PROJECT REPORT

FUNDAMENTAL ANALYSIS OF FMCG SECTOR

Submitted By:

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CERTIFICATE

This is to certify that the project dissertation titled **"FUNDAMENTAL ANALYSIS OF FMCG SECTOR"** is a bonafide work carried out by APURVA MAHESHWARI, MBA final year student of University School of Management & Entrepreneurship, Delhi Technological University in the partial fulfilment of the requirement for the award of the Degree of Masters of Business Administration.

Date:

Sign of head (USME):

DECLARATION

This to declare that I have completed the project titled **"FUNDAMENTAL ANALYSIS OF FMCG SECTOR"** under the guidance of "**Mr. Anurag Chaturvedi"** in the partial fulfillment of the requirement for the award of the degree of "Master in Business Administration" in Business Analytics from University School of Management & Entrepreneurship, Delhi Technological University, Delhi. This is my original work and I have not submitted it earlier elsewhere.

NAME – APURVA MAHESHWARI

Roll no. 2K18/MBA/904

ACKNOWLEDGEMENT

I offer my humble gratitude to my project mentor Mr. Anurag Chaturvedi from the esteemed Management department of USME. The project report became possible under your sheer support & guidance throughout the summer internship.

With the help of my guide, my training head & the learnings I did as part of my internship, I present to you my report on the topic "Fundamental Analysis of FMCG Sector in India". I am also thankful to him for giving his suggestions and encouragement throughout the project.

It gave immensely thankful to my family and friends for constantly motivating me to complete the project within stipulated time frame and providing me an environment which enhanced my knowledge necessary for the completion of the project.

APURVA MAHESHWARI

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1. INTRODUCTION

- **Industry Profile**

FMCG Industry in India is one of the quickest developing divisions in the Indian market taking into account the Indian crowd. There're 3 essential areas inside the division – food and refreshments which represent 19% of the portion, healthcare sector services which represent 31% and family and individual consideration representing the remaining portion.

It is the 4th biggest area in the market. The size of the sector was regarded at $10,020.0 billion in 2017 and is foreseen to reach $ 15,361.8 billion by 2025, having an exacerbated yearly development pace of 5.4% from 2018 to 2025.

Quick moving items consist of things that are sold quickly and for the most part at a low cost. Illustrations incorporate non-durable family products like packaged items, refreshments, toiletries, OTC medications, and different consumables.

DIVISION COMPOSITION

This sector has basically three divisions describes as follows:-

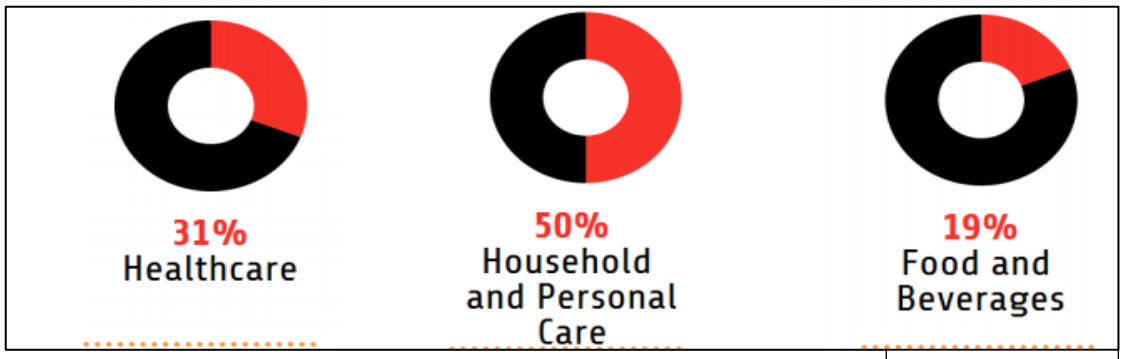


Figure 1.1

1. **Healthcare:**

These services have taken up probably the greatest division - both as far as pay is concerned or the employability and addresses 31 percent of industry. Sector is spiraling at the incredible and quick pace because of its fortifying inclusion, administrations and expanding consumption by the both open segment players and the private part players.

2. **Household & Personal Care**

It is the undeniable part and records for 50 percent of the general piece of the pie. Hair care takes to 23 percent comes following regarding piece of the overall industry. Beauty care products, aromas, hair care, healthy skin, are the key sections of the segment. Every one of these fragments shows their intriguing examples and development structures.

3. **Food & Beverages**

This segment addresses 19% in sector. This segment includes processed natural products & vegetables, dairy item, cereals, pastry kitchen items, snacks, supplying crude chocolates, ice cream, tea/coffee/soft drinks etc.

KEY POINTS

- Changing lifestyles has been the important improvement drivers for the FMCG sector. The urban part (has the income portion of 55%) is the greatest supporter of the pay delivered by the FMCG division.
    - Rural fragment represents 45% income share while the urban portion represents income portion of 55% in the for the most part generally speaking incomes recorded by FMCG area in India.
- The FMCG sector has seen good inflows of FDI of 14.7 billion USD, in the midst of April 2000 to March 2019.

SCOPE OF FMCG INDUSTRY IN INDIA

- Organizations in this sector have gone up against outrageous rivalry among themselves over a long time which is unendingly growing. This is regularly because of the expansion in per capita pay amidst various progressions in semi urban & rural sector.

- The sector has changed its techniques and chosen for organized exhibiting of the things to enter both the common and urban markets. The organizations are contracting progressively people which have headed to an augmentation inside the work prospects in this division.

- FMCG division in economy is one of the preeminent important sections in economy.

- Henceforth, FMCG section is making huge business with extraordinary career possibilities. Advancing, retail, bargains, organizations, and flexibly are the key zones which produces most noteworthy scope in Industry.

ATTRIBUTES OF FMCG MARKET

From the purchaser's perspective

- Frequent buying
- Less consideration
- Less expense
- Shorter timeframe of realistic usability
- Fast use of products.

From the advertiser's perspective

- Increased volumes
- Less margins
- Increased stock turnover

VARIABLES THAT SPEED UP THE DEVELOPMENT OF FMCG SECTOR

1. More significant compensation for rural households' use.
2. Propelled tastes and tendencies
3. Emphasis on research and development
4. Great Investments
5. Activities of and undertaken by government
6. Exchange of goods channels

The business is exceedingly serious because of the quality of global organizations, - private organizations and disorderly division.

GROWTH OF FMCG SECTOR IN INDIA

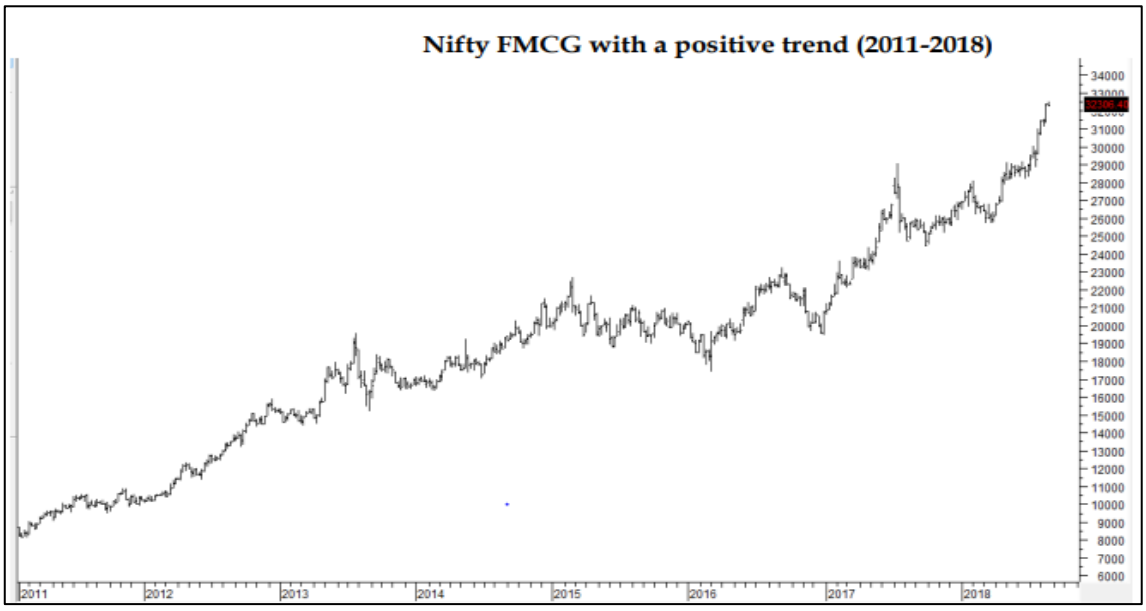
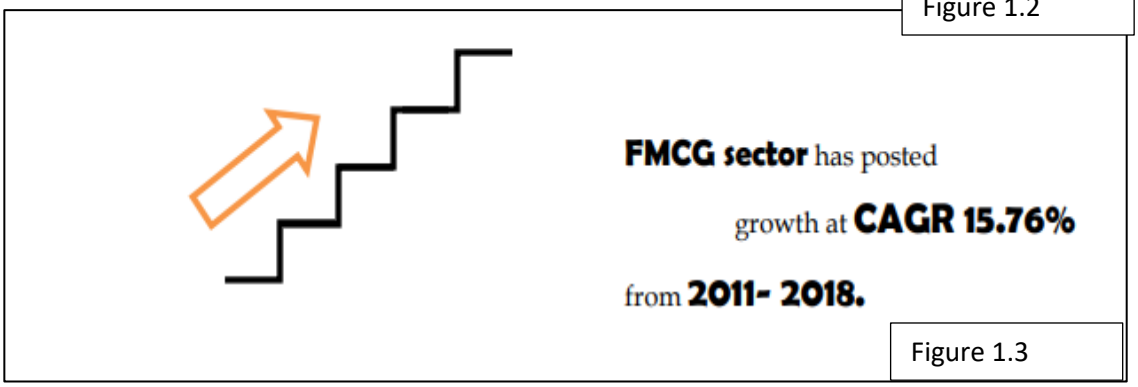


Figure 1.2



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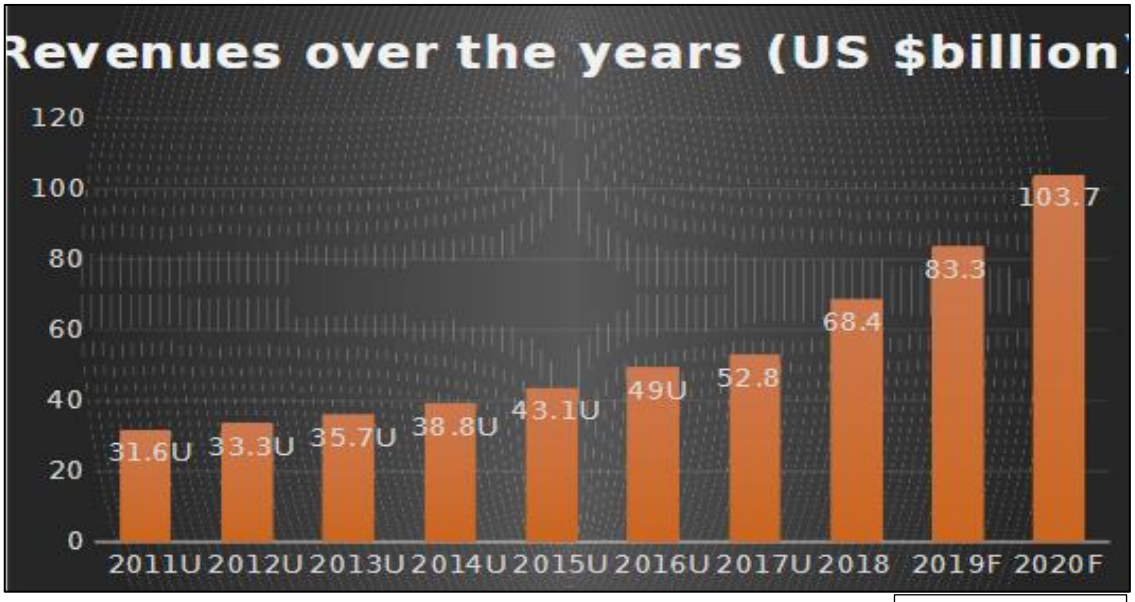


Figure 1.4

- **ORGANIZATIONS' PROFILE**

1) HINDUSTAN UNILIVER LIMITED (HUL)

Type	Public
Industry	FMCG-Consumer goods
Founded	1932
Headquarters	Mumbai,India
Products	Foods,beverages,personal care,cleaning agents
Revenue	Rs. 38,224 crores(2018-19)
Net income	Rs. 6036 crores(2018-19)
Parent	Unilever Plc(67%)

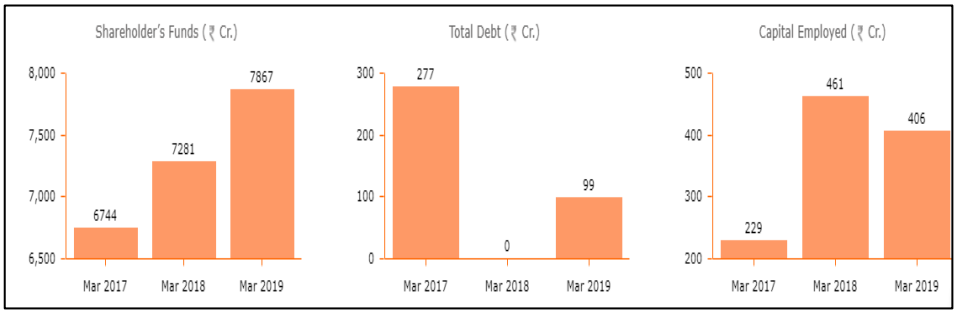
Table 1.1 – Overview of HUL

Hindustan Unilever Ltd. (HUL) is an Indian consumer goods organization situated in Mumbai, Maharashtra.HUL's things consolidate food, refreshments, cleaning authorities, singular consideration things, and water purifiers. It is controlled by Anglo-Dutch organization Unilever having over 67% shareholding in HUL and is the holding organization of HUL.

