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ANALYSIS OF CAPITAL STRUCTURE OF PHARMACEUTICAL COMPANIES GLAXO INDIA LTD. & NOVARIS INDIA LTD.

Kishor Kumar
Research Scholar
CMJ University
Shillong, Meghalaya

Rajiv Chopra
Associate Professor
Sri Aurobindo College
University of Delhi, Delhi

ABSTRACT: The present study is aimed at to examine the reason of existence of two pharmaceutical company's capital structure and to identify the possible sources of such variation in capital structure. The pharmaceutical industry in India is one of the largest and most advanced among the developing countries. Therefore, this study is aimed to make analyse of capital structures pattern of Novartis India Ltd. & Glaxo India Ltd. for the period of 2007-2011

KEYWORDS: Capital Structure, Growth Rate, WACC, Operating Leverage, Financial Leverage

1. INTRODUCTION

The financing or capital structure decision is a significant managerial decision. It influences the shareholder's return and risk. Consequently, the market value of the share may be affected by the capital structure decision. Maximizing of Shareholders' Wealth is the basic function. To attain this objective cost of capital must be minimum which depends inter-alia on the capital mix, Government's tax policy and the price level changes. What investors expect (rate of return) from the company is the Cost of Capital to the Company that it must earn in order to keep the market value of its common equity intact.

GLAXO INDIA LIMITED :

Glaxo India Ltd. has for over decades maintained its position as the industry leader. The Company is established in 1924 is the subsidiary of Glaxo Welcome Pic U.K. a household name in Pharmaceuticals. The company seeks out new options for India in the 'bullock-cart' markets of rural India and the 'cyber_ space' markets tomorrow India. The company has a large portfolio of two hundred products. The company manufactures ceftum, stibbs, an anti-diarrhoeal medicine, Phexin BD and Zondon for the treatment of Nausea. It also manufactures Alpha-D3 for the 'treatment of osteoporosis. The company enjoys status of a 'Recognise Export House' and is attempting to achieve a Trading House status. The company also manufactures qualigens fire chemicals and number of farm cattle and poultry care products. Glaxo India was ranked as India's most respective company by Business World Magazine in 2010. Glaxo took the top honour in a survey conducted by Business World – India Research.

NOVARTIS INDIA LIMITED:

Novartis India Limited established in 1947 is an affiliate of Novartis A.G. The Company has merged with itself Hindustan Ciba Giegy Ltd. and Sandoz India Ltd. The company is a global leader in the Life Sciences committed to improving health and well being through innovative products and services. The company has a

country wide presence in Healthcare & Agri-business through its Pharmaceuticals, CIBA vision crop protection, seeds and animal health care sectors.

The green revolution in India was possible primarily on account of the new hybrid and high yielding variety of seeds adequately supported by other inputs. Novartis contributes towards these efforts through a variety of seeds it produces and markets in the country. In the field crops these Hybrids includes cotton, maize, sunflower, bajra, jowar and carter. In the area of the vegetables it has hybrids in tomato, cabbage, cauliflower, capsicum, chilli, bhendi, bringle, watermelon, melon, gawar, cowpea and sweet corn. Novartis offers a range of products in tablets and syrup form for the tuberculosis patients including Rimactazid, pza Ebutol sand Rimactane. For the treatment of breast cancer the company produces Femara. For the treatment of an old age disease Alzheimer disease the company produces Excelon. The company also manufacture & Eye care products.

2. RESEARCH METHODOLOGY:

The selection of the two companies has been made using purposive sampling procedure. Relevant statistical techniques and tests have been applied in carrying out the analysis. The present research study is based on the capital structure analysis the two companies from their annual reports. Besides the annual reports other data regarding these companies were obtained from their respective head offices at Mumbai. Ratio analysis, trend analysis and trend percentages were also calculated from the data collected from these companies. To make the figures comparable inflation accounting techniques were used and factors were calculated to convert the historical figures into current figures. Help of reference and text book on accounts and financial management were also taken.

3. OBJECTIVES OF STUDY :

The main objective of study is to analyze the cost of capital must be minimum which depends inter-alia on the capital mix, Government's tax policy and the price level changes.

4. SOURCES OF DATA :

For the current analysis data is secondary data and were collected from the financial reports of the selected pharmaceutical companies from the year 2007-2011. From internet (www.moneycontrol.com)

5. MEANING OF CAPITAL STRUCTURE :

The assets of a company can be financed either by increasing the owners' claims or the creditor's claims. The owners' claims increase when the firm raises funds by issuing ordinary shares or by retaining the earnings; the creditors' claims increase by borrowing. The various means of financing represent the financial structure of an enterprise.

