

# Impact of Operating Profit and Capital Charge on Economic Value Added and Analysing Market Value Added

Prof. Prayag Gokhale<sup>1</sup>, Ashwini Kamate<sup>2</sup>

<sup>1</sup>Assistant Professor Department of MBA, KLE Dr. MSSCET, Belgaum, Karnataka, India

<sup>2</sup>Student of MBA, Department of MBA, KLE Dr. MSSCET, Belgaum, Karnataka, India

**Abstract:** - This study examines the Economic Value Added (EVA) and Market Value Added (MVA) which are two different approaches. EVA is a measure of firm's profitable yield where it implied the gap between operating profits after taxes and total cost of capital. Since WACC takes care of financial costs of all sources of investor's funds in a corporate, it is spectacular that profits after taxes should be considered to quantify EVA. The approach of MVA quantifies the modification in the market value of the firm's equity capital with regard to equity fund. This consists of meaning, calculation and analysing of EVA and MVA in a sugar company.

**Key Words:** EVA, MVA NOPAT, Capital Charge

## I. INTRODUCTION

The study analyses the net operating profit after tax, cost of equity & cost of debt, and analyses of Economic Value Added and Market Value Added which emphasis on maximizing shareholders value of a firm and also measures the financial performance on company's share value. The fundamental economic principle in this technique is to verify whether the firm is gaining high rate of return on invested capital than the cost of capital (in terms WACC) if the result is positive, the management of company is adding wealth to the shareholders. On the other hand, if the Weighted Average Cost of Capital (WACC) is greater than the rate of earning, the operations of firm have deteriorated the current shareholders wealth.

The origin of EVA was introduced by Stern Stewart & Co in 1990's which was an American consulting company; this technique is based on the previous performance of the corporate-enterprise. Assessment of financial outlook is done through EVA, which all capital has a cost and that of gain is higher than the cost of capital which creates shareholder's value. According to Stewart "A company's EVA is the fuel that fires up its MVA" EVA is a measure of firm's profitable yield where it implied the gap between operating profits after taxes and total cost of capital. Since WACC takes care of financial costs of all sources of investor's funds in a corporate, it is spectacular that profits after taxes should be considered to quantify EVA.

The approach of MVA quantifies the modification in the market value of the firm's equity capital with regard to equity fund. This approach is only applicable to the firms which are listed in stock exchange hence it has limited application. If the result is positive, the company has produced shareholder's wealth and management is capable of creating a new value for owners. MVA shows the firm owners that a capacity of the management. In opposite if MVA is negative the capital invested is reducing due to this the company is not performing well which results into decline in the value of a firm.

While EVA is an accounting based quantifying term for the performance of the firm and MVA is market generated number. According to investor's perception MVA is the greater term of a company's performance.

EVA increases awareness of the efficient utilization of capital which finally produce shareholder value. It also used in analyzing equity securities and helps in communicate with shareholders and investors.

### Components of Economic Value Added

- Net operating profit after tax (NOPAT): NOPAT calculation is one of the essential steps in finding economic value added. This is firm's after tax operating profit for shareholders and debt holders.

- Weighted Average Cost of Capital (WACC) :WACC  

$$= \frac{\text{Total Cost}}{\text{Total amount of capital}}$$

WACC is the overall cost incurred by a firm for collecting capital through various sources of capital such as equity, debt and preference share capital. It is also known as minimum required rate of return on investment or hurdle rate of return. A company should explore projects which provide a return on invested capital which is greater than WACC to add wealth to its shareholders, investors as well.

- Cost of Capital :It is a cost incurred for raising capital for example interest in case of bonds, debentures, loans and dividend in case of shares.

Cost of equity formula

$$k_e = R_f + B(R_m - R_f)$$

Cost of Debt formula

$$K_d = \frac{\text{Total Interest Payment}}{\text{Total Amount of Debt}}$$

- **Capital Employed** :Capital employed is the total capital invested in company for the functioning of the business.

$$\text{Capital Employed} = \text{Equity} + \text{Debt}$$

- **Beta (B)**: Beta means security's price varies with regard to the market where as beta is a market risk of a firm which vary periodically based on market conditions. It is a technique of responsiveness of shares of firm due to changes in economic factors of the economy. Thus it is market sensitivity. Beta value if it is less than one it indicates that investment has lesser volatility, if the value is equal to one then investment does not have any variations and if the value is more than one then it have higher volatility in its investment.
- **Risk-free Rate of Return (Rf)** : The investor expect a rate on his investment without any risk of losing money invested by him where as the zero risk is not possible in practice but it is available only in theoretical aspects. Shareholders do not want to take additional risk. But every investment carries a small amount of risk.
- **Market Return (Rm)** :Market Return is the market portfolio that includes all the assets and having weighted value of portfolio.

*Components of Market Value Added.*

"MVA = Market value of Firm's equity - Equity capital investment.".....eq. 2.5

- Market value of firm's equity is estimated by multiplying outstanding shares with the share's market price.
- Equity capital investment: It is the company's invested capital in equity. If company have invested in preference shares then that is to be added to the invested capital to subtract from the market value of firm's equity.

