVACE, which is null hypothesis & the level of significance for testing hypothesis 5%. On the above table it is clear that the original and estimated values of EVACE moved in a very narrow range. The difference between original and estimated values varied in a positive direction only the year of 2005-2006 while the difference varied in negative direction during the year 2006-2007, 2008-2009 and 2009-2010. The calculated value has Chi-Square 0.002354 less than the Table value of Chi-Square 9.49 at 5% level of significance for four degree of freedom. Hence the null hypothesis (Ho) is accepted which means the difference between original and estimated values are insignificant and they have arisen due to sample fluctuations only.

Comparison of EVA with EPS, ROE and ROCE:

A comparison of EVA with the traditional measures of shareholder's value of SPL is shown in the Table # 3. The financial performance of SPL a front line pharmaceuticals company of our country based on traditional parameters and EVA the data retaining five financial years between 2005 and 2010.

Table -3

Traditional versus EVA performance indicator of Square Pharmaceutical ltd

Year ending 31st March	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006
ROCE (%)	24.45	25.24	22.19	23.48	23.95
ROE (%)	18.07	18.99	16.41	17.77	18.20
EPS(Tk.)	165.46	136.4	101.1	96.63	89.76
EPS Growth (%)	21.32	34.92	4.63	7.65	
EVACE(%)	4.42	5.38	2.73	4.04	4.68

Source: Annual reports of Square Pharmaceuticals ltd. for the periods 2005-2006 to 2009-2010.

It appears from the Table # 3 that both ROCE and ROE marked a fluctuating trend during past five years under study. ROCE was 23.95% during the year 2005-2006. It declined to 23.48% and 22.19% during the year 2006-2007 and 2007-2008 thereafter it increased 25.24% in 2008-2009, 24.45% in 2009-2010. Similarly, ROE also showed a fluctuating trend during the past five years and reduced to 17.77% during the year 2006-2007 as compared during the other years. But it shot up and reached to 18.99% the highest, during the year 2008-2009. On the other hand, EPS registered on upward trend except 2009-2010 during this period it was as high as tk. 165.46 and low as tk. 89.76 during the year 2005-2006. In the year of 2005-2006 EPS 89.76 which is less than EPS of 2006-2007 i.e. 96.63 but EVACE is higher in 2005-2006 than the year of 2006-2007.

8. Limitations of EVA:

In periodical performance measurement EVA can however in some occasions give misleading information because it suffers from the same shortcomings as accounting rate of return (ROI). EVA suffers from wrong periodisation, i.e., they underestimate the returns in the beginning and overestimate the returns at the end o the period of a project. Some growth phase companies are likely to have currently negative EVA although their rate of return would be good and their true long term share value added would be positive. That is the reason why EVA is also criticized as a short term measure. However in spite of these drawbacks, EVA seems to have importance for companies as a performance measure and control tool. Particularly, it is a simple measure aim of any given company, the increase or decrease in shareholder wealth. Maximum traditional performance measures like ROI is not theoretically in the line with maximizing the wealth of shareholders. Therefore, EVA is considered superior to conventional performance measures.

9. Conclusion:

The company has been successfully able to create value i.e. maximizing the wealth for its shareholders. The company's earnings are much higher than the over all cost of capital.

From the analysis the traditional performance indicators are showing quite high values of ROCE, ROE and EPS growth as compared to EVACE. It is observed that the traditional parameter indicates quite a rosy and healthy picture of the company during all five years of the study.

It is therefore, suggested that the companies must compute the publish EVA statistics also in their annual reports. The concept of EVA emphasizes quality of earnings and not just the quantity as it takes into account the overall cost of capital employed in the business including the cost of equity.

It is further concluded that ROCE, EVACE and EPS are highly positively correlated.

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