The term capital structure is used to represent the proportionate relationship between debt and equity, Equity includes paid-up share capital, share premium and reserves and surplus (retained earnings). The financing of capital structure decision is a significant managerial decision. It influences the shareholder's return and risk**.** Consequently, the market value of the share may be affected by the capital Structure decision. The company will have to plan its capital structure initially at the time of its promotion. Subsequently, whenever funds have to be raised to finance investments, a capital structure decision is involved.

6. FACTORS AFFECTING CAPITAL STRUCTURE:

The important factors and considerations in planning the capital structure are :

INCOME: to understand the consequences of alternative financing plans on the income of equity stockholders, two issues may be raised:

- What is the implication of alternative financing plans on earnings per share ?
- What is the impact or financial leverage on return on equity?

Generally, the affairs or the firm arc. or should be, managed in such a way that the total risk borne by equity stockholders, which consists or business risk plus financial risk, is not unduly high. This implies that if the firm is exposed to a high degree of business risk, its financial risk should be kept low. On the other hand, if the firm has a low business risk profile, it can assume a high degree or financial risk.

Control: Consider the case of a firm which presently has an equity capital of 1,000 owned entirely by the original promoters. If the firm wants to raise additional capital, say another 1,000, it may go for debt finance. or a rights issue or equity stock, or a public issue of equity stock or a combination of two or more of these. The pros and cons of the three basic ways of raising additional finance are shown below:

	Pros	Cons
Rights issue of Equity Stock	• No dilution of Control • No financial risk	• Severe limits in the financing ability of the firm • Higher cost
Debt finance	• No dilution of Control • Lower cost	• Financial risk
Public issue of equity stock	• No financial risk	• Dilution of Control • Higher cost

FLEXIBILITY: Flexibility refers to the ability of a firm, to raise capital from any source it wishes to tap. It provides manoeuvrability to the finance manager generally, if the rate of return earned on equity satisfactory, the firm can raise further equity capital because the debt-equity ratio can fall to zero. However, as the debt-equity ratio is normally not permitted to exceed a certain level. Hence flexibility for practiced purposes may mean that the firm does not exhaust fully its debt capacity.

REGULATORY NORMS: In India, capital issues by public limited companies were regulated by the erstwhile Capital Issues Control) Act. As per this law, a firm is normally allowed a debt-equity ratio 1 : 2. This means that two rupees of debt is allowed for every rupee of equity. For capital intensive industries, however, more liberal norms are applied: a norm of 4 : 1 for fertilizer and cement units, and a norm of 6 : 1 for shipping units.

OTHER FACTORS: In addition to the above factors, the capital structure or a firm is influenced by the following factors as well:

TAXES -- The interest on debt capital is a tax-deductible expense whereas dividend payment is not so. Hence, higher the tax rate" greater the incentive to employ debt capital.

GROWTH RATE -- Rapidly growing firms need to rely more on debts. Why? The financial requirements or such firms arc high and cannot be met adequately from internal sources. Hence they have to depend rather heavily external financing. Since the cost of external equity-thanks to under

pricing and higher issue expenses, among other reasons -tends to be quite high compared to the cost of debt, such firms, in general, lean more on debt capital. A conspicuous example in recent years has been the Reliance Industries Limited which raised substantial funds from debt sources to finance its massive investment schemes.

PROFITABILITY - We often find that firms which are highly profitable use relatively little debt in their capital structure. For example, the Gwalior Rayon Manufacturing (Weaving) Company Limited had a very small proportion of debt in its capital structure for a long time.

While there is no theoretical justification for such firms to have a low debt-equity ratio, the substantial internally generated funds, thanks to high profitability, seem to obviate the need for external financing.

ATTITUDE O F LENDERS: Since the availability of debt capital depends on the willingness of lenders to provide it, their attitude is an important consideration in the capital structure decision. It is necessary to gauge the disposition of lenders, both institutional and private, when debt financing is sought. The advice and concurrence or institutional investors must be obtained when large private placements with institutions are sought.