Organisation is having around 18k agents and has revenue of INR 38224 crores (2018-19). HUL, a subsidiary of Unilever, one of the world's driving suppliers of Nourishment, Domestic Care, Individual Care etc.

As on 30 Apr.'20

Fig-1.5



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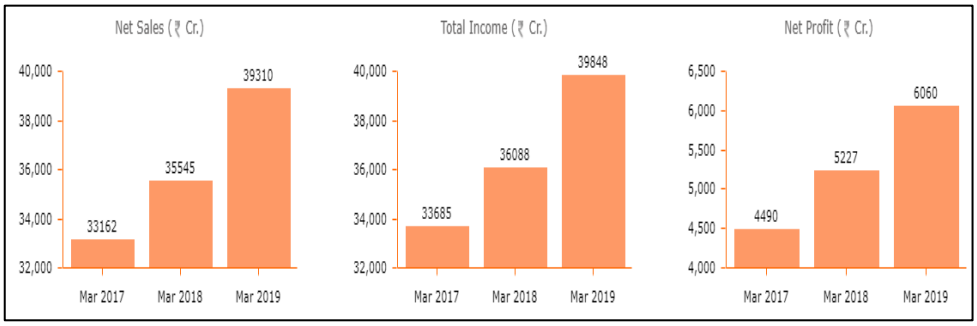

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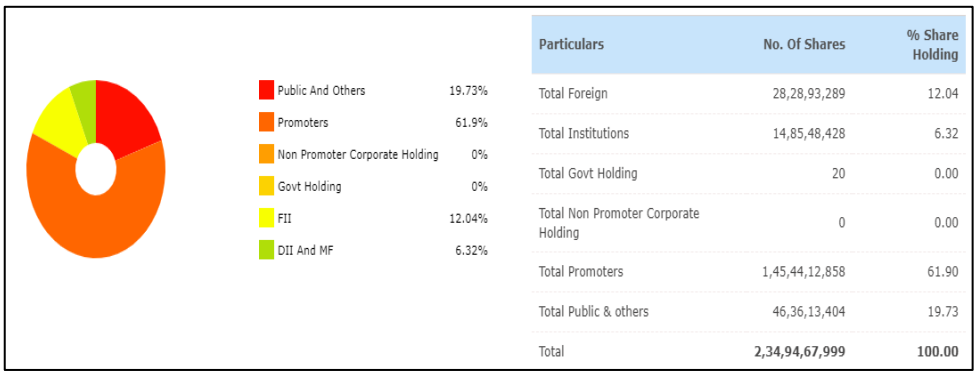


Particulars	No. Of Shares	% Share Holding
Total Foreign	28,28,93,289	12.04
Total Institutions	14,85,48,428	6.32
Total Govt Holding	20	0.00
Total Non Promoter Corporate Holding	0	0.00
Total Promoters	1,45,44,12,858	61.90
Total Public & others	46,36,13,404	19.73
Total	**2,34,94,67,999**	**100.00**

Fig-1.8

2) GODREJ CONSUMER PRODUCTS

Type	Public
Industry	FMCG-Consumer goods
Founded	2001
Headquarters	Mumbai
Products	Personal care products & cleaning agents
Revenue	1.5 bn USD (2019)
Net income	US$160 million (2019)
Parent	Godrej group

Table 1.2 – Overview of Godrej Consumers Products Ltd.

Godrej Customer Products Ltd (GCPL) is one of the driving FMCG organizations in India. The organization has five thing segments explicitly Family Bug splashes, Cleansers, Hair Colors, Fluid Cleansers and Air Fresheners. The organization is among the greatest publicist of toiletries in the country with driving brands, for example, Cinthol, Fairglow, and Godrej No 1. Fairglow, India's first cleanser made displaying history as one of the principal fruitful advancements.

BRAND PORTFOLIO

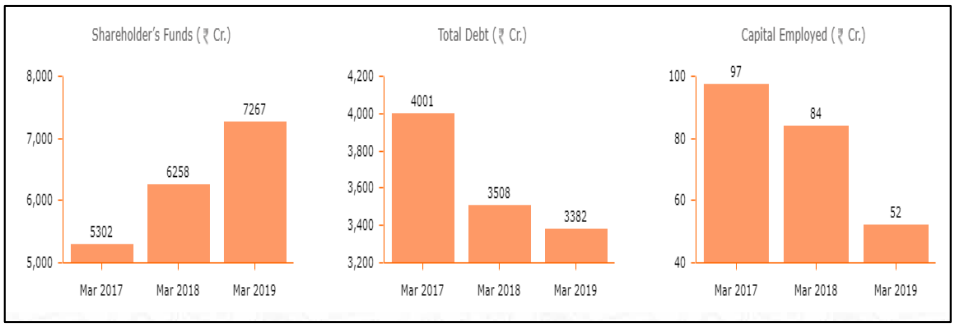
Fig-1.9

BUSINESS PERFORMANCE

Fig1.10

As on 30 Apr.'20

Fig-1.10



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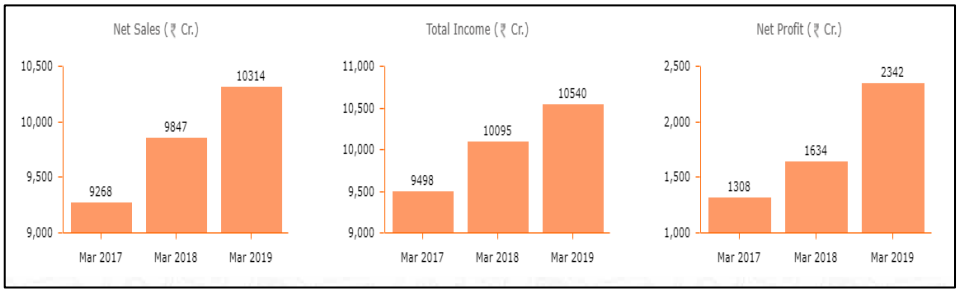

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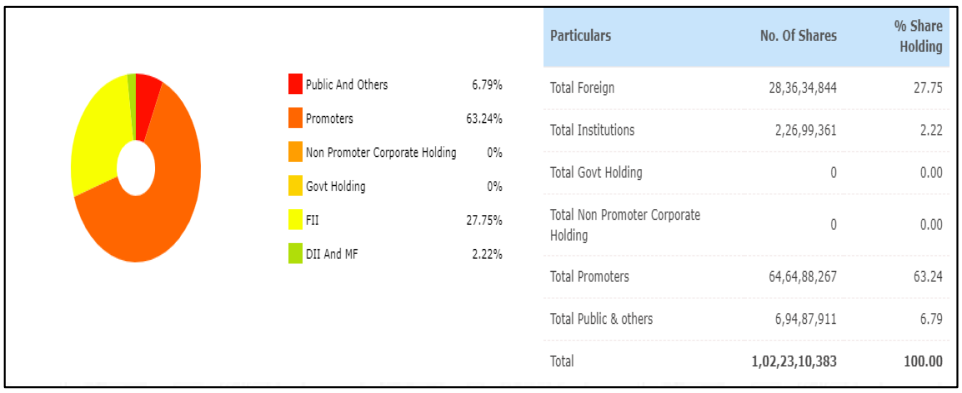


Particulars	No. Of Shares	% Share Holding
Total Foreign	28,36,34,844	27.75
Total Institutions	2,26,99,361	2.22
Total Govt Holding	0	0.00
Total Non Promoter Corporate Holding	0	0.00
Total Promoters	64,64,88,267	63.24
Total Public & others	6,94,87,911	6.79
Total	**1,02,23,10,383**	**100.00**

Fig-1.13

3) MARICO

Type	Public
Industry	FMCG-Consumer goods
Founded	1990
Headquarters	Mumbai,India
Products	Edible Oil, Hair Care, Skin Care, Healthy Foods, etc
Revenue	1.0 billion USD(2019)
Net income	INR 1,132 crores (2019)
Parent	Marico

Table 1.3 – Overview of Marico Ltd.

MAJOR BRANDS

Fig-1.14

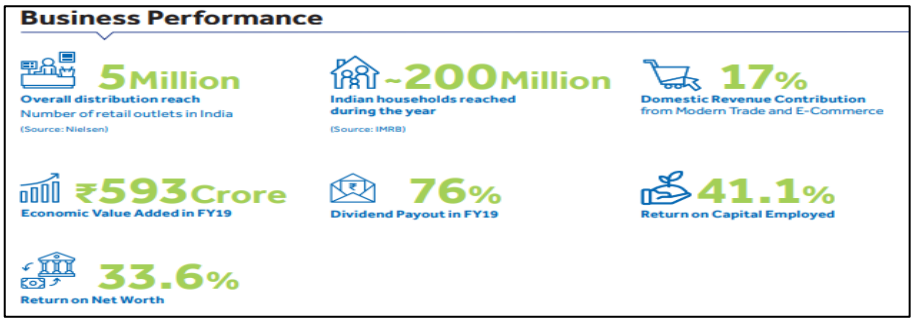
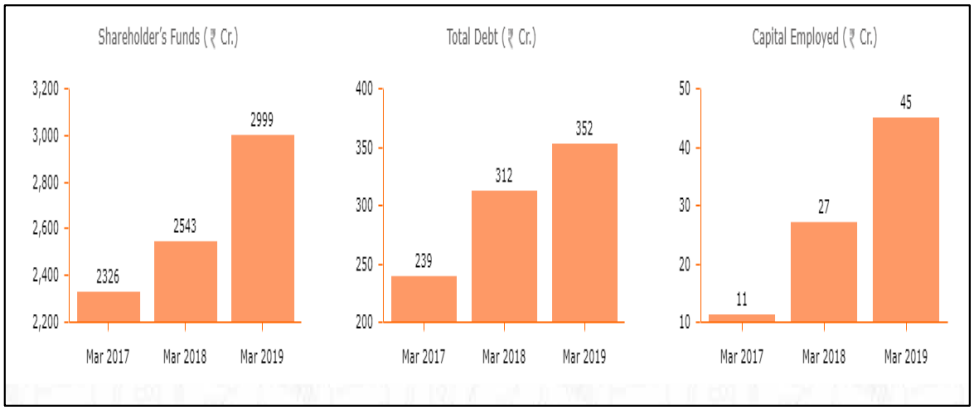


