Determinants of Debt-Equity ratio in top FMCG companies

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ABSTRACT

This paper studies the determinants of capital structure choice among the Fast-Moving Consumer Good (FMCG) companies. Capital is inevitably the nurturing power for any company to decide its future course of action. Capital is required for a firm not only for meeting the reputation but also for other long term and short-term payables. Therefore, it is essential that the firm investigates, the highly essential components which impact the capital structure of the FMCG organizations. It is an empirical study that makes use of panel data. 15 companies listed on National Stock Exchange are considered for the study. The study period is from 2009 to 2018 is put together to scrutinize the factors. The companies are chosen on the basis of their continued service since 19th century. To depict the relationship between dependent variable debt-equity ratio and other independent variables like tangibility, size, non-debt tax shield, and profitability. Panel data regression analysis is applied. The growth rate of each company is determined in accordance to their performance. The risk level of each companies is measured separately and compared for the past few years. It is found that profitability has significant effect on the capital structure of the companies. The rest of the variables such as tangibility, non-debt tax shield and size has insignificant effect on the capital structure of the companies.

Keywords: Financial Risk, Capital structure, Debt-equity, FMCG.

INTRODUCTION

The capital structure decision of an organization is a debatable issue at present. The debt and equity in the capital structure should be in a balanced position. Over past decades, theories on an organization's capital structure choice have created multiple points of views on decision.

Capital structure is a mix of long-term debt, equity and securities. The major determinants of the organization's future rely on the Economic and Business cycle. Further, the reputation of the business concern plays an important role in earning advances in premiums on equity and debt issues. Business should be conscious about the expenses they make to their portfolios with the credits and advances they endeavour to take. Debt and equity depend upon the organizations demand side factors and the supply side factors respectively. It is exceptionally well demonstrated that the firm's financing decision would be explained through demand and supply side factors. Various capital structure theories are expressed in different research papers that clarify the ideal debt equity structure. Organizations' arrange sources to raise their capital by backing their exercises. The mix between the diverse sources is referred to as the affiliation to the company's capital structure. The trial capital writing researches and the cross-sectional examinations show that observed debt proportions are modestly close to the company's real targets. The key reason for the investigation is to look at the determinants of capital structure of the FMCG organizations.

The debt-to-equity ratio indicates the proportion of the company's assets that are being financed through debt. A high debt-equity ratio generally means that a company have been aggressive in financing its growth with debt. The prudence of the company in fulfilling its obligations is highly measured through this debt-equity ratio which acts as an indicator to reduce companies' risk. A higher cash turning business and cheaper cost of debt will allow a company to lever up more. Whether or not a debt-equity ratio is good depends on the context within which it is being analysed. From the business perspective, it is important to measure the debt to equity ratio as capital structure is considered to be one of the primary reflections in financial management.

Risk is a natural element faced by each individual or a company consistently while choosing an appropriate capital structure mix. In spite of the fact that the risks are unavoidable and can't be totally eradicated, regardless we flourish to be cautious and manage to carry the task. Risks emerge from numerous sources like prices, market share, innovation and technology, competition, productivity and profitability. Risks in the business fluctuate depending upon the market now and then. Each and every business has its range of risks relating to securities exchange unpredictability, products being produced, utilizing the capital effectively in geological areas.

A firm can raise funds through financing its activities by issue of shares and debentures. A company's debt-equity proportion discovers the capital structure which gives a clear picture of the level of risks in an organization. The two kinds of risk existing for any investor are Financial risk and Business Risk. Business risks are the risks related to the operations and capital structure of the business. Financial risks are the vulnerability regarding the funding, insurance and advances. On the off chance that money related or financial risks are identified at a beginning period, the loss endured by loan specialists and creditors can be limited and the preventive measures can made in like manner.

