



## DOES OPERATING LEVERAGE IS AN VALUE AMPLIFIER? (A COMPARATIVE STUDY OF SELECT PHARMACEUTICAL COMPANIES)

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### ABSTRACT

Operating leverage measures a company's fixed costs as a percentage of its total costs. It is used to evaluate the breakeven point of a business, as well as the likely profit levels on individual sales. When economy is booming, there is a possibility that companies having operating leverage may outperform those that don't have it. But during a period of falling sales, companies with operating leverage might find their operating income/margins dropping drastically.

An attempt is made in this paper that Is operating leverage has amplifying power to increase the Economic value addition to the company? Two Pharmaceutical companies have been taken for comparative study. It is found from the study that, the Economic value addition of one company is more influenced by operating leverage and another company is least influence of operating leverage on Economic value addition. This is being confirmed by using descriptive statistics such as Average, Standard deviation and R square.

**KEY WORDS :-** *Cost of Debt, Cost of Equity, EVA, NOPAT, Operating leverage, WACC,*

### SECTION -I

#### INTRODUCTION

The term 'leverage' refers to means of accomplishing power for gaining an advantage. It represents the impact of one financial variable over some other related financial variable. Leverage refers to the ability of a firm in employing long term funds having a fixed cost, to enhance returns to the owners. In other words, leverage is the employment of fixed assets or funds for which a firm has to meet fixed costs or fixed rate of interest obligations irrespective of the level of activities attained or the level of operating profit earned. The higher the leverage, higher the profits vice versa. But higher leverage obviously implies higher outside borrowings and hence riskier if the

business activity of the firm suddenly takes a dip. But a low leverage does not necessarily indicate prudent financial management, as the firm might be incurring an opportunity cost for not having borrowed funds at a fixed cost to earn higher profits. Leverages have the magnifying effect. Operating leverage magnifies EBIT with respect to contribution while financial leverage magnifies EPS with respect to EBIT. Financial leverage enhances the EPS without an additional investment. By having judicious assets mix and financing mix, EPS may be increased. A few areas identified in this regard are as follows:

Investment in fixed assets or cost structure (Operating leverage)

Capital structure planning (Financial leverage)

Profit planning (Combined leverage)

Monitoring business and financial risk

Maximising the value of share

Improving EPS

Judicious mixture of operating leverage and financial leverage.

The degree of operating leverage of a company is very important from an investor's standpoint. Although it shows the riskiness of a venture, it also shows the efficiency of a company. Just like, financial leverage arises out of the capital structure of a company, operating leverage arises out of its cost structure. If a company has too many expenses which are fixed in nature, the company is said to have high operating leverage. A firm with high operating leverage should not have a high financial leverage. Similarly, a firm having low operating leverage will stand to gain by having a high financial leverage. If both leverages are increased, the possibility of bearing more risk will increase. Typically, companies that are highly mechanized have high operating leverage. This is because they have replaced labour which is a variable cost by depreciation on machinery which is fixed cost. This creates debate whether having a high operating leverage is a bad thing. Henry Ford was amongst the first to use operational leverage on a large scale and build cars at a fraction of what it would cost earlier. This idea was soon followed by many others and high operating leverage became the norm.

Against this background this paper is organised to know the power of leverage in amplifying the value of companies in four sections. The first section is used to give importance of leverage, objectives of the study and theoretical framework of operating leverage and remainder of the paper is presented in these following sections:

Section II - Research methodology

Section III- Results and Discussion

Section IV – Findings and Suggestions

In view of amplifying power of operating leverage this paper is organised in four sections. First section is Introduction and Objectives of the study, Theoretical framework of operating leverage and Second section consists of Research methodology, Section Three includes results and analysis, last and Fourth section deals with the Findings and Suggestions.

## **OBJECTIVES OF THE STUDY**

1. To know the degree of operating leverage in select pharmaceutical companies for the study period

2. To determine and understand cost of equity, cost of debt. overall cost of capital respectively
3. To know the value addition EVA in select pharmaceutical companies
4. To know the relationship between degree of operating leverage and value addition and
5. To offer suggestions in the light of our findings.

## **THEREOTICAL FRAME WORK OF LEVERAGE**

Operating leverage measures a company's fixed costs as a percentage of its total costs. It is used to evaluate the breakeven point of a business, as well as the likely profit levels on individual sales. The following two scenarios describe an organisation having high operating leverage and low operating leverage.

### **High Operating Leverage**

In high operating leverage situation, a large proportion of the company's costs are fixed costs. In this case, the firm earns a large profit on each incremental sale, but must attain sufficient sales volume to cover its substantial fixed costs. If it can do so, then the entity will earn a major profit on all sales after it has paid for its fixed costs. However, earnings will be more sensitive to changes in sales volume.