DEBT - EQUITY RATIO:

Several debt ratios may be used to analyses the long-term solvency of a firm. The firm may be interested in knowing the proportion of the interest- bearing debt (also called funded debt) in the capital structure. It may, therefore, compute debt ratio by dividing total debt (TD) by capital employed (CE) or net assets (NA). Total debt will include short and long-term borrowings from financial institutions, debentures/bonds, deferred payment arrangements for buying capital equipments, bank borrowings, public deposits and any other interest-bearing loan. Capital employed will include total debt and net worth (NW).

Table A – Debt – Equity Ratio in Glaxo India Ltd. & Novartis India Ltd.

Year	Glaxo India Ltd.	Novartis India Ltd.
2007	18.23%	24.0%
2008	10.33%	41.0%
2009	19.03%	39.0%
2010	6.21%	12.0%
2011	5.74%	10.0%

INTERPRETATION:

From the above table it is clear that in both the units under study the Debt equity ratio is declining. It is lower in Glaxo than in Novartis. If the EBIT of both the Companies are taken as equal it would be concluded that Novartis stands to gain due to higher degree of financial leverage.

FINANCIAL LEVERAGE (FL)

A company can finance its investments by debt and/or equity. The company may also use preference capital. The rate of interest on debt is fixed. A company can finance its investments by debt and/or

equity. The company may also use preference capital. The rate of interest on debt is fix and taxes (Less preference dividends) belong to them.

The rate of the equity dividend is not fixed and depends on the dividend policy of a company. The use of the fixed-charge sources of funds, such as debt and preference capital along with the owners' equity in the capital structure, is described as financial leverage or gearing or trading on equity. The use of the term trading on equity is derived from the fact that it is the owners' equity that is used as a basis to raise debt; that is; the equity that is traded upon. The supplier of debt has limited participation in the company's profits and, therefore, he will insist on protection in earnings and protection in values represented by ownership equity. The financial leverage employed by a company is intended to earn more on the fixed charges fund than their costs. The surplus (or deficit) will increase (or decrease) the return on the owners' equity. The rate of return on the owners' equity is levered above or below the rate of return on total assets. Degree of financial leverage is calculated by the following way:

$$\text{Degree of Financial Leverage} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}}$$

Table B - Degree of Financial Leverage in Glaxo India Ltd. and Novartis India Ltd.

(Rs.in Lakhs)

Year	EBIT	EBIT – Interest	Financial Leverage EBIT / EBIT – Interest
G1axo India Ltd.			
2007	17589.61	17589.61– 1059.67 = 16529.94	1.06
2008	8304.70	8304.70– 1007.41= 7297.29	1.14
2009	8662.71	8662.71– 1124.26 = 7538.14	1.15
2010	12003.18	12003.18– 925.48 = 11077.70	1.08
2011	10494.88	10494.88– 1090.73 = 9404.15	1.11
Novartis India Ltd.			
2007	4769.22	4769.22– 742.61 = 4026.61	1.18
2008	4710.67	4710.67– 732.01 = 3978.66	1.18
2009	3536.95	3536.95– 1716.55 = 1820.40	1.94
2010	6567.25	6567.25– 956.15 = 5611.10	1.17
2011	11164.11	11164.11– 453.77 = 10710.34	1.04

Source*: Annual Reports from 2007 to 2011 of both the companies*

INTERPRETATION: The above table reveals the degree of financial leverage around I in both the units under study. A financial leverage of 1 implies that a 10% increase in EBIT would result in a 10% increase in EPS. Both the companies have deprived themselves of the benefit of cheaper debt capital. These companies can increase their EPS by infusing debt element ill their capital structure.

OPERATING LEVERAGE (OL):

Operating leverage refers to the use of fixed costs in the operation of a firm. A firm will not have operating leverage if its ratio of fixed costs to total costs is nil. For such a firm, a given change in sales would produce the same percentage change in the operating profit or earnings before interest and taxes (EBIT). If the firm has fixed costs, it would have operating leverage and the percentage change in the operating profit would be more for a given change in sales. A firm will have higher operating leverage if the total costs have higher percentage of fixed costs. Operating leverage increases with fixed costs. Operating profit of a highly leverages (operating) firm would increase at a faster rate for any given increase in sales. However, if sales fall, the firm with a high operating leverage would suffer more than

the firm with no or low operating leverage. Operating leverage is a double-edged sword. Degree of operating leverage is calculated by the following way:

$$\text{Degree of Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

Table B - Degree of Operating Leverage in Glaxo India Ltd. and Novartis India Ltd.