When there is loss in the business, the company experiences business risk. There are many factors which influences business risk such as competition, sales volume, economic climate, input costs, government regulations etc. The capital structure with low debt equity ratio should ensure that the company has high business risk. Business risk can be calculated by using operation and financial leverage effect, contribution margin and effect on total leverage. In a business, there are many types of risks that are likely to occur such as operational risks which might happen in the day to day operations of a business, interest rate risk, credit risk, strategy risk, economic risk etc. The Business Risk is calculated as, BUSINESS RISK = Standard deviation of EBIT/Mean of EBIT

Tax shield is deduction from the taxable income that results in the decrease in taxes to be paid. Tax shields vary from nation to nation and it also differs based on the eligible criteria. However, the value of the tax shield depends upon the rate fixed for corporations and individuals. Commonly deducted expense comprises of mortgage payment, depreciation, amortization and interest expenses. Tax rate that is effective and has been utilized as a conceivable determinant of capital structure choice. Interest instalments on debt obligations which are tax-deductible will help firms with positive taxable income to issue more debt according to Modigliani and Miller (1958). So, the primary motive of borrowing is to get favour of interest tax shields. The mathematical formula for calculating Non-debt tax shield is, NON-DEBT TAX SHIELD = Total depreciation charges/Total Assets

When an investment or project has the potential to grow it leads to profit for the investors. New investments are also considered as growth opportunities for potential investors. Investors get a tremendous gain from the profits being earned from the companies. The company must try to identify new growth opportunities for the business to flourish and for the long-term success of

the business. In this study Percentage change in total assets over the previous year determines the growth opportunity of the companies.

GROWTH OPPORTUNITY = [(Current year asset - Last year asset)/Last year asset] *100

There must be a certain level of profitability a business must attain. The factors which determine profitability helps in assisting the managers about the success of the business. The important factors which determine profitability are price, expenses and cost of business. Measuring the success of the business is as important as measuring profitability. The profitability of a company can be increased by testing price in selected markets or along the product line. The profitability of the company can be improved by reducing market costs, managing inventory, seeking add-on sales. The following formula is used to calculate profitability.

PROFITABILITY = Earnings before interest and Tax (EBIT)/Total Assets

REVIEW OF LITERATURE

Financial engineering techniques have been adopted by three-fourth of the corporations to control their exposures to interest rates, foreign exchange rates and commodity prices. When compared to the corporate industries, the gold mining industries discloses their detailed risk management programs (Tufano, 1996). In addition to this the distinct investigation demonstrates an exploratory knowledge to know the relation between the factors. The factors chosen were firm size, utilization of debt and return on equity. Research recommends that at any rate in the midst of the preliminary firm size had a more transcendent effect on ROE. There were peril connections between Return on Equity and stock cost changes (Eunju Yoon, 2005). However, this paper is carried forward to test risk model that clarifies how investors and speculators see money related dangers. The outcomes demonstrate that the decision theory and behavioural variables are imperative in clarifying speculators and investors about the hazards risk judgments. Further, it also influences such judgments through its impact on a portion of behavioural factors. It further demonstrates that potential loss outcome has impacted in both the ways by directly and also indirectly on risk perceptions (Lisa Koonce, 2005). Similarly, for risk management decisions, economies of scale, financial distress costs, informational asymmetry, and growth opportunities are the factors considered. The risk management is emphatically connected with administrative qualities and their remuneration bundles. Managers who have a more noteworthy bit of their compensation as investment opportunities have the tendency to oversee less hazard than the individuals who get stocks. Magnitude of