*Objectives*

- To analyze the net operating profit after tax of Sugar industries in North Karnataka
- To analyze  $k_e$  (cost of equity) &  $k_d$  (cost of debt)

- To indicate the value formed by a firm that will indicate the wealth creating ability of the firm to its shareholders.

## II. METHODOLOGY

The data is collected through secondary data. Sugar industry's financial statements are collected. For analysing the data a statistical tool MS Excel is used.

## III. RESULTS

- Table Number 1: Calculation of Net Operating Profit after Tax (NOPAT) (Rs. In Millions)

Particulars	2015-16	2016-17
Sales	59873	78921.39
Less: Operating Cost	64077.21	80919.47
	-4204.21	-1998.08
Add: Exceptional Items	0	0
Profit before Tax	-4204.21	-1998.08
Less: Tax		
Current Tax	0	0
Deffered Tax	-1423.01	-759.28
<b>Net Operating Profit After Tax(NOPAT)</b>	<b>-2781.2</b>	<b>-1238.8</b>

**Interpretation:** The above table shows NOPAT for the year 2015-16 is (2781.2) (Rs. In Millions) but later there is a reduction of losses in 2016-17.

- Table Number 2: Calculation of Cost of Equity.

Particulars	2015-16	2016-17
$k_e = R_f + B(R_m - R_f)$	17.40%	17.91%
Rf	6%	6%
beta	1.39	1.39
Rm	0.142	0.1457

**Interpretation:** The above table shows cost of equity for the year 2015-16 was 17.40% and increased to 17.91% in 2016-17

- Table Number 3: Calculation of Cost of Debt.

Particulars	2015-16	2016-17
$k_d = \frac{\text{Total Interest Payment}}{\text{Total Amount of Debt}}$	11.54%	11.54%

**Interpretation:** The above table shows cost of debt for the year 2015-16 was 11.54% and it remain unchanged in 2016-17 at 11.54%.Cost of debt affects higher interest expenses of the company.

- Table Number 4: Calculation of WACC for the year 2015-16

Sources of funds	Amount	Specific cost	Total Cost
Equity Share capital	928.81	16.81%	156.133
Total Debenture	2500	11.54%	288.5
Total	3428.81		444.633
WACC = $\frac{\text{Total cost}}{\text{Total amount of Capital}}$			12.97%

- Table Number 5: Calculation of WACC for the year 2016-17

Sources of funds	Amount	Specific cost	Total Cost
Equity Share capital	945.25	17.33%	163.7863
Total Debenture	2500	11.54%	288.5
Total	3445.25		452.2863
WACC = $\frac{\text{Total cost}}{\text{Total amount of Capital}}$			13.13%

**Interpretation:** The above table shows that WACC for the year 2015-16 was 12.97% and again it increased to 13.13% in the year 2016-17. The increase in interest debt leads to increase in weighted average cost of capital.

- Table Number 6: Calculation of Capital Charge

Particulars	2015-16	2016-17
Capital Charge = Total capital * WACC	444.6330	452.2863

**Interpretation:** The above table shows that Capital Charge for the year 2015-16 was 444.6330 (Rs. In Million). In the year 2016-17 it was increased to 452.2853 (Rs. In Million).

- Table Number 7: Calculation of Economic Value Added (EVA) (Rs. In Millions)

Particulars	2015-16	2016-17
NOPAT	-2781.2	-1238.8
Total Capital	3428.81	3445.25
Overall Cost of Capital	12.97%	13.13%
Capital Charge	444.6330	452.2863
EVA = NOPAT – (Total cost * Capital Charge)	-3225.8329	-1691.0863

**Interpretation:** The above table shows that Economic Value Added for the year 2015-16 was (3225.8329) (Rs. In Million). Economic Value Added has a negative value but due to reduction in operating losses there was a reduction in Economic Value Added in the year 2016-17.

- Table Number 8: Calculation of Market Value Added (Rs. In Crores)

Particulars	2015-16	2016-17
MVA = Market value of Firm's Equity - Equity capital investment	-2082.03	-2074.64

**Interpretation:** The above table shows that Market Value Added for the year 2015-16 was (2082.03) and in 2016-17 (2074.64). The value of Market Value Added was negative due to decrease in stock price of the company.

#### IV. CONCLUSION

The study helps to understand the impact of operating profit and capital charge on Economic Value Added and analysing of Market Value Added of the company. This helps in analyzing the net operating profit after tax as well as cost of equity and cost of debt. It will also help in indicating the value created by the company which shows the wealth creating ability of the firm.

#### REFERENCE

- [1]. Andrew C Worthington West "Economic Value-Added: A Review of the Theoretical and Empirical Literature Asian Review of Accounting" (2001).
- [2]. Arvind Girtra and Surendra S. Yadav "Economic value-added: A New Flexible Tool for Measuring Corporate Performance Global journal of Flexible Systems Management" (2001), Vol. 2, No 1, page number 7-18
- [3]. Dimitris & Christos Anastassis "The Validity of the Economic Value Added Approach: an Empirical Application Journal compilation © (2007) Blackwell Publishing Ltd."
- [4]. Dr. Anil K. Sharma "Economic Value-Added (EVA) – Literature Review and Relevant Issues Vol 2" No2; (2010)