Fig-1.15

As on 30Apr.'20

Fig-1.16



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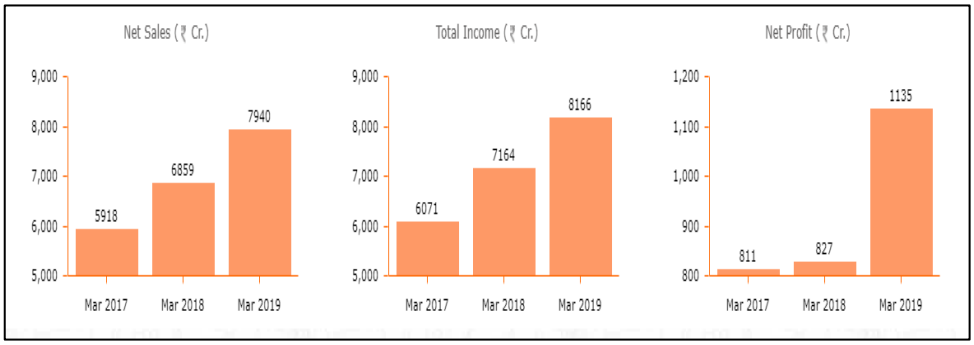

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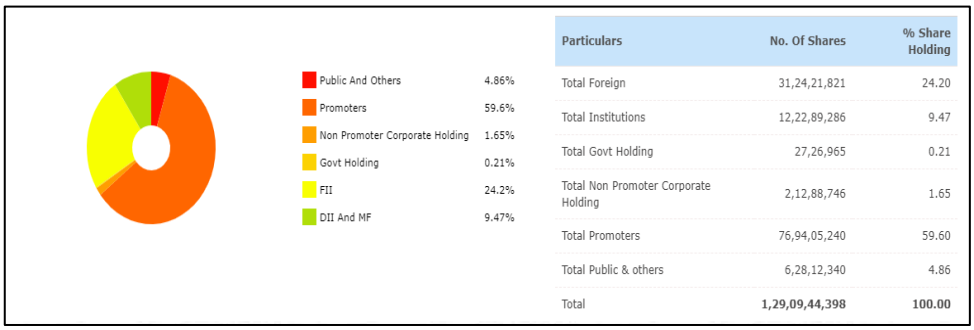


Particulars	No. Of Shares	% Share Holding
Total Foreign	31,24,21,821	24.20
Total Institutions	12,22,89,286	9.47
Total Govt Holding	27,26,965	0.21
Total Non Promoter Corporate Holding	2,12,88,746	1.65
Total Promoters	76,94,05,240	59.60
Total Public & others	6,28,12,340	4.86
Total	**1,29,09,44,398**	**100.00**

Fig-1.19

4) DABUR

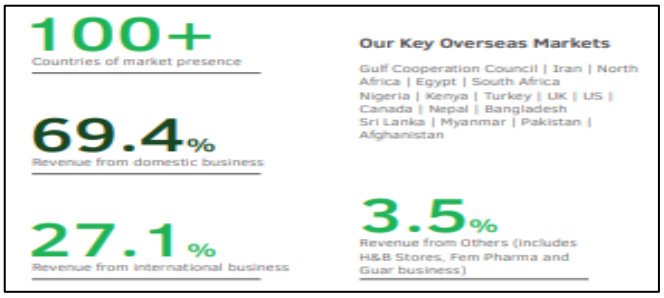
Type	Public
Industry	FMCG-Consumer goods
Founded	1884
Headquarters	Sahibabad, Ghaziabad, Uttar Pradesh,India
Products	Health supplements, & Ayurvedic medicines,Personal care ,Home care etc.
Revenue	US$1.2 billion (2019)
Net income	US$200 million (2019)
Parent	Dabur

Table 1.4 – Overview of Dabur India Ltd.

BRAND PORTFOLIO

Fig-1.20

BUSINESS PERFORMANCE



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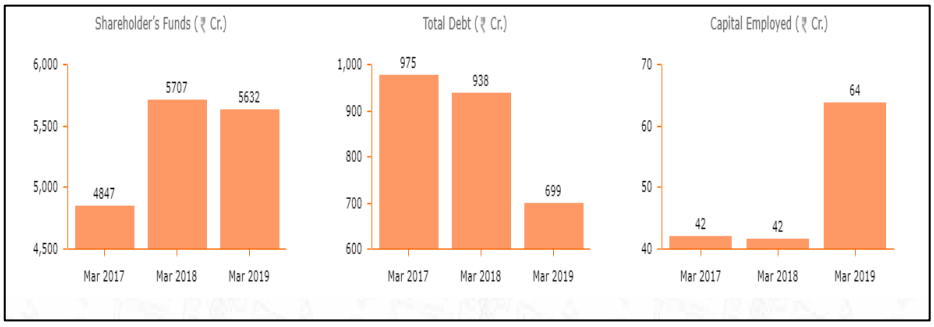
As on 30 Apr.'20

Fig-1.22



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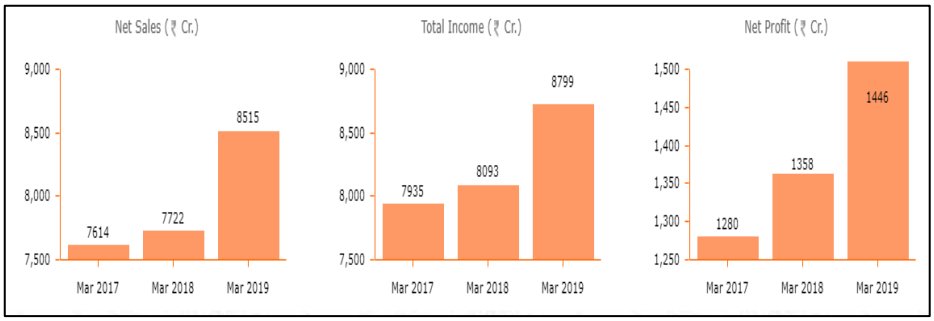

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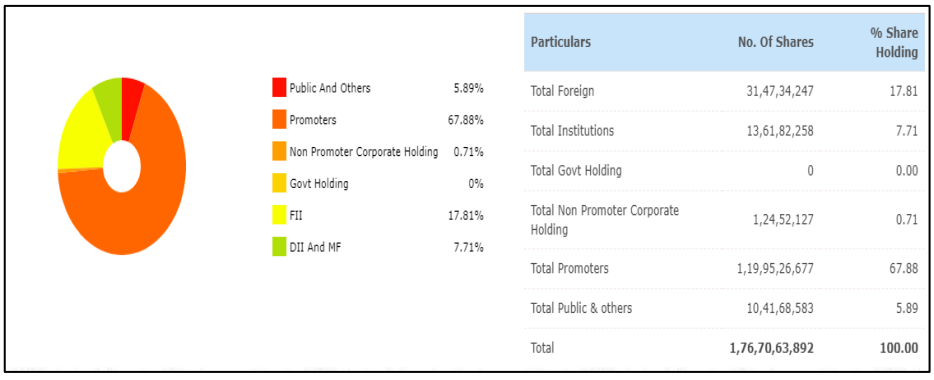


Particulars	No. Of Shares	% Share Holding
Total Foreign	31,47,34,247	17.81
Total Institutions	13,61,82,258	7.71
Total Govt Holding	0	0.00
Total Non Promoter Corporate Holding	1,24,52,127	0.71
Total Promoters	1,19,95,26,677	67.88
Total Public & others	10,41,68,583	5.89
Total	**1,76,70,63,892**	**100.00**

Fig-1.25

5) ITC

Type	Public
Industry	FMCG-Consumer goods,Conglomerate
Founded	1910
Headquarters	Kolkata,West Bengal,India
Products	Personal care, Foods,beverages, etc
Revenue	US$7.3 billion (2019)
Net income	US$1.8 billion (2019)
Parent	Dabur

Table 1.5 – Overview of ITC Ltd.

BRAND PORTFOLIO

Fig-1.26

BUSINESS PERFORMANCE

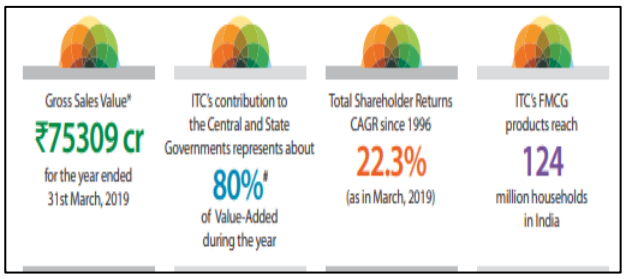
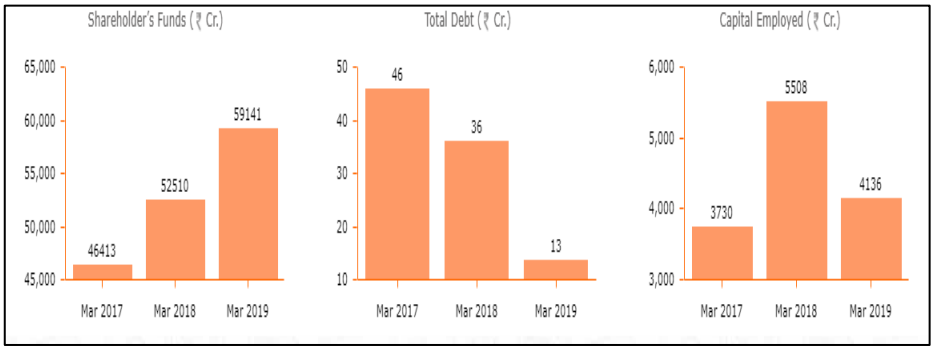


Fig-1.27

As on 30 Apr.,'20

Fig-1.28



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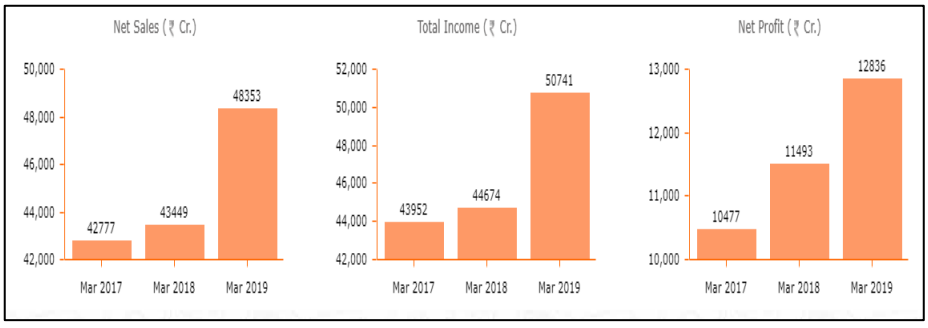

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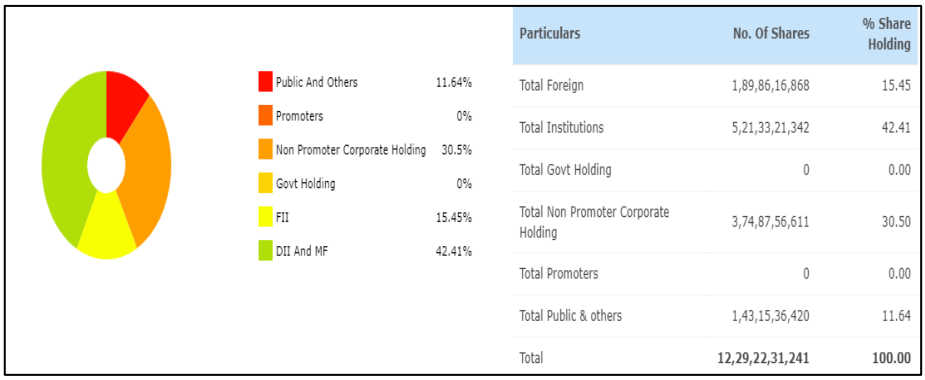


Particulars	No. Of Shares	% Share Holding
Total Foreign	1,89,86,16,868	15.45
Total Institutions	5,21,33,21,342	42.41
Total Govt Holding	0	0.00
Total Non Promoter Corporate Holding	3,74,87,56,611	30.50
Total Promoters	0	0.00
Total Public & others	1,43,15,36,420	11.64
Total	**12,29,22,31,241**	**100.00**

Fig-1.31

- **OBJECTIVES OF STUDY**

Report has undertaken fundamental analysis of FMCG sector. The main objective of this report is to find some good performing stocks for the investor so as to make good portfolio. I am focussing on winning greatest benefits by analyzing patterns of the industry & by doing fundamental analysis. Other goals are recorded underneath:

PRIMARY OBJECTIVES

- To gather information about industry & its importance in economy.
- Calculate the risk of the stocks.
- To discover out the few proportions & analyse them for the reason of investment.
- To direct investor that in which stock is worth investing.