(Rs.in Lakhs)

G1axo India Ltd.				Novartis India Ltd.			
Year	EBIT	Contribution	OL	Year	EBIT	Contribution	OL
2007	17589.61	16592.10	0.94	2007	4769.22	13341.08	2.79
2008	8304.70	18887.28	2.27	2008	4710.67	13706.44	2.91
2009	8662.71	20403.63	2.35	2009	3536.95	19703.66	5.57
2010	12003.18	22485.76	1.87	2010	6567.25	22422.15	3.41
2011	10494.88	22594.17	2.15	2011	11164.11	28095.75	2.34

Source : Annual Reports from 2007 to 2011 of both the companies

INTERPRETATION : It can be concluded that the degree of operating leverage in Novartis is higher than in Glaxo. A high degree of operating leverage implies that a large change in profit occurs due to a relatively small change in sales. A firm will not have operating leverage if its ratio of fixed costs to total costs is nil. For such a firm a given change in sales would produce the same percentage change in the operating profit before interest and taxes. In Glaxo the O.L. is 2.15 in the year 2011 which implies that a 1% increase in sales would result in a 2.15% increase in EBIT. In the case of Nov art is the O.L. is 2.34. Thus Novartis is better placed in comparison to Glaxo.

COST OF CAPITAL:

Capital is scarce in every economy and has a cost. The fundamental evil of the world arose from the fact that the good lord has not created enough money. The concept of the cost of capital is critically important in business. A firm should not accept a project unless it provides a return at least equal to the cost of capital. Cost of capital is the rate of return a firm must earn on its investment for the market value of the firm to remain unchanged. If a company is unable to earn a return on its investment at least equal to that expected by the providers of funds the value of the firm is bound to go down. Therefore the expected rate of return by the providers of funds is the cost of capital for the company that it must earn.

COMPONENTS OF CAPITAL

Capital is a necessary factor of production, and like any other factor, it has a cost. The capital can be provided from different sources which are as follows:

(a) Debt Capital
(b) Preferred Stock
(c) Common Equity
(d) Retained Earnings

Selection of a source of finance has a major bearing on the overall cost of capital to the firm. Proper capital budgeting decisions also require an estimate of the Cost of Capital. Many other types of decisions, including those relating to leasing, to bond refunding, and to working capital policy also require

estimates of the cost of capital. Maximizing the value of a firm requires that the cost of all inputs, including capital be minimized, and to minimize the cost of capital we must be able to calculate it.

(a) COST OF DEBT CAPITAL (K_d) : It is that rate of return which equates the present value of all future outflows on account of debt capital with the net proceeds received by issue of debentures. While debt capital is a cheaper source of fund at the same time it increases a firm's risk. Interest paid on debt capital is an allowable expenditure u/s 36 (i) (iii) of Income Tax Act, 1961 for the purpose of determining the taxable income, Therefore, the effective cost of debt capital becomes lower on account of the tax factor. So long as the corporate tax rate goes on declining the preference for debt capital loses its shine and vice versa. This implies that the government indirectly bears a part of the lender's required rate of return. As a result of interest tax shield, the after tax cost of debt to the company will be substantially less than the lender's required rate of return. An unprofitable company not required to pay Income Tax It would not gain any tax benefit associated with the payment of interest and its true cost of debt is the before tax cost. Cost of debt (K_d), can be computed as follows:

$$\text{Irredeemable Debt or Perpetual debt } (K_{d)} = \frac{\text{Interst } (1-T)}{SV}$$

$$\text{Redeemable debt } (K_d) = \frac{\text{Interst } (1-T) + \frac{RV - SV}{N}}{\frac{RV + SV}{2}}$$

Where RV = Redeemable Value, SV = Sales Value, N = number of years. T = Tax

To illustrate the concept of cost of capital a sample of two units from the Pharmaceuticals industry, namely, Glaxo India Ltd. and Novartis India Ltd, has been taken. The data have been taken from their Annual Reports for the year 2010. The cost of debt capital in the case of Novartis India Ltd. and Glaxo India Ltd. was found to be 9.23% and 8.61 % respectively based on the effective tax rate of38.5% (35% + 10% surcharge).

(b) COST OF PREFERRED STOCK: In India preference share capital as a source of long-term funds is not popular. The ratio of Preference Share Capital to total capitalization of Indian Companies has been declining due to the fact that the cost of Preference Share Capital amounts to more than the cost of debt capital as the dividend paid on Preference taxable income whereas the interest paid on debentures is allowed an expenditure. The cost of capital in respect of Redeemable Preference Share Capital can calculated as follows.

$$\text{Cost of Preference share capital } (K_p) = \frac{\text{Dividend } + \frac{RV - SV}{N}}{\frac{RV + SV}{2}}$$

Where RV = Redeemable Value, SV = Sales Value, N = number of years.