### **Low Operating Leverage**

In low operating leverage situation, a large proportion of the company's sales are variable costs, so it only incurs these costs when there is a sale. In this case, the firm earns a smaller profit on each incremental sale, but does not have to generate much sales volume in order to cover its lower fixed costs. It is easier for this type of company to earn a profit at low sales levels, but it does not earn outsized profits it can generate additional sales. When using the operating leverage measurement, constant monitoring of operating leverage is more important for a firm having high operating leverage, since, a small percentage change in sales can result in a dramatic increase (or decrease) in profits. A firm must be especially careful to forecast its sales in these situations, since a small forecasting error translates into much larger errors in both net income and cash flows. Knowledge of the level of operating leverage can have a profound impact on pricing policy, since a company with a large amount of operating leverage must be careful not to set its prices so low that it can never generate enough contribution margin to fully offset its fixed costs.

Operating leverage is particularly useful to creditors, managers, and analysts because it shows them the risk involved with a particular business. While a high degree of operating leverage can be a good sign, it also means it carries a high risk when the economic conditions change for the worse. Similarly, a business with a low degree of operating leverage shows that it carries a comparatively smaller risk when the economic conditions change and can still generate profits.

## **SECTION-II**

### **RESEARCH METHODOLOGY**

**Sources of Data** The present study is based on the secondary data which are collected from various sources such as books, magazines, research articles, annual reports of the companies, websites [www.moneycontrol.com](http://www.moneycontrol.com), [www.screener](http://www.screener), [www.equity](http://www.equity) master, www. Indian Infoline, etc.

### Sample Design

The study consists of the of Mid Cap Active Pharmaceutica Ingredient Companies (API)

1. Glenmark Pharmaceutical company
2. NATCO Pharmaceutical company

which have identical assists but not in value, operate in the same market segments belong to the same industry and they also face similar competitive and business conditions. Hence, we have the justifiable reason for the study.

### Period of the study

The study covers 5 years period from 2016-2017 To 2020-2021.

Firstly, we have calculated Degree of Operating Leverage (DOL). In order to calculate operating leverage, the following equation is used:

$$DOL = \frac{S - V}{EBIT}$$

Where,

S- Sales

V-Variable Cost

EBIT - PBT (EBT) +Finance Cost

Operating Revenue is taken as proxy for sales, materials consumed and employee benefit expenses are taken as component of variable cost

Secondaly, we calculated Economic Value Added the following equation is used:

$$\text{Economic Value Added} = \text{NOPAT} - (\text{WACC} \times \text{Capital Invested})$$

OR

$$\text{Economic Value added} = \text{NOPAT} - \text{Capital Charge}$$

Where,

NOPAT- Net Operating Profit after Tax is calculated by the following equation:

$$\text{NOPAT} = \text{EBIT}(1-t)$$

WACC-weighted average cost of capital is calculated in the following way:

Firstly,we calculated cost of debt by the following equation:

$$\text{Cost of debt (before tax)} = \frac{\text{Interest expense or Finance cost}}{\text{Total debt}}$$

$$\text{After tax debt} = \text{Interest} (1-\text{tax})$$

Tax rate is calculated by using the following equation:

$$\text{Tax rate} = \frac{\text{Current tax}}{\text{EBT}}$$

Where,

EBT-Earning Before Tax

Next we are calculated cost of equity by using CAPM equation

$$K_e = R_f + \beta(R_m - R_f)$$

Where,

R<sub>f</sub>- Risk free rate (10years Government bond yield is considered for the respective years)

β-Risk estimates (by using slope function in MS Excel yearly beta is calculated Bench mark index considered is S & P BSE 500 daily prices are considered to arrive at accurate beta value)

Rm- Market return

There has been a proof in International Research studies, market rate of return on equity on an average was 17%. When we have seen the equity return in Indian context it is 17.3% therefore in order to calculate cost of equity average market return used is 17% and

Then  $k_o$  is calculated by using following equation:

$WACC = \text{weight of debt} \times \text{cost of debt} + \text{weight of equity} \times \text{cost of equity}$

### SECTION-III

#### RESULTS AND ANALYSIS

The entire study results are presented in the following tables and analysis of the respective companies is also undertaken with the help of result presented in the table

**TABLE 3.1 SHOWING OPERATING RISK OF GLENMARK PHARMACEUTICAL COMPANY AND NATCO PHARMACEUTICAL COMPANY DURING THE STUDY PERIOD**

YEAR	GLENMARK PHARMA COMPANY	NATCO PHARMA COMPANY
2016-2017	2.69	1.90
2017-2018	3.50	1.59
2018-2019	3.55	1.61
2019-2020	3.89	2.01
2020-2021	3.15	1.52
<b>AVERAGE</b>	<b>3.36</b>	<b>1.73</b>
<b>STD DEV</b>	<b>0.41</b>	<b>0.21</b>

Source: [www.moneycontrol.com](http://www.moneycontrol.com) Compiled and calculated by the Author.

The above computed figures in the table shows the operating risk in Glenmark Pharma is ranging from 2.69 to 3.15 which has an average of 3.36 which imply 100% change in sales will lead to 336% change in EBIT called operating profit. Whereas, NATCO Pharma has operating leverage ranging from 1.52 to 1.90 having the average of 1.73 which means 100% jump or fall has 173% Jump or fall in EBIT called operating profit. With this we infer that operating risk of Glenmark Pharma is more than NATCO Pharma. Therefore, as per risk theory of profit, possibly higher the risk of a company obviously has to have higher potential to create value, and vice-versa. Therefore, we have made an attempt to know the value addition of these two.