SECONDARY OBJECTIVES

- Selection the best stock amongst the five companies.
- To evaluate can this analysis alone determine good investments.
- To know about the FMCG sector, how it operates in economy, what does it cater to the people etc.

2. LITERATURE REVIEW

This project report describes the Fundamental Analysis of FMCG sector . It aims to target the companies with a certain selection criteria from the period from 2014-15 to 2018-19. The core objective of the report is to fulfil the requirement of the MBA program as prescribe by USME, DTU.

Based on the market cap and positioning of the company in the market, five companies are chosen on a certain criteria enlisted further to know which stock is underperforming, outperforming or averagely performing with respect to the benchmark index taken.

In case of company analysis, key profitability and liquidity ratios are taken so as to simplify the compkex data into user friendly form for the investor. The analysis points out certain areas where the top management can work upon to bring up the revenue and down the costs for the respective companies.

In totality, five companies are selected and their data has been taken from different sources so as to know and ascertain their stock performance. Alongside ratio analysis, SWOT analysis, one wayANOVA,BMW model is also used to analyse the performance.

All in all, there are three phases to the fundamental analysis:

- Looking into economic and sectoral environment & developments
- Intepreting the goods and bads of the industry
- Assessing company's performance

Beta analysis

Beta Analysis is basically the exploration or investigation of stocks' return for the explanation of various investments. Each monetary authority and financial institutions needs progressively advantage on their venture. For this portion of advantage, the financial specialist persistently attempts to pick right security and portfolio for the investment purpose. As a rule term, the higher benefit is straightforwardly identified with higher risk, there's a high positive correlation between the two. FMCG sector assumes a significant role in the financial advancement of the nation.

SWOT Analysis

An industry refers to as the homogeneous mixture of various firms. Popularly, described as the combination of organizations making reasonably relative and consumer things that serve the equivalent expect of the basic arrangement of purchasers. The advantage of the industry relies on advancement. These externalities rely upon the availabilities of control and relationships between the industry and economy. In India, organizations like Dabur, ITC, Marico, HUL and P&G are the predominant drivers of the FMCG section supported by less rivalry.

Company Analysis-

Examination of the company is the strategy for recognizing the financial strengths and deficiencies of the organization by truly setting up the connection between the things of asset and liabilities report, p&l account and other cash related clarifications. The principal successful instrument of money related or financial examination is ratio investigation. The project has utilized the ratios analysis in company analysis section.

THEORETICAL FRAMEWORK

The fundamental analysis fixates on ascertaining the security's fair worth and compares it with the market cost to choose if the security is excessively esteemed(over-valued) or underestimated (under-valued) according to market or genuinely priced(fairly priced). By taking into account the monetary variables that sway the hypothesis dynamic, this assessment can evaluate future patterns dependent on the company's or the market's certified potential. I will perform key investigation on organizations.

The term basically implies the investigation of the money related prosperity of the fiscal element rather than just its cost developments. Fundamental analysis is used most consistently in the context of stocks, however, we are capable perform a key analysis on any security, from the bond to the subsidiary. For all this, fundamental analysis is persistently is implied in the context of stocks.

The principal investigation stresses on computing the security's fair worth and compares it to the market cost to choose if the security is overstated, belittled, or genuinely regarded. By thinking about the budgetary components that sway investment decision making, this investigation can evaluate future patterns dependent on the market's real potential. The term essentially insinuates the assessment of the financial well-being as negated to just its cost advancements.

Government Initiatives

- Indian government has given100 per cent Foreign Direct Investment (FDI) approval in the cash and carry section and 51 per cent FDI in multi-brand retail.
- The Government of India has drafted the new Consumer Protection Bill with a special reference on broad instrument to guarantee basic, fast, available, moderate, and auspicious delivery of products to buyers.

3. RESEARCH METHODOLOGY

Research methodology could be the means to methodically unravel the respective issue. It is the depiction, clarification of different strategies of conduction of research. It incorporates the different steps that are by & large taken up by the researcher in examining his issue alongside the rationale.

CRITERIA FOR COMPANIES -:

- Sector companies must be listed in stock market (NIFTY or SENSEX)
- Five years' data ranging from 2014-15 to 2018-19.
- Financial year-Apr to Mar

Companies that satisfy the above conditions are:

a) HUL
b) ITC
c) Dabur Ltd.
d) Godrej Consumers
e) Marico Limited

SOURCE OF DATA- The study is based on the secondary information. One of the main source of data or information is the statements published by the companies. Sources utilized in this study are:

- Companies' AR (Annual reports)
- Different Sites
- Various reference Books

PERIOD OF STUDY

Period of study ranges from 2014-15 to 2018-19 i.e. five years.

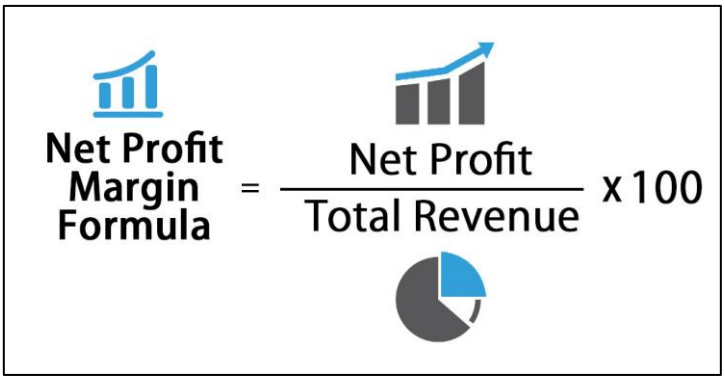
TOOLS USED FOR ANALYSIS

1. Ratios – Profitability & Liquidity Ratios of the companies
2. ANOVA one-way testing
3. SWOT analysis

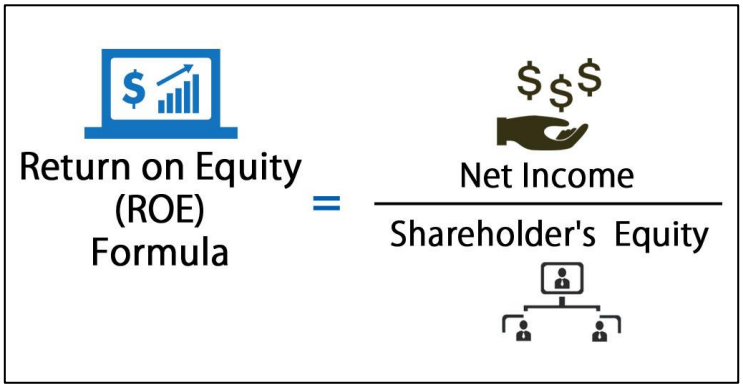
- **RATIOS :**

A. PROFITABILITY RATIOS USED :

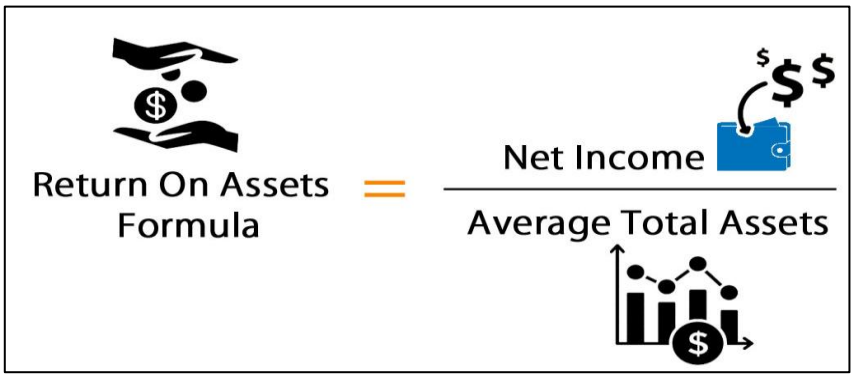
a) **Net Profit Ratio:** Net profit margin measures the profits after tax or after tax profits with respect to the net sales generated by company.



b) **Return on Equity:** To ascertain how much return is to be fetched with respect to money invested in the company, ROE is used.



c) **Return on Assets (ROA) :** How much return a company is fetching with respect to its assets is determined by ROA.



B. LIQUIDITY RATIOS USED:

a) Current ratio: How much short term or current assets are being utilised by the businesses to meet the short term obligations is determined by this ratio.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

b) Quick Ratio/ Acid test ratio

How fast and quickly the quick assets can help in covering the short term obligations is being determined by this ratio.

$$\text{Quick Ratio} = \frac{\text{Cash \& Cash Equivalents + Current Receivables + Short-term Investments}}{\text{Current Liabilities}}$$

- **ANOVA TESTING:**

One independent variable experiment is known as one way ANOVA. This study has only one independent variable which is years taken from 2014-15 to 2018-19. ANOVA means Analysis of Variance, to set of statistical techniques so as to for study the cause & effect relationship of one or more factors. ANOVA is used when independent variables are of nominal scale (categorical) & dependent variable is metric (continuous).

The variance between group are compared with the groups' within variance, so as to determine whether there the variables are significantly different or not.

Sums of squares (squared deviations from the mean) tell the story of variance. The simple ANOVA designs have 3 sums of squares.

$$SS_{tot} = \sum (X_i - \overline{X}_G)^2$$

The total sum of squares comes from the distance of all the scores from the grand mean. This is the total; it's all you have.

$$SS_W = \sum (X_i - \overline{X}_A)^2$$

The within-group or within-cell sum of squares comes from the distance of the observations to the cell means. This indicates error.

$$SS_B = \sum N_A (\overline{X}_A - \overline{X}_G)^2$$

The between-cells or between-groups sum of squares tells of the distance of the cell means from the grand mean. This indicates IV effects.

$$SS_{TOT} = SS_B + SS_W$$

F Ratio- Division of SS_b i.e. between sum of squares is done with SS_w i.e. within sum of squares to compute or calculate the value of F ratio.

MS- Popularly known as square of mean or mean squares. It helps in determination of variance of the average or mean of SS_b i.e. between sum of squares and SS_w i.e. within sum of squares

Df refers to as degrees of freedom. One has to be deducted from no.s of groups to calculate df.

$MS_{between}$ and MS_{within} can be written as follows:

$$MS_{between} = \frac{SS_{between}}{df_{between}} = \frac{SS_{between}}{k - 1}$$

$$MS_{within} = \frac{SS_{within}}{df_{within}} = \frac{SS_{within}}{n - k}$$

Where as, $SS_{total} = SS_{between} + SS_{within}$

Hypothesis Study

- **Null For Profitability ratios (H_{01})** = No significant difference in average profitability performance amongst selected companies.
- **For Liquidity ratios (H_{02})** = No significant difference in average liquidity performance amongst selected companies.