hedging and the decision to use currency derivatives does not impact the debt in foreign currency (Saito, 2009). Constructively, banks are liable to economic risk or credit in the host market. Second, host governments may participate in the policies that encroach on the bank's property rights and seize either completely or partially the bank's income and capital. The investigation on this obviously abstracts from various genuine contemplations and may influence a bank's decision of corporate structure (Marquez, 2010). Similarly, in the part of capital structure the short and long-term liabilities have important role in documenting their financial and budgetary reports. The outcomes uncovered that the variables debt and debt equity ratio are negatively correlated with ROA. It is discovered from the overall study that each and every company in the industry must devise procedures to upgrade and enhance profit benefits with a target to maximize the investors wealth (Enekwe & Agu, 2014). Although in most capital structure models for firms the choice of debt is a key concern. In this structure, given enlightening asymmetries, the ideal obligation level of debt is got by exchanging off the leverage related expenses against the benefits. Disaggregating firms based on value of equity and broad presence, the findings were that the impact of leverage on debt maturity is the most astounding for firms that don't show close associations with banks. Those firms which are not in access with banks finance tend to borrow so long in order to avoid liquidity risk (Ghosh, 2015). Necessarily, in this paper a similar report on the capital structure of three driving concrete organizations has been done to know the profitability position of the organizations. Capital structure characterizes the fleeting financing necessities of a firm which incorporates keeping up ideal equalization of capital components – receivables, stock and payables and utilizing the money effectively for day to-day tasks. This likewise finds the connection between capital efficiency and profitability (Madhavilatha, 2016). Capital structure is always a disputable topic. To measure financial performance Return on assets and return on equity were used. The tests show that fixed effect model is suitable and it showed that debt and total assets ratio were significantly negatively related to Return on Assets. From the results of the study it says that the managers who is responsible in dealing with finance should look into the internal sources. They should not rely completely on the debt capital (Logavathani Sivalingam, 2018).

STATEMENT OF PROBLEM

An organization's capital structure is ostensibly one of its most imperative decisions. From a rational point of view, the capital structure is characterized as the cautious balance between equity and debt that a business uses to finance its assets and its advantages, day to day activities, and future development. Capital structure investigates the connection between equity

financing, debt financing and the market value of the firm. It infers that firm ought to boost its value by acquiring an infinite sum. Debts increases the risk of the company in terms of paying fixed charges to debt holders. When debt is used with equity, debt leverages increases the EPS (when company earning is more than the rate of interest). Equity financing helps in the growth of the company without the requirement of repayment to the shareholders. The cost of equity is said to be the rate of return on investment that investors expect in dividends i.e. profits. Capitalization structure, essentially alludes to the cash an organization uses to subsidize activities and where that cash originates from. Capitalization structure has a huge impact on company's profitability. Therefore, it is necessary to find whether the capital structure affects the Financial risk of the company. Post industrial revolution, there were companies that survived and sustained despite heavy competition. This paper is an attempt to analyse the sustainability of the century old FMCG companies. It seeks to explore whether the companies were able to sustain due to their efficiency in managing the debt – equity balance. The paper has also already to explore whether the firms have leveraged on their growth opportunities to mitigate their business risk.

OBJECTIVES

The primary intention of the study is to investigate the impact of most of the capital structure determinants on leverage of FMCG companies.

- To explore whether growth opportunities affect business risks
- To investigate the effect of the select determinants on the debt-equity ratio of the FMCG companies.

RESEARCH METHODOLOGY

The present study is based on secondary data is typically empirical in nature which is analysed quantitively. Data are collected from National Stock Exchange, ACE analyser and the concerned companies' annual reports.

The paper analyses the debt equity structure of 15 companies that manufactures FMCG products and were able to sustain in the business for more than 40 years. The data is chosen for a period of 10 years since 2009 to 2018. Quantitative techniques has been followed. The tool, Panel data Regression analysis is used to determine the variables which impact capital structure.

ANALYSIS

To calculate the company's business risk, the standard deviation of EBIT is divided by mean of EBIT. It is calculated and presented in the table below.