The Indian Companies Act prohibits the issue of non- redeemable preference shares. Both the companies under study have not resorted to this source of financing hence the same has not been discussed.

(c) COST OF COMMON EQUITY: The cost of common stock is not as easy to calculate as either cost of debt or the cost of Preferred Stock. The difficulty arises from the definition of Cost of Common Stock, which is based on the presumption that the value of a share of a firm is determined by the present value of all future dividends expected to be paid on the stock.

The rate at which these expected dividends are discounted to determine and equate their present value with the present market price of the share represent the Cost of common Stock. This rate of discount is the function of the riskless return on money adjusted for the business and financial risk associated with the firm. The commonly cited Gordon Model for measuring the cost of Equity capital is –

$$K_e = \frac{\text{Expected Dividend}}{\text{Current market price}} + g$$

Growth Rate (g) is computed on the basis of earlier year's trend assuming the same to continue. In the case of sample units, we have computed the 'g' on the basis of past 10 year's dividend rate of the respective companies assuming that the same rate will continue. Based on the Equity figures of these companies for the year 2011 the cost of equity capital was found to be 23.48% in the case of Novartis India Ltd. and 18.65% in the case of Glaxo India Ltd.

(d) COST OF RETAINED EARNINGS: The cost of retained earnings is closely associated to the cost of common stock. If earnings are not retained they would be paid to the common stockholders as dividend. Retained earnings are often looked upon as a fully subscribed issue of common stock, since they increase the stockholders equity in the same way that a new issue of common stock would. The cost of retained earnings is less than the common equity capital. Had a shareholder been paid dividends out of these earnings and wanting to invest them in additional shares of the firm's stock he would have to first pay taxes on the dividend and then pay brokerage in order to acquire the added shares. Accordingly the formula for calculating the cost of retained earning has been adjusted:

$$K_r = K_e \text{ (1 - Tax rate) (1 – brokerage rate) } or = K_e \text{ (1 - brokerage rate)}$$

The cost of retained earnings in the sampled units was found to be 23.48% in the case of Novartis India Ltd. and 18.65% in the case of Glaxo India Ltd. for the year 2010.

WEIGHTED AVERAGE COST OF CAPITAL (WACC):

Having analysed the cost of capital of individual components of the total capital let us now discuss the over - all cost of capital *i.e.* Weighted Average Cost of Capital (WACC). The WACC may be found by weighting the cost of each specific type of capital by proportions of each type of capital used. The use of weights for calculating the firm's WACC is quite common. The use of these weight is based on the assumption that the firm's existing mix of funds (i.e. capital structure) is optimal and *therefore*, should be maintained in the future too. Two types of weights can be used - Book Value Weights and Market Value Weights.

Table - C: WACC in Novartis India Ltd. (2011) *(Book Value Weights)*

Source	Book Value *(Rs. In Lakh)*	Weights (w)	Cost of Capital (k)	Weighted cost of capital (c) = (w) × (k)
Equity Share Capital	3186.16	0.104	23.48%	2.44%
Retained Earnings	24530.22	0.805	23.48%	18.90%
15% Public Deposits	292.78	0.011	9.23%	0.10%
15% Debt	2457.55	0.080	9.23%	0.76%
Total	30466.71	1.000		22.20%

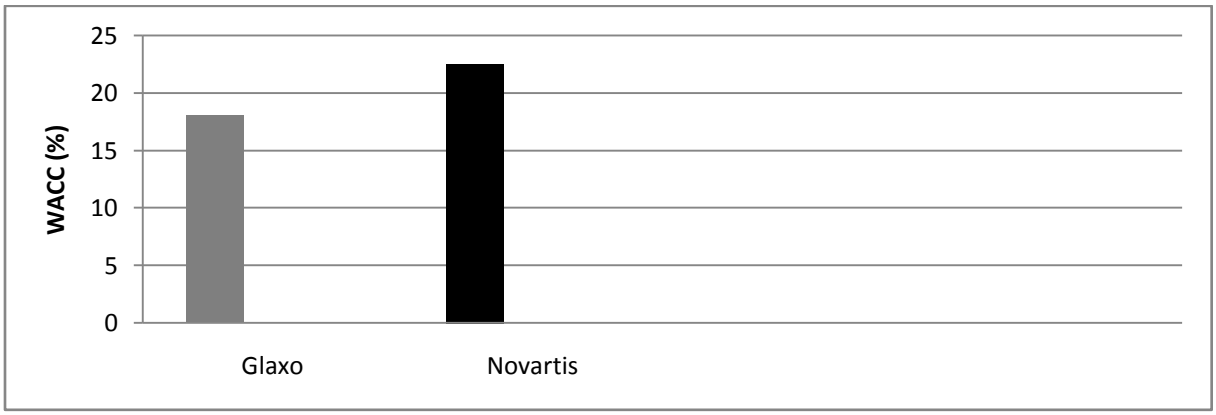
Source: Annual Reports from 2007 to 2011