4. FUNDAMENTAL ANALYSIS

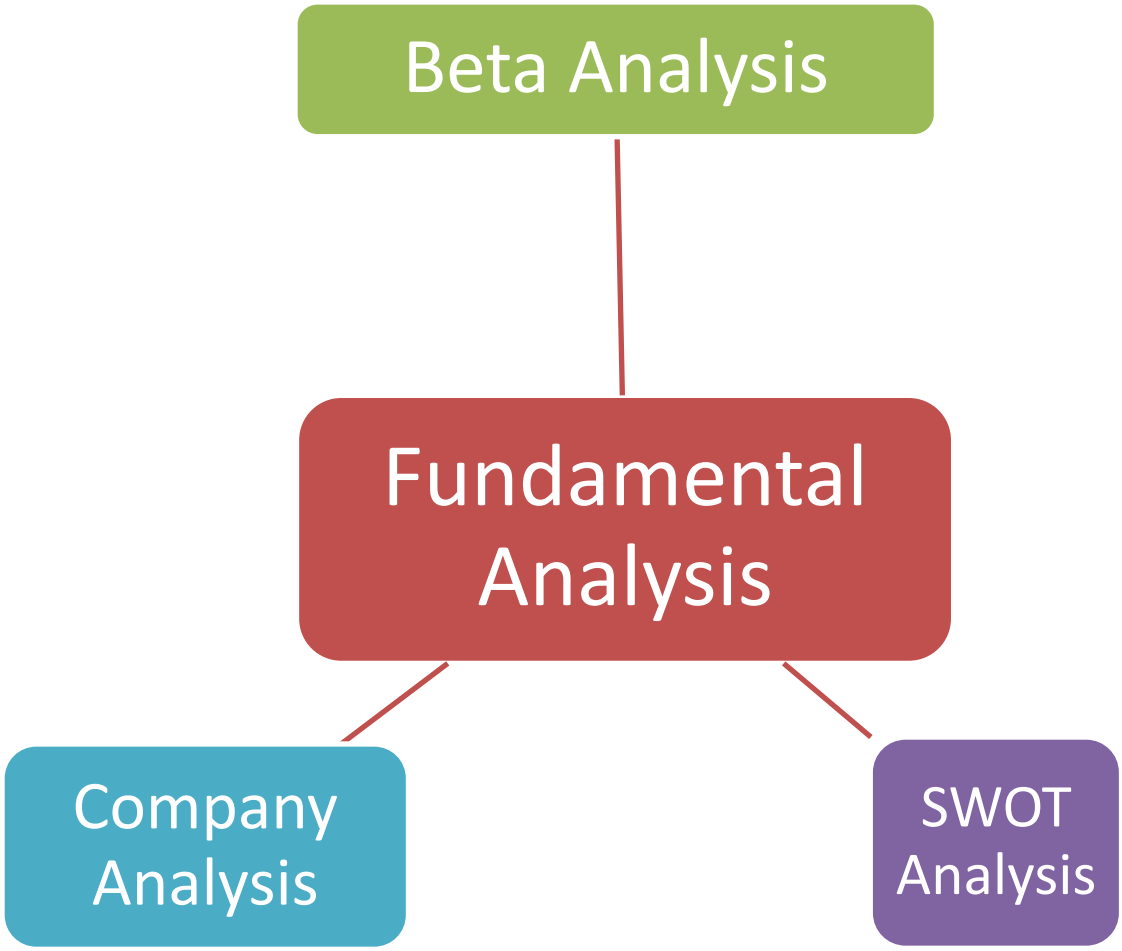


Figure- 4.1

SWOT ANALYSIS

A. STRENGTHS-

- Lower operational costs.
- Foreign Direct Investment is permitted.
- Recognized distribution systems in both urban & rural areas.
- Favourable Government & Foreign policies.

B. WEAKNESS

- The level of exports are generally low.
- Unrightfully made copy names of the known brands of FMCG product decreased the scope in urban & semi-urban market.
- Lower scope of contributing in innovation as well as technology of small - scale segments.

C. OPPORTUNITIES

- Large domestic market.
- Export potential
- Untapped rural markets.
- Spending on consumer goods is pretty high.

D. THREATS

- Since rural demand depends on monsoon, there is the possibility of slowdown in demand.
- Tax & regulatory structure.

COMPANY ANALYSIS

COMPANY ANALYSIS

I. PROFITABILITY RATIO ANALYSIS WITH ANOVA

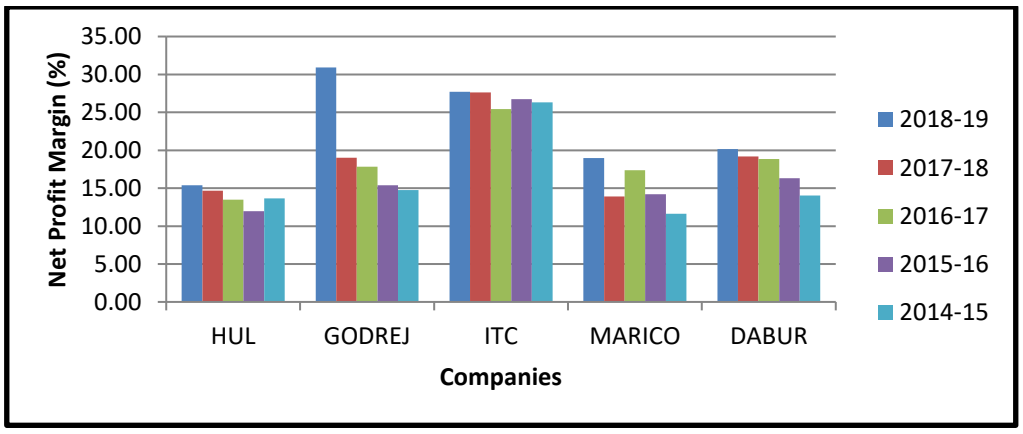
a) Net Profit Ratio

NET PROFIT RATIO					
Year	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**
2018-19	15.40	30.90	27.70	18.95	20.15
2017-18	14.66	19.00	27.62	13.89	19.17
2016-17	13.49	17.85	25.44	17.37	18.86
2015-16	11.95	15.37	26.72	14.18	16.33
2014-15	13.64	14.77	26.31	11.64	14.04

Table 4.1 – Net profit ratios of companies (2014-15 to 2018-19)

ANOVA					
Source of Variation	***SS***	***df***	***MS***	***F***	***F critical***
Between Groups	512.96	4	128.24	10.61	2.87
Within Groups	241.72	20	12.09		
Total	754.68	24			

Table 4.2- Anova Analysis of companies



Conclusion – From the ANOVA table, it can be analysed that F critical at 5% level of significance is 2.87 & F calculated is 10.61. When the F calculated value is higher than F critical value, there's a case of rejection of null hypothesis. Thus, it means there is significant difference in NP ratios of five companies during 2014-19.

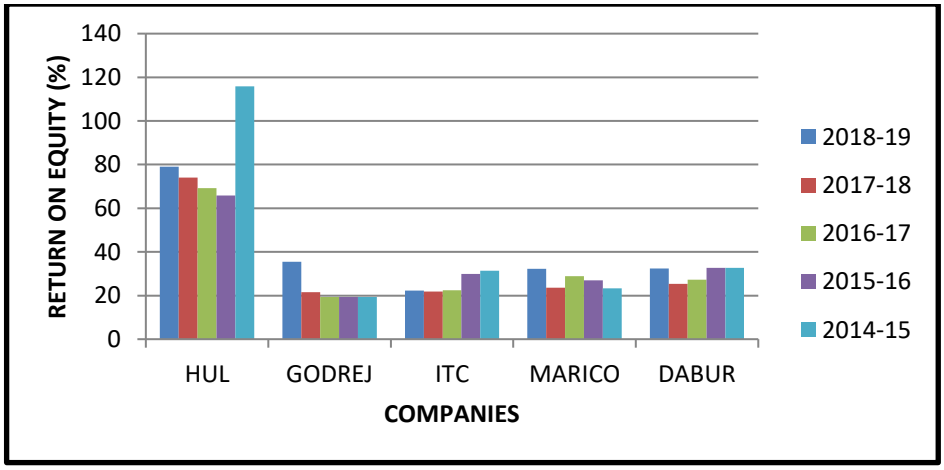
b) Return on Equity (ROE)

RETURN ON EQUITY RATIO					
Year	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**
2018-19	79.06	35.42	22.27	32.26	32.46
2017-18	74.02	21.54	21.83	23.61	25.36
2016-17	69.18	19.38	22.49	28.81	27.29
2015-16	65.88	19.34	29.94	27.01	32.71
2014-15	115.87	19.34	31.31	23.26	32.64

Table 4.3 – ROE ratios of companies (2014-15 to 2018-19)

ANOVA					
Source of Variation	***SS***	***df***	***MS***	***F***	***F critical***
Between Groups	11963.45	4	2990.86	29.54	2.87
Within Groups	2024.84	20	101.24		
Total	13988.30	24			

Table 4.4 Anova Analysis



Conclusion – From the ANOVA table, it can be analysed that F critical at 5% level of significance is 2.87 & F calculated is 29.54 When the F calculated value is higher than F critical value, there's a case of rejection of null hypothesis. Thus, it means there is significant difference in ROE ratios of five companies during 2014-19.

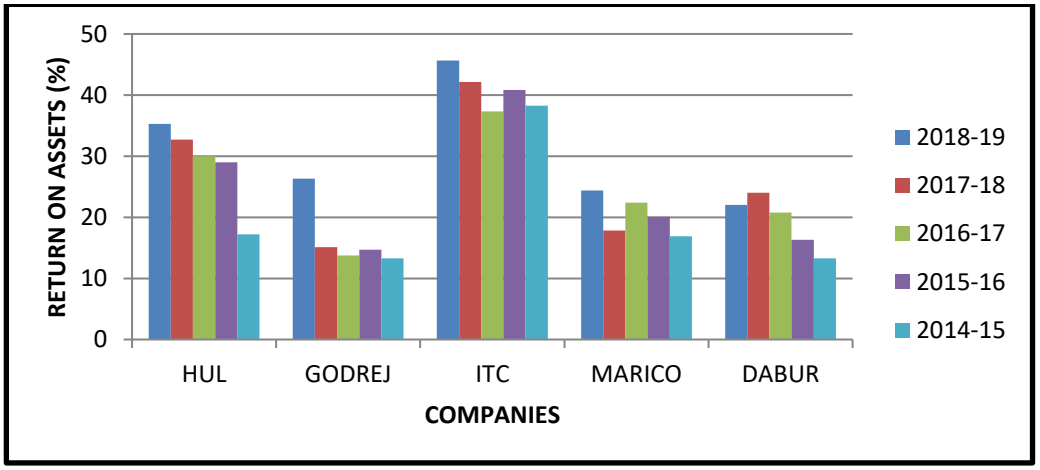
c) Return on Assets Ratio

RETURN ON ASSETS RATIO					
Year	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**
2018-19	35.27	26.33	45.64	24.39	22.05
2017-18	32.69	15.09	42.12	17.86	24.00
2016-17	29.99	13.75	37.33	22.39	20.77
2015-16	29.02	14.71	40.85	20.09	16.32
2014-15	17.22	13.29	38.28	16.87	13.30

Table 4.5– ROA ratios of companies (2014-15 to 2018-19)

ANOVA					
Source of Variation	***SS***	***df***	***MS***	***F***	***F critical***
Between Groups	1950.56	4	487.64	20.70	2.87
Within Groups	471.25	20	23.56		
Total	2421.80	24			

Table 4.6 – ANOVA analysis



Conclusion – From the ANOVA table, it can be analysed that F critical at 5% level of significance is 2.87 & F calculated is 20.7 When the F calculated value is higher than F critical value, there's a case of rejection of null hypothesis. Thus, it means there is significant difference in ROA ratios of five companies during 2014-19.

II. LIQUIDITY RATIO ANALYSIS WITH ANOVA

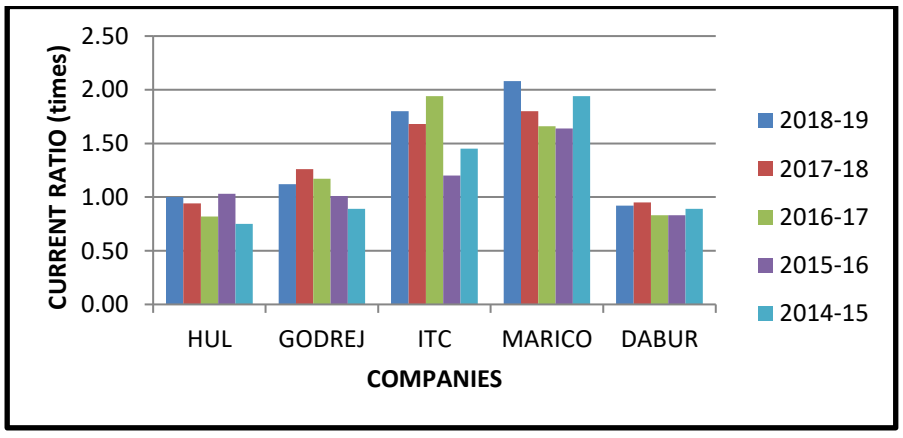
- **Current Ratio**

CURRENT RATIO					
Year	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**
2018-19	1.00	1.12	1.80	2.08	0.92
2017-18	0.94	1.26	1.68	1.80	0.95
2016-17	0.82	1.17	1.94	1.66	0.83
2015-16	1.03	1.01	1.20	1.64	0.83
2014-15	0.75	0.89	1.45	1.94	0.89

Table 4.7 – Current ratios of companies (2014-15 to 2018-19)

ANOVA					
Source of Variation	***SS***	***df***	***MS***	***F***	***F critical***
Between Groups	3.68	4	0.92	29.03	2.87
Within Groups	0.63	20	0.03		
Total	4.32	24			

Table 4.8 – ANOVA Analysis



Conclusion – From the ANOVA table, it can be analysed that F critical at 5% level of significance is 2.87 & F calculated is 29.03. When the F calculated value is higher than F critical value, there's a case of rejection of null hypothesis. Thus, it means there is significant difference in current ratios of five companies during 2014-19.