Table 1: Business Risk of the FMCG Companies

Sl No.	FMCG Companies	Business Risk
1	Britannia	0.680
2	Colgate – Palmolive Ltd	0.360
3	Dabur India Ltd	0.318
4	Emami Ltd	0.351
5	Glaxosmithkline Consumer Healthcare Ltd	0.382
6	Godrej Consumer Products	0.488
7	Godrej Industries	0.889
8	Hindustan Unilever Ltd	0.356
9	Itc Ltd	0.331
10	Jubilant Food Works Ltd	0.528
11	Marico Ltd	0.425
12	Procter & Gamble Hygiene & Health Care Ltd	0.522
13	Tata Global Beverages Ltd	0.394
14	United Breweries Ltd	0.396
15	United Spirits Ltd	0.466

From the above table, Godrej industries have high business risk (0.889) the investors are not likely to make investment the company. Comparing to other companies ITC (0.331) and Dabur India Ltd (0.318) have very less risk level so that the new investors and existing investors show keen interest in investing. The fluctuations in the EBIT of Godrej industries renders more risk whereas ITC and Dabur have constant level of EBIT. Other companies are moderately risky companies. As per investors point, low risk companies are good for return benefits.

Table 2: Growth of the Company (in Percentage)

Company	2010	2011	2012	2013	2014	2015	2016	2017	2018
Britannia	25.11	7.67	61.94	43.64	32.23	-3.18	-32.88	23.57	-2.80
Colgate – Palmolive Ltd	47.58	35.52	73.96	27.78	24.04	12.68	13.19	24.53	49.65
Dabur India Ltd	14.64	14.39	28.88	19.70	17.92	12.66	13.67	70.67	-2.29
Emami Ltd	16.00	-7.57	51.03	28.78	18.51	7.72	-0.34	-13.02	17.53

Glaxosmithkline Consumer Healthcare Ltd	8.61	13.37	25.99	19.21	140.83	-26.91	106.56	6.07	18.95
Godrej Consumer Products	6.78	17.77	13.40	13.94	4.25	30.57	79.10	84.31	40.02
Godrej Industries	-15.07	-6.24	1.53	26.80	2.56	48.20	9.80	-17.63	-3.54
Hindustan Unilever Ltd	12.76	3.86	49.81	8.28	16.16	-14.47	27.29	37.12	4.02
Itc Ltd	13.38	8.86	35.38	16.85	17.54	18.39	17.54	13.98	1.86
Jubilant Food Works Ltd	22.50	6.87	16.56	19.55	29.43	44.68	53.00	58.51	18.44
Marico Ltd	3.85	15.58	1.11	12.66	-5.84	62.27	23.66	24.46	40.40
Procter & Gamble Hygiene & Health Care Ltd	-67.96	34.36	22.48	24.46	-24.28	17.05	70.55	21.49	26.94
Tata Global Beverages Ltd	10.71	7.98	-16.47	41.49	27.57	-9.95	6.71	-3.17	0.90
United Breweries Ltd	15.02	4.65	1.93	5.69	-0.81	27.40	12.36	-13.88	7.84
United Spirits Ltd	16.59	13.63	-29.90	-32.72	-29.29	2.06	6.70	-17.18	64.30

From the above table, it is seen that there is constant and sustainable growth in ITC and Jubilant companies. Also the companies Colgate, Dabur, Godrej Consumer Products and Marico Ltd are growing positively. Their percentage of growth is positively increasing.

These companies Britannia, Tata Global Beverages Ltd, Procter & Gamble Hygiene & Health care Ltd, United Breweries Ltd, and United Spirits growth rate are declining in the past few years. Emami Ltd, Glaxosmithkline Consumer Healthcare Ltd, Godrej Industries and Hindustan Unilever Ltd are the companies whose growth rate are fluctuating moderately according to their company's performance.

In order to find out if there is any relationship between growth and business risk, correlation was conducted on the business risk and average annual growth rate of all the 15 companies. This is shown in Table 3. Though the results were not statistically significant but still there exists a negative correlation between business risk and average annual growth rate. This clearly signifies the fact that as companies start increasing their assets the business risk starts reducing.