**TABLE 3.2 TABLE SHOWING ECONOMIC VALUE ADDED OF GLENMARK PHARMACEUTICAL COMPANY AND NATCO PHARMACEUTICAL COMPANY DURING THE STUDY PERIOD**

**(Rs. In Crores)**

YEAR	GLENMARK PHARMA COMPANY			NATCO PHARMA COMPANY		
	NOPAT	CAPITAL	EVA=NOPAT-	NOPAT	CAPITAL	EVA=NOPAT-

		CHARGE	Capital Charge		CHARGE	Capital Charge
2016-2017	1097	108	989	503	175	328
2017-2018	996	313	683	679	541	138
2018-2019	851	488	363	651	521	130
2019-2020	904	484	420	458	453	5
2020-2021	1061	606	455	442	407	35
<b>AVERAGE</b>	<b>982</b>	<b>400</b>	<b>582</b>	<b>547</b>	<b>419</b>	<b>127</b>
<b>STD DEV</b>			<b>258</b>			<b>113.46</b>

Source: [www.moneycontrol.com](http://www.moneycontrol.com) Compiled and computed by the author

From the above table it is clear that Economic Value Added in Glenmark Pharmaceutical Company is ranging from Rs.363crores to Rs.989 crores. Glenmark Pharma Company created value during the study period with an average EVA of Rs.582 Crores, highest value addition was recorded in the year 2016-17 but in the subsequent year it is fluctuated with the standard deviation of 258, whereas, NATCO Pharma Company Economic Value Added ranging from Rs. 5 Crores to Rs.328 Crore. NATCO Pharma has created value with an average of Rs 127 crores, highest value addition was recorded in the year 2016-17 is Rs. 328 crores with standard deviation of 113.46 so, the more standard deviation is found in Glenmark Pharma as compared to NATCO Pharma Company.

**TABLE 3.3 TABLE SHOWING OPERATING LEVERAGE AND ECONOMIC VALUE ADDED OF GLENMARK PHARMACEUTICAL COMPANY AND NATCO PHARMACEUTICAL COMPANY DURING THE STUDY PERIOD**

YEAR	GLENMARK PHARMA COMPANY		NATCO PHARMA COMPANY	
	DOL	EVA	DOL	EVA
2016-2017	2.69	989	1.90	328
2017-2018	3.50	683	1.59	138
2018-2019	3.55	363	1.61	130
2019-2020	3.89	420	2.01	5
2020-2021	3.15	455	1.52	35
AVERAGE	<b>3.36</b>	<b>582</b>	<b>1.73</b>	<b>127</b>
STD DEV	<b>0.454</b>	<b>258</b>	<b>0.215</b>	<b>126</b>
R SQUARE		<b>0.54</b>		<b>0.030</b>

Source: [www.moneycontrol.com](http://www.moneycontrol.com) Compiled and computed by the author

We see from the above table that R Square of selected Pharmaceutical Companies, R Square is more in case of Glenmark Pharmaceutical Company i.e. 54 per cent whereas, in case of NATCO Pharmaceutical company 3 per cent

which brings inference that EVA is largely influenced by operating risk but it is not so in case of NATCO Pharmaceutical Company. Therefore, in fine, we can say that Glenmark Pharmaceutical Company has to lay higher importance to sales growth either in terms of price reduction or in terms of Volume improvement or both but such importance may not be laid in case of NATCO Pharmaceutical company but it could improve other variables not necessarily operating risk as its R Square is very less i.e. 3 per cent.

## SECTION-IV

### FINDINGS OF THE STUDY

Some of the important findings of our study are as follows:

1. Average operating leverage of Glenmark Pharma company is more as compared to Natco Pharma company and also more standard deviation is found in Glenmark during the study period.
2. There is a more fluctuation in Economic value addition is seen in both the companies during the study period
3. Average Economic Value addition is more in case of Glenmark as compared to Natco Pharma company it is found from the study that increase in operating risk leads to increase in Economic Value Addition of Glenmark Pharma Company.
4. The study reveals that EVA is largely influenced by operating risk in Glenmark Pharmaceutical Company as compared to NATCO Pharma Company during the study period.

### SUGGESTIONS:

1. The Glenmark Pharma Company has to reduce operating risk by minimising operating costs and maximising sales.
2. Natco Pharma Company Economic Value addition is very less in the year 2019-20 i.e 5 crores. This might be low sale and high operating costs in that year.
3. Glenmark as well as Natco Pharma company has to maintain consistency in Economic Value addition.

### LIMITATIONS OF THE STUDY

1. The study is based on only secondary data
2. The study is based on monetary information, non-monetary factors are ignored.
3. The study has been done only for a period of 5 years.
4. There are so many other risks also affect the value addition of the company but we considered only operating risk.
5. We conducted study of only twopharmaceuticalcompanies.
6. To find out cost of equity CAPM is applied but not other methods of equity.
7. Risk free rate considered for the study is 10years Government Bond Yield.

8. Actual market return is not considered but considered CAGR of return of 17% from the international research done is in general and not specifically.

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