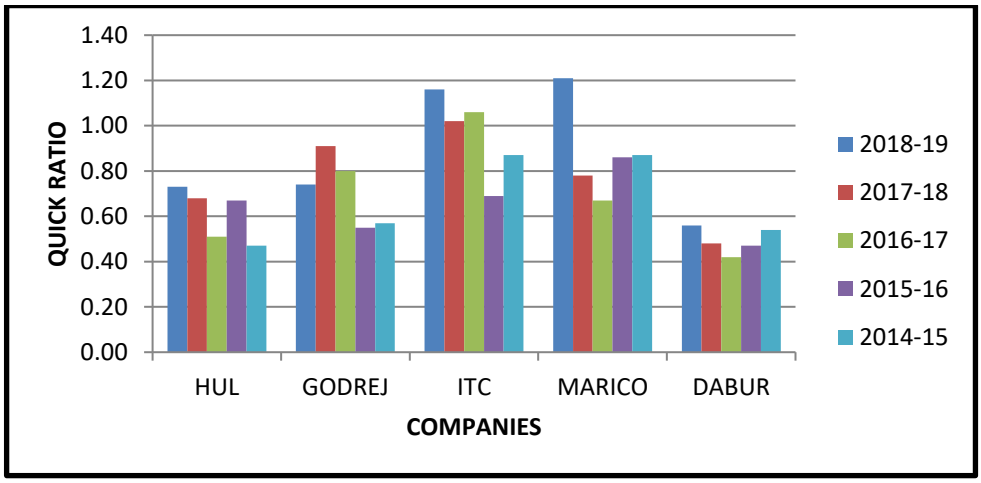
- **Quick/Acid Test Ratio**

QUICK RATIO					
Year	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**
2018-19	0.73	0.74	1.16	1.21	0.56
2017-18	0.68	0.91	1.02	0.78	0.48
2016-17	0.51	0.80	1.06	0.67	0.42
2015-16	0.67	0.55	0.69	0.86	0.47
2014-15	0.47	0.57	0.87	0.87	0.54

Table 4.9 – Quick ratios of companies (2014-15 to 2018-19)

ANOVA					
Source of Variation	***SS***	***df***	***MS***	***F***	***F critical***
Between Groups	0.72	4	0.18	7.91	2.87
Within Groups	0.46	20	0.02		
Total	1.18	24			

Table 4.10 – ANOVA Analysis



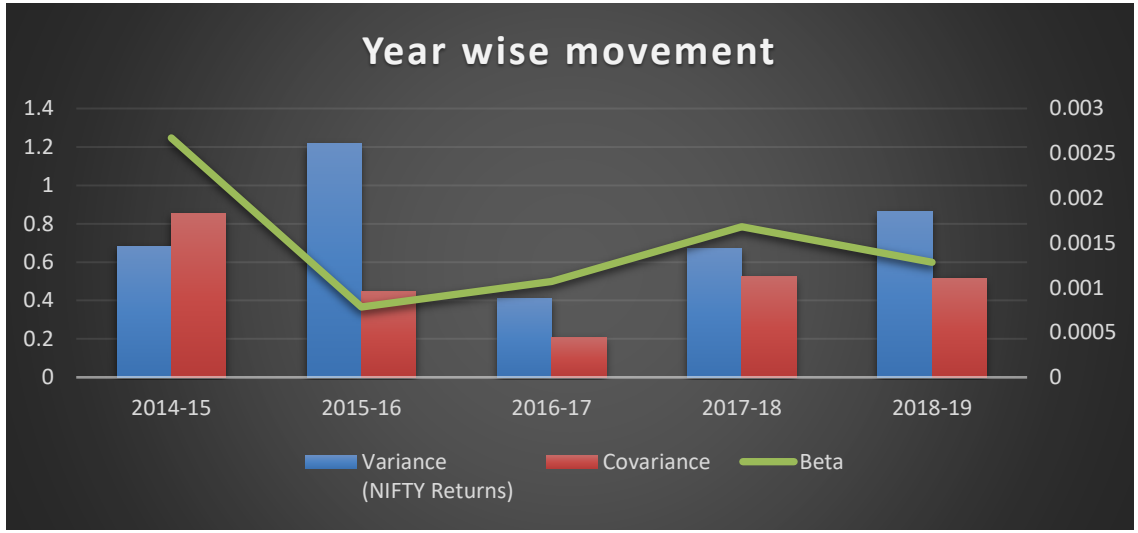
Conclusion – From the ANOVA table, it can be analysed that F critical at 5% level of significance is 2.87 & F calculated is 7.91. When the F calculated value is higher than F critical value, there's a case of rejection of null hypothesis. Thus, it means there is significant difference in quick ratios of five companies during 2014-19.

BETA ANALYSIS

Table-4.11 Market Returns & Beta Computation of HUL

HINDUSTAN UNILEVER LTD.(HUL)																				
Year	2014-15				2015-16				2016-17				2017-18				2018-19			
Date	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return (%)
Apr, 1	513.90	-	6,696.40	-	785.60	-	8,181.50	-	817.03	-	7,849.80	-	897.37	-	9,304.05	-	1,470.77	-	10,739.35	-
May, 1	546.36	6.32%	7,229.95	7.97%	794.10	1.08%	8,433.65	3.08%	798.48	-2.27%	8,160.10	3.95%	1,024.12	14.12%	9,621.25	3.41%	1,570.73	6.80%	10,736.15	-0.03%
Jun, 1	572.94	4.86%	7,611.35	5.28%	846.90	6.65%	8,368.50	-0.77%	845.88	5.94%	8,287.75	1.56%	1,036.21	1.18%	9,520.90	-1.04%	1,599.68	1.84%	10,714.30	-0.20%
Jul, 1	581.01	1.41%	7,721.30	1.44%	860.45	1.60%	8,532.85	1.96%	878.06	3.80%	8,638.50	4.23%	1,119.26	8.01%	10,077.10	5.84%	1,700.63	6.31%	11,356.50	5.99%
Aug, 1	680.29	17.09%	7,954.35	3.02%	798.22	-7.23%	7,948.95	-6.84%	872.83	-0.60%	8,786.20	1.71%	1,181.24	5.54%	9,917.90	-1.58%	1,748.21	2.80%	11,680.50	2.85%
Sep, 1	683.54	0.48%	7,964.80	0.13%	760.64	-4.71%	7,948.90	0.00%	826.00	-5.37%	8,611.15	-1.99%	1,136.84	-3.76%	9,788.60	-1.30%	1,579.59	-9.65%	10,930.45	-6.42%
Oct, 1	695.41	1.74%	8,322.20	4.49%	732.87	-3.65%	8,065.80	1.47%	796.16	-3.61%	8,638.00	0.31%	1,198.38	5.41%	10,335.30	5.59%	1,592.65	0.83%	10,386.60	-4.98%
Nov, 1	726.24	4.43%	8,588.25	3.20%	764.41	4.30%	7,935.25	-1.62%	803.30	0.90%	8,224.50	-4.79%	1,232.28	2.83%	10,226.55	-1.05%	1,732.41	8.78%	10,876.75	4.72%
Dec, 1	702.22	-3.31%	8,282.70	-3.56%	812.18	6.25%	7,946.35	0.14%	793.14	-1.26%	8,185.80	-0.47%	1,333.29	8.20%	10,530.70	2.97%	1,797.25	3.74%	10,862.55	-0.13%
Jan, 1	861.54	22.69%	8,808.90	6.35%	769.02	-5.31%	7,563.55	-4.82%	821.02	3.52%	8,561.30	4.59%	1,334.75	0.11%	11,027.70	4.72%	1,741.55	-3.10%	10,830.95	-0.29%
Feb, 1	819.60	-4.87%	8,844.60	0.41%	781.73	1.65%	6,987.05	-7.62%	831.10	1.23%	8,879.60	3.72%	1,284.45	-3.77%	10,492.85	-4.85%	1,711.32	-1.74%	10,792.50	-0.36%
Mar, 1	807.03	-1.53%	8,491.00	-4.00%	818.54	4.71%	7,738.40	10.75%	875.11	5.30%	9,173.75	3.31%	1,299.66	1.18%	10,113.70	-3.61%	1,685.79	-1.49%	11,623.90	7.70%

Years	Variance (NIFTY Returns)	Covariance	Beta
2014-15	0.001464782	0.001826098	1.246669
2015-16	0.00260867	0.000955246	0.366181
2016-17	0.00088271	0.000439898	0.498349
2017-18	0.001435257	0.001125246	0.784003
2018-19	0.00184799	0.001107432	0.599263



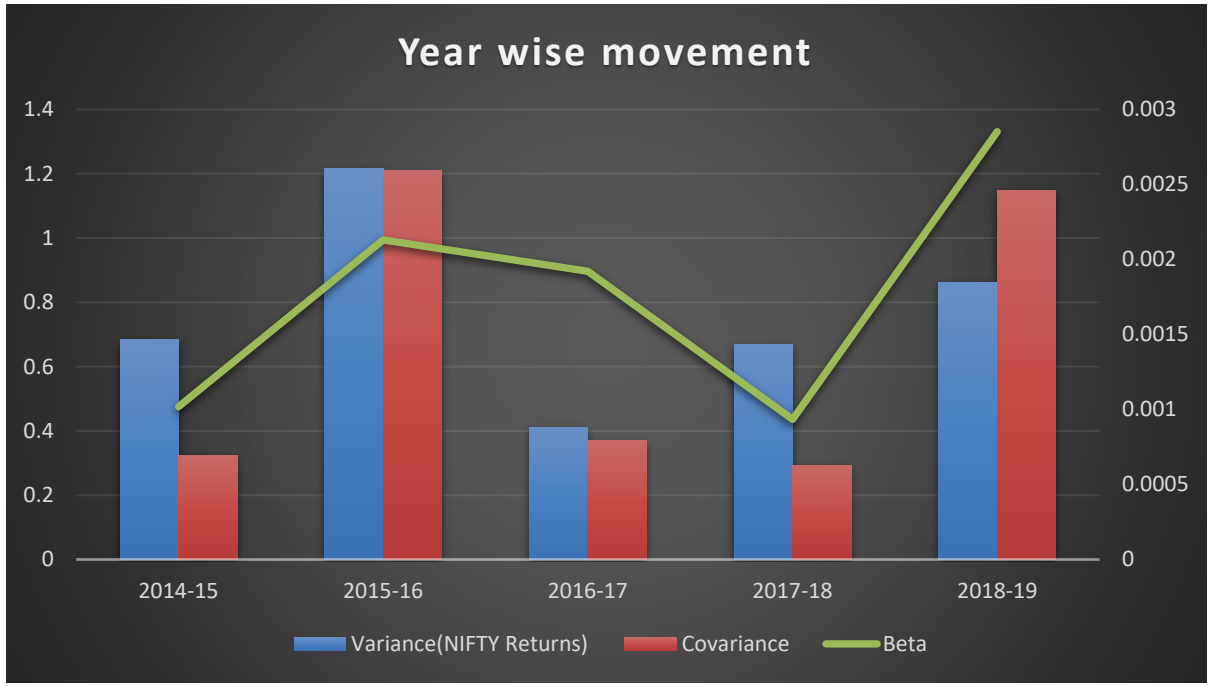
Conclusion

Taking reference with respect to above table, we can clearly see that risk factor is highest in year 2014-15 i.e. HUL stock is 24% more volatile than the market whereas it is lowest in year 2015-16.i.e. 64% less volatile than the market. Beta is the measure of market risk. The covariance between market return & stock return has to be divided by variance of market return to compute the beta of stock.