Table 3: Relationship between Business Risk and Growth

	Business Risk	Growth
Business Risk	1	-.248
Growth	-.248	1

Table 4: Beta Coefficients through panel data regression analysis of select independent variables on Debt – Equity ratio

Model Specification	Intercept	Beta Coefficients				Adjusted R-Square	p-value (F-Statistic)
		Non-Debt Tax Shield	Profitability	Size	Tangibility		
Pooled OLS	0.82	-0.12	-0.34	-0.13	0.09	0.07	0.005
Fixed Effects Method	3.7	-0.41	-0.93	-0.84	0.13	0.28	0.000
Random Effects Method	1.06	-0.22	-0.41	-0.19	0.13	0.09	0.001

Table 5: T values generated through the Panel Data Regression analysis

Model Specification	Intercept	Non-Debt Tax Shield	Profitability	Size	Tangibility
Pooled OLS	2.92	-0.39	-2.23*	-1.64	0.64
Fixed Effects Method	5.77	-1.16	3.82*	-4.87*	0.56
Random Effects Method	3.39	-0.72	-2.55*	-2.14*	0.13

*Significant at $p < 0.05$

The test has been conducted on two effects such as Random Effects Model (REM) and Fixed Effects Model (FEM).

H_0: Random effects model is appropriate

H_1: Fixed effects model is appropriate

H_0 is rejected as the probability value here is 0.000 which is less than 5% which means H_1 to be accepted that FEM is appropriate. The Wald test is adopted to determine the right model among the FEM and the Pooled OLS regression model.

H_0: Pooled OLS regression model is appropriate.

H_1: Fixed Effect model is appropriate

Since the p value of Wald test was greater than 5%, the Pooled OLS model was considered appropriate for the study.

Thus, the equation derived from the Beta Coefficients is presented as under:

Debt/Equity ratio = 0.83 (C) – 0.12 (Non-Debt Tax Shield) – 0.34 (Profitability) – 0.13 (Size) + 0.098 (Tangibility)

Since the probability of profitability is 0.027 which lies below 5% it is said to be statistically significant. Therefore, profitability will affect the debt-equity ratio more. It has a greater impact on companies' capital structure. The other variables do not impact the debt to equity ratio much as they are statistically insignificant as their probability is more than 5%.

CONCLUSIONS

The relationship between dependent and independent variable is been studied in this paper. For the present study, 15 companies have been selected. It is found that tangibility has a positive impact on the leverage. This can be observed through the equation derived from the panel data regression analysis. In contrast size and profitability has a negative effect on the leverage. Business risk also has a relationship with the growth of the companies which are determined by the performance of the companies. Thus, it can be said that profitability is the key determinant which has an impact on the capital structure of FMCG companies.

Profitability of the companies has a negative effect on the Debt-equity ratio. This clearly indicates that these companies have been profitable enough that their dependence on external sources of funding is less. Further, it is also noted that the companies have been rather depending on the non-debt tax shields for tax cover. The non-debt tax shields also show a negative effect. The companies have been taking a cover on tax by investing more on assets, through which they are able to capitalise on non-debt tax shields like depreciation. As the growth in assets is more from the equity funding than the debt funding, their business risk rate is also reduced. Also size has a negative effect on the capital structure that indicates that the firms have been leveraging on the capital markets for funding. This is true with most of the big firms as reported by (Rajan & Luigi, 1995). Tangibility has a positive relationship with the debt-equity ratio. Tangible assets usually have the capacity to reduce the effects of debt. This is due to the fact the tangible assets can be quickly converted into cash compared to intangible assets. The study also proves the same. Therefore the study finds that large firms depend

heavily on the equity funding. Most of their investments on assets are through equity funding. They depend very less on debt funds. This strategy helps them to mitigate the business risk. However, it should also be noted that the adjusted R^2 is only 7% which means there are lot many determinants other than those selected for the study that could affect the Debt-Equity structure. The study brings to light the capital structure strategy that is followed by many of these big FMCG companies that has helped them to sustain in this competitive world, a lesson to be learnt by many of the aspiring start ups in India.

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