Table -D: WACC in Glaxo India Ltd. (2011) *(Book Value Weights)*

Source	Book Value *(Rs. In Lakh)*	Weights (w)	Cost of Capital (k)	Weighted cost of capital (c) = (w) × (k)
Equity Share Capital	5978.00	0.17	18.65%	3.17%
Retained Earnings	24530.22	0.77	18.65%	14.36%
Debt Capital (14%)	2070.00	0.06	8.61%	0.52%
Total	34431.00	1.000		18.05%

Source: Annual Reports from 2007 to 2011

Bar diagram showing WACC Novartis India Ltd. & Glaxo India Ltd (2011)



MARKET VALUE WEIGHTS: Since the costs of various types of capitals are calculated using the prevailing market price it is more prudent to use Market value Weights. The Equity shares of Novartis India Ltd. and Glaxo India Ltd. were found to be quoting at Rs. 1,200/- per share and Rs. 400/- per share respectively on 16 June, 2011 at the NSE. Using the Market Value Weights the Weighted Average Cost of Capital has been shown in Table- F. The market rates of debentures have been taken at par *i.e.* Rs. 100/- each. The market value of Equity Capital and Retained Earnings has been computed as follows. Accordingly, using the Market Value Weights the following situation has emerged.

Table – E : WACC in Novartis India Ltd. (2011) *(Market Value Weights)*

Source	Market Value *(Rs. In Lakh)*	Weights (w)	Cost of Capital (k)	WACC (c) = (w) × (k)
Equity Share Capital	25489.28	0.90	23.48%	21.13%
Retained Earnings				
15% Public Deposits	292.78	0.01	9.23%	0.09%
15% Debt	2457.55	0.09	9.23%	0.83%
Total	28,229.61	1.000		22.05%

Table -F: WACC in Glaxo India Ltd. (2011) *(Book Value Weights)*

Source	Book Value *(Rs. In Lakh)*	Weights (w)	Cost of Capital (k)	Weighted cost of capital (c) = (w) × (k)
Equity Share Capital	2391.20	0.54	18.65%	10.07%
Retained Earnings				
Debt Capital (14%)	2070.00	0.46	8.61%	3.96%
Total	4461.20	1.000		14.03%

INTERPRETATION:

The WACC is 22.05% in Novartis and 14.03% in Glaxo. Really a glaring difference. The reason is not hard to trace. The proportion of debt financing in the total capital is 46% in Glaxo and merely 10% in Novartis. Thus Glaxo is reaping the benefit of Financial Leverage. Financial Leverage is the use of fixed charge securities like preference and debt capital in the total capitalization of a company. A highly levered capital structure leads to saying in taxes, flexibility in capital structure, control of more funds with lesser equity and magnification of the rate of return of equity (ROE). A levered capital structure raises a firm's fixed financial obligations as also the risk to the proprietors (Equity Holders).

7. CONCLUSION

Various factors that affect capital structure are Income, control, flexibility, regulatory norms and others. Financial leverage has been described as the use for fixed charges sources of funds, such as debt in preference capital along with the owner's equity in the capital structure. There are various measures of financial leverage. Most commonly used are Debt Ratio, Debt Equity Ratio and Interest coverage ratio. Degree of financial leverage in Glaxo and Novartis has revealed that both companies have deprived themselves of the benefit of cheaper debt capital. Operating leverage has been defined as the use of fixed costs in the operation of a firm. A table shows the degree of operating leverage in Glaxo India Ltd. and Novartis India Ltd. the table shows that the degree of OL in Novartis is higher than in Glaxo. Money is all cases have a cost. The finance function was once viewed simply as the task of providing the funds needed by an enterprise the terms most favourable in the light of the objectives of the business.

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