GODREJ CONSUMERS																				
Year	2014-15				2015-16				2016-17				2017-18				2018-19			
Date	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return (%)
Apr, 1	240.32	-	6,696.40	-	322.28	-	8,181.50	-	410.75	-	7,849.80	-	549.21	-	9,304.05	-	720.70	-	10,739.35	-
May, 1	234.57	-2.39%	7,229.95	7.97%	321.76	-0.16%	8,433.65	3.08%	460.79	12.18%	8,160.10	3.95%	570.87	3.94%	9,621.25	3.41%	734.96	1.98%	10,736.15	-0.03%
Jun, 1	250.23	6.68%	7,611.35	5.28%	381.82	18.67%	8,368.50	-0.77%	502.58	9.07%	8,287.75	1.56%	621.77	8.92%	9,520.90	-1.04%	798.56	8.65%	10,714.30	-0.20%
Jul, 1	255.18	1.98%	7,721.30	1.44%	424.69	11.23%	8,532.85	1.96%	497.44	-1.02%	8,638.50	4.23%	666.19	7.14%	10,077.10	5.84%	857.97	7.44%	11,356.50	5.99%
Aug, 1	299.27	17.28%	7,954.35	3.02%	411.19	-3.18%	7,948.95	-6.84%	474.27	-4.66%	8,786.20	1.71%	596.85	-10.41%	9,917.90	-1.58%	946.09	10.27%	11,680.50	2.85%
Sep, 1	301.14	0.63%	7,964.80	0.13%	377.32	-8.24%	7,948.90	0.00%	498.02	5.01%	8,611.15	-1.99%	591.26	-0.94%	9,788.60	-1.30%	752.87	-20.42%	10,930.45	-6.42%
Oct, 1	295.43	-1.90%	8,322.20	4.49%	390.35	3.46%	8,065.80	1.47%	505.06	1.42%	8,638.00	0.31%	600.75	1.60%	10,335.30	5.59%	709.97	-5.70%	10,386.60	-4.98%
Nov, 1	290.73	-1.59%	8,588.25	3.20%	382.89	-1.91%	7,935.25	-1.62%	457.37	-9.44%	8,224.50	-4.79%	618.50	2.96%	10,226.55	-1.05%	734.95	3.52%	10,876.75	4.72%
Dec, 1	297.28	2.26%	8,282.70	-3.56%	409.06	6.83%	7,946.35	0.14%	474.93	3.84%	8,185.80	-0.47%	643.90	4.11%	10,530.70	2.97%	798.62	8.66%	10,862.55	-0.13%
Jan, 1	324.30	9.09%	8,808.90	6.35%	379.77	-7.16%	7,563.55	-4.82%	497.07	4.66%	8,561.30	4.59%	678.66	5.40%	11,027.70	4.72%	698.78	-12.50%	10,830.95	-0.29%
Feb, 1	350.37	8.04%	8,844.60	0.41%	368.43	-2.99%	6,987.05	-7.62%	518.63	4.34%	8,879.60	3.72%	689.64	1.62%	10,492.85	-4.85%	662.87	-5.14%	10,792.50	-0.36%
Mar, 1	318.97	-8.96%	8,491.00	-4.00%	429.13	16.48%	7,738.40	10.75%	526.71	1.56%	9,173.75	3.31%	705.61	2.32%	10,113.70	-3.61%	677.76	2.25%	11,623.90	7.70%

Years	Variance (NIFTY Returns)	Covariance	Beta
2014-15	0.001464782	0.000695877	0.475071765
2015-16	0.00260867	0.002593364	0.994132649
2016-17	0.00088271	0.000791358	0.89650906
2017-18	0.001435257	0.000625851	0.436055022
2018-19	0.00184799	0.002460101	1.331230957

Table-4.12 Market Returns & Beta Computation of Godrej



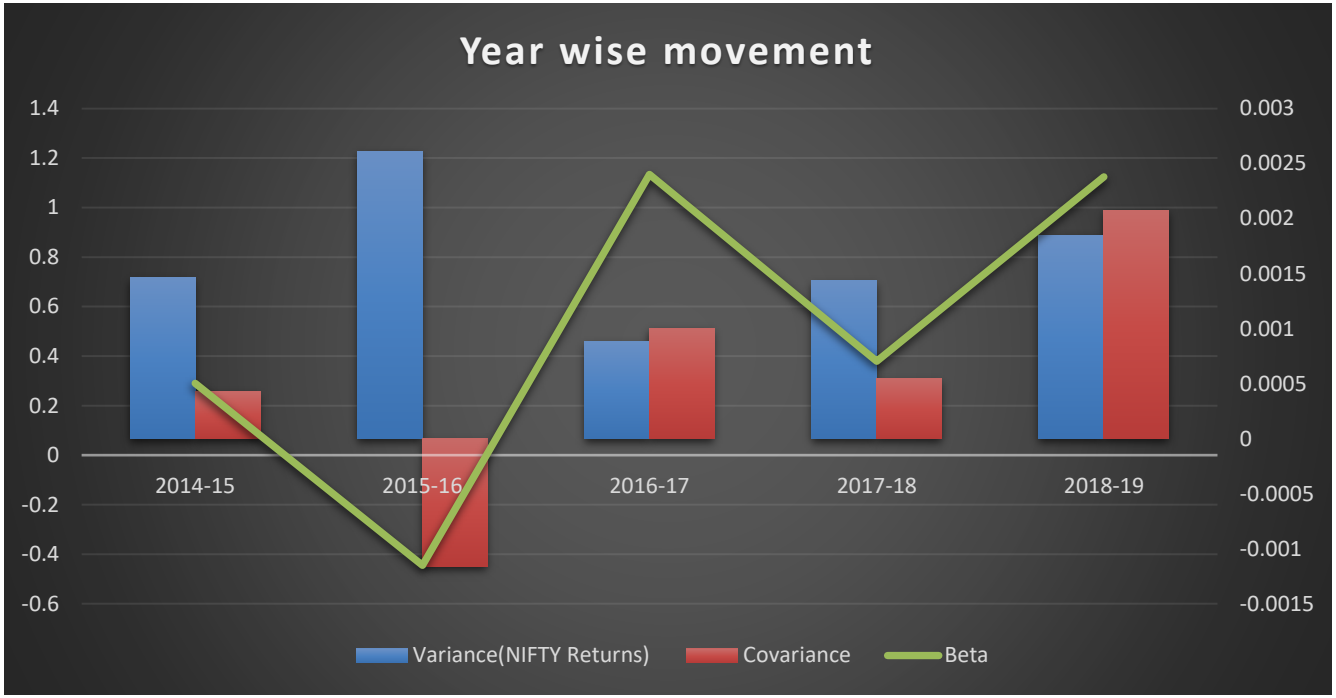
Conclusion

Taking reference with respect to above table, we can clearly see that risk factor is highest in year 2018-19 i.e. HUL stock is 33% more volatile than the market whereas it is lowest in year 2017-18 i.e. 57% less volatile than the market. Beta is the measure of market risk. The covariance between market return & stock return has to be divided by variance of market return to compute the beta of stock

Table-4.13 Market Returns & Beta Computation of ITC

ITC Limited																				
Year	2014-15				2015-16				2016-17				2017-18				2018-19			
Date	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return (%)
Apr, 1	198.01	-	6,696.40	-	192.47	-	8,181.50	-	216.63	-	7,849.80	-	263.68	-	9,304.05	-	270.99	-	10,739.35	-
May, 1	198.59	0.29%	7,229.95	7.97%	195.30	1.47%	8,433.65	3.08%	234.03	8.03%	8,160.10	3.95%	295.74	12.16%	9,621.25	3.41%	261.55	-3.48%	10,736.15	-0.03%
Jun, 1	188.89	-4.89%	7,611.35	5.28%	188.17	-3.65%	8,368.50	-0.77%	245.60	4.94%	8,287.75	1.56%	306.98	3.80%	9,520.90	-1.04%	261.20	-0.14%	10,714.30	-0.20%
Jul, 1	212.59	12.55%	7,721.30	1.44%	200.54	6.58%	8,532.85	1.96%	252.45	2.79%	8,638.50	4.23%	274.64	-10.53%	10,077.10	5.84%	292.10	11.83%	11,356.50	5.99%
Aug, 1	212.14	-0.21%	7,954.35	3.02%	300.54	49.86%	7,948.95	-6.84%	260.05	3.01%	8,786.20	1.71%	271.76	-1.05%	9,917.90	-1.58%	313.84	7.44%	11,680.50	2.85%
Sep, 1	221.03	4.19%	7,964.80	0.13%	202.27	-32.70%	7,948.90	0.00%	241.35	-7.19%	8,611.15	-1.99%	248.70	-8.49%	9,788.60	-1.30%	292.15	-6.91%	10,930.45	-6.42%
Oct, 1	212.08	-4.05%	8,322.20	4.49%	205.87	1.78%	8,065.80	1.47%	243.10	0.73%	8,638.00	0.31%	255.82	2.86%	10,335.30	5.59%	274.83	-5.93%	10,386.60	-4.98%
Nov, 1	216.83	2.24%	8,588.25	3.20%	212.94	3.44%	7,935.25	-1.62%	232.50	-4.36%	8,224.50	-4.79%	246.53	-3.63%	10,226.55	-1.05%	280.43	2.03%	10,876.75	4.72%
Dec, 1	220.14	1.53%	8,282.70	-3.56%	201.65	-5.30%	7,946.35	0.14%	241.65	3.94%	8,185.80	-0.47%	253.46	2.81%	10,530.70	2.97%	276.36	-1.45%	10,862.55	-0.13%
Jan, 1	220.05	-0.04%	8,808.90	6.35%	196.98	-2.32%	7,563.55	-4.82%	258.10	6.81%	8,561.30	4.59%	261.31	3.10%	11,027.70	4.72%	273.41	-1.07%	10,830.95	-0.29%
Feb, 1	235.07	6.82%	8,844.60	0.41%	181.87	-7.67%	6,987.05	-7.62%	262.20	1.59%	8,879.60	3.72%	255.19	-2.34%	10,492.85	-4.85%	270.86	-0.93%	10,792.50	-0.36%
Mar, 1	194.55	-17.23%	8,491.00	-4.00%	201.93	11.03%	7,738.40	10.75%	280.30	6.90%	9,173.75	3.31%	246.00	-3.60%	10,113.70	-3.61%	291.66	7.68%	11,623.90	7.70%

Years	Variance (NIFTY Returns)	Covariance	Beta
2014-15	0.001464782	0.000425864	0.29073564
2015-16	0.00260867	-0.00116073	-0.44495084
2016-17	0.00088271	0.00100115	1.134176742
2017-18	0.001435257	0.000544541	0.379402896
2018-19	0.00184799	0.002076581	1.123697539



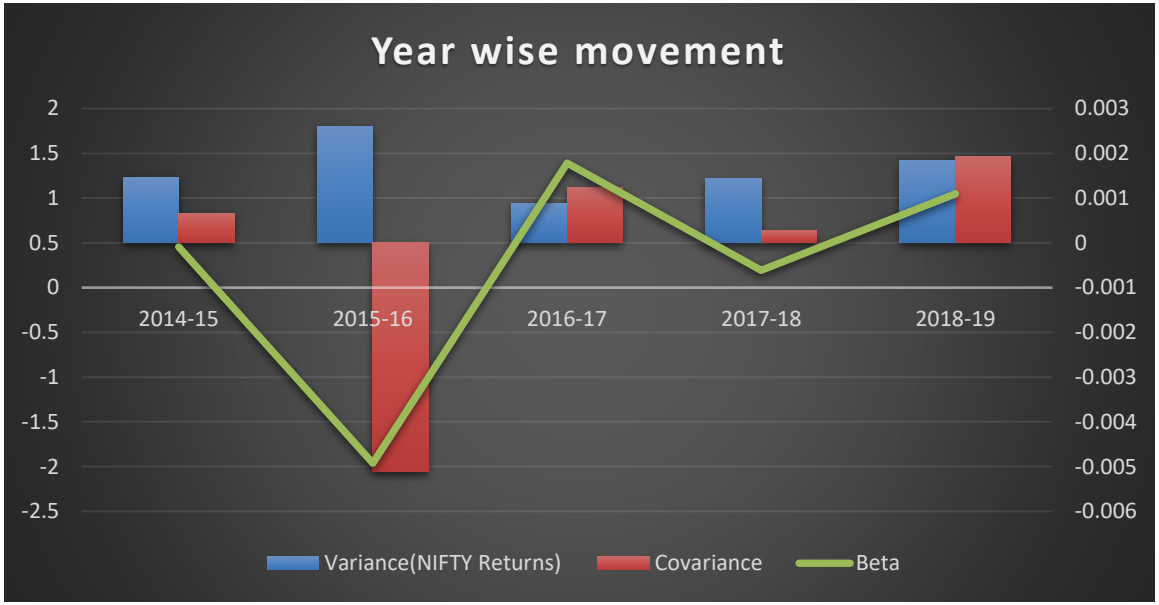
Conclusion

Taking reference with respect to above table, we can clearly see that risk factor is highest in year 2016-17 i.e. ITC stock is 13% more volatile than the market whereas it is lowest in year 2015-16 having negative beta which means moving in opposite direction with that of market. Beta is the measure of market risk. The covariance between market return & stock return has to be divided by variance of market return to compute the beta of stock.

Table-4.14 Market Returns & Beta Computation of MARICO

MARICO																				
Year	2014-15				2015-16				2016-17				2017-18				2018-19			
Date	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return (%)
Apr, 1	92.68	-	6,696.40	-	185.17	-	8,181.50	-	243.60	-	7,849.80	-	300.41	-	9,304.05	-	321.33	-	10,739.35	-
May, 1	110.83	19.58%	7,229.95	7.97%	202.64	9.43%	8,433.65	3.08%	234.29	-3.82%	8,160.10	3.95%	299.27	-0.38%	9,621.25	3.41%	310.99	-3.22%	10,736.15	-0.03%
Jun, 1	110.88	0.04%	7,611.35	5.28%	207.28	2.29%	8,368.50	-0.77%	247.83	5.78%	8,287.75	1.56%	299.60	0.11%	9,520.90	-1.04%	320.46	3.04%	10,714.30	-0.20%
Jul, 1	116.15	4.75%	7,721.30	1.44%	202.85	-2.14%	8,532.85	1.96%	267.25	7.83%	8,638.50	4.23%	319.00	6.47%	10,077.10	5.84%	351.81	9.78%	11,356.50	5.99%
Aug, 1	123.69	6.49%	7,954.35	3.02%	378.09	86.39%	7,948.95	-6.84%	274.06	2.55%	8,786.20	1.71%	300.65	-5.75%	9,917.90	-1.58%	356.98	1.47%	11,680.50	2.85%
Sep, 1	140.84	13.87%	7,964.80	0.13%	186.33	-50.72%	7,948.90	0.00%	259.02	-5.49%	8,611.15	-1.99%	296.17	-1.49%	9,788.60	-1.30%	321.81	-9.85%	10,930.45	-6.42%
Oct, 1	141.41	0.40%	8,322.20	4.49%	178.49	-4.21%	8,065.80	1.47%	265.08	2.34%	8,638.00	0.31%	300.46	1.45%	10,335.30	5.59%	310.46	-3.53%	10,386.60	-4.98%
Nov, 1	146.81	3.82%	8,588.25	3.20%	195.20	9.36%	7,935.25	-1.62%	237.54	-10.39%	8,224.50	-4.79%	291.65	-2.93%	10,226.55	-1.05%	344.71	11.03%	10,876.75	4.72%
Dec, 1	148.62	1.23%	8,282.70	-3.56%	210.33	7.75%	7,946.35	0.14%	236.86	-0.29%	8,185.80	-0.47%	309.10	5.99%	10,530.70	2.97%	362.93	5.29%	10,862.55	-0.13%
Jan, 1	164.92	10.96%	8,808.90	6.35%	206.14	-1.99%	7,563.55	-4.82%	243.38	2.76%	8,561.30	4.59%	296.55	-4.06%	11,027.70	4.72%	356.47	-1.78%	10,830.95	-0.29%
Feb, 1	163.53	-0.85%	8,844.60	0.41%	220.18	6.81%	6,987.05	-7.62%	266.04	9.31%	8,879.60	3.72%	295.35	-0.40%	10,492.85	-4.85%	330.18	-7.38%	10,792.50	-0.36%
Mar, 1	177.82	8.74%	8,491.00	-4.00%	228.73	3.88%	7,738.40	10.75%	281.02	5.63%	9,173.75	3.31%	315.05	6.67%	10,113.70	-3.61%	339.51	2.83%	11,623.90	7.70%

Years	Variance (NIFTY Returns)	Covariance	Beta
2014-15	0.001464782	0.000666605	0.455087905
2015-16	0.00260867	-0.005117604	-1.961767627
2016-17	0.00088271	0.001228318	1.391529841
2017-18	0.001435257	0.000276538	0.19267461
2018-19	0.00184799	0.001938412	1.048930186



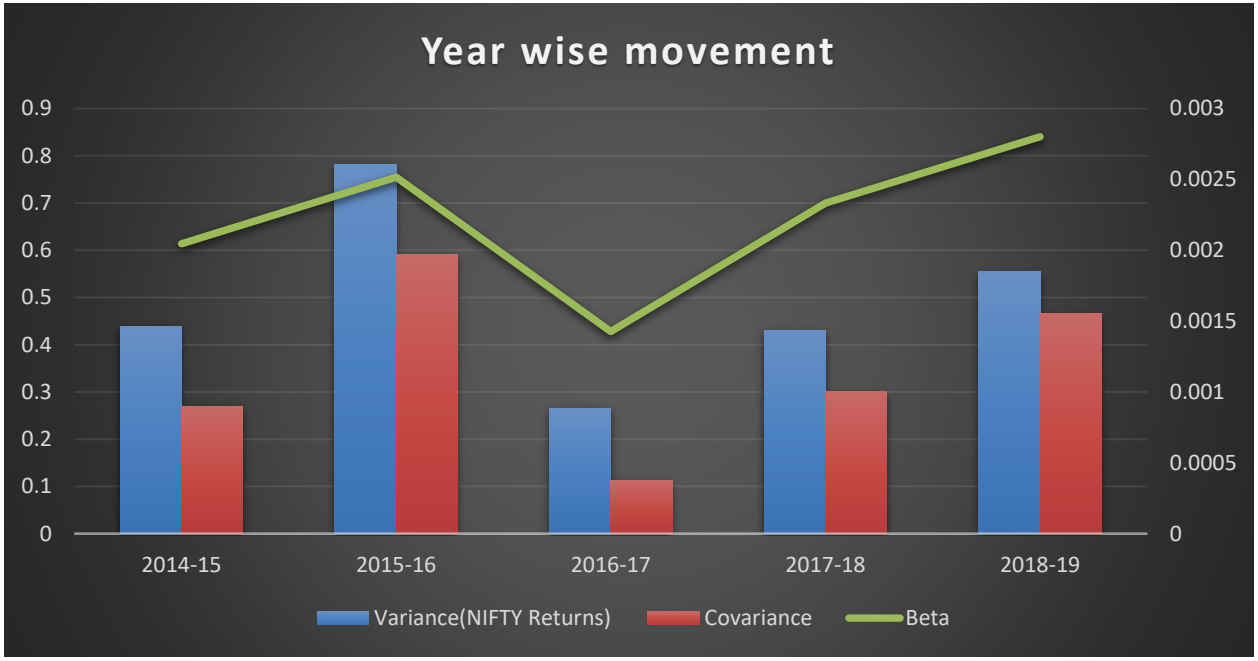
Conclusion

Taking reference with respect to above table, we can clearly see that risk factor is highest in year 2016-17 i.e. MARICO's stock is 39% more volatile than the market whereas it is lowest in year 2015-16 having negative beta which means moving in opposite direction with that of market. Beta is the measure of market risk. The covariance between market return & stock return has to be divided by variance of market return to compute the beta of stock

Table-4.15 Market Returns & Beta Computation of DABUR India

DABUR INDIA LIMITED																				
Year	2014-15				2015-16				2016-17				2017-18				2018-19			
Date	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return(%)	Close	Return(%)	NIFTY Close	NIFTY Return (%)
Apr, 1	170.04	-	6,696.40	-	241.61	-	8,181.50	-	266.49	-	7,849.80	-	279.14	-	9,304.05	-	362.15	-	10,739.35	-
May, 1	178.77	5.13%	7,229.95	7.97%	258.83	7.13%	8,433.65	3.08%	279.92	5.04%	8,160.10	3.95%	272.53	-2.37%	9,621.25	3.41%	375.77	3.76%	10,736.15	-0.03%
Jun, 1	177.87	-0.50%	7,611.35	5.28%	268.66	3.80%	8,368.50	-0.77%	298.23	6.54%	8,287.75	1.56%	284.35	4.34%	9,520.90	-1.04%	383.76	2.13%	10,714.30	-0.20%
Jul, 1	197.67	11.13%	7,721.30	1.44%	282.09	5.00%	8,532.85	1.96%	294.30	-1.32%	8,638.50	4.23%	301.78	6.13%	10,077.10	5.84%	413.27	7.69%	11,356.50	5.99%
Aug, 1	221.85	12.23%	7,954.35	3.02%	262.61	-6.90%	7,948.95	-6.84%	281.69	-4.28%	8,786.20	1.71%	307.78	1.99%	9,917.90	-1.58%	472.43	14.32%	11,680.50	2.85%
Sep, 1	211.88	-4.49%	7,964.80	0.13%	265.45	1.08%	7,948.90	0.00%	262.89	-6.68%	8,611.15	-1.99%	297.92	-3.21%	9,788.60	-1.30%	421.27	-10.83%	10,930.45	-6.42%
Oct, 1	217.25	2.53%	8,322.20	4.49%	259.44	-2.26%	8,065.80	1.47%	282.61	7.50%	8,638.00	0.31%	325.12	9.13%	10,335.30	5.59%	379.67	-9.87%	10,386.60	-4.98%
Nov, 1	231.06	6.36%	8,588.25	3.20%	262.13	1.04%	7,935.25	-1.62%	274.86	-2.74%	8,224.50	-4.79%	336.31	3.44%	10,226.55	-1.05%	403.70	6.33%	10,876.75	4.72%
Dec, 1	224.21	-2.97%	8,282.70	-3.56%	267.60	2.09%	7,946.35	0.14%	270.77	-1.49%	8,185.80	-0.47%	342.83	1.94%	10,530.70	2.97%	426.41	5.63%	10,862.55	-0.13%
Jan, 1	245.79	9.63%	8,808.90	6.35%	242.19	-9.50%	7,563.55	-4.82%	268.68	-0.77%	8,561.30	4.59%	348.62	1.69%	11,027.70	4.72%	439.28	3.02%	10,830.95	-0.29%
Feb, 1	254.32	3.47%	8,844.60	0.41%	229.15	-5.39%	6,987.05	-7.62%	269.56	0.33%	8,879.60	3.72%	318.67	-8.59%	10,492.85	-4.85%	433.74	-1.26%	10,792.50	-0.36%
Mar, 1	254.71	0.15%	8,491.00	-4.00%	241.47	5.38%	7,738.40	10.75%	269.99	0.16%	9,173.75	3.31%	321.95	1.03%	10,113.70	-3.61%	404.78	-6.68%	11,623.90	7.70%

Years	Variance (NIFTY Returns)	Covariance	Beta
2014-15	0.001464782	0.000899434	0.614039459
2015-16	0.00260867	0.001968601	0.754637867
2016-17	0.00088271	0.000377843	0.428048389
2017-18	0.001435257	0.001004146	0.699628501
2018-19	0.00184799	0.001553277	0.840522676



Conclusion

Taking reference with respect to above table, we can clearly see that risk factor is highest in year 2018-19 i.e. DABUR's stock is 16% less volatile than the market whereas it is lowest in year 2016-17 where stock is 58% less volatile than market. Beta is the measure of market risk. The covariance between market return & stock return has to be divided by variance of market return to compute the beta of stock

CORRELATION MATRIX

AVERAGE MARKET RETURNS						
Years	**HUL**	**GODREJ**	**ITC**	**MARICO**	**DABUR**	**NIFTY**
2014-15	4.48%	2.83%	0.11%	6.28%	3.88%	2.25%
2015-16	0.49%	3.00%	2.05%	6.08%	0.13%	-0.39%
2016-17	0.69%	2.45%	2.47%	1.47%	0.21%	1.47%
2017-18	3.55%	2.42%	-0.45%	0.70%	1.41%	0.83%
2018-19	1.37%	-0.09%	0.83%	0.70%	1.29%	0.81%

Table-4.16 Average Market Returns of companies (2014-15 to 2018-19)

In the above table, average returns of HUL, Godrej, ITC, Marico & Dabur is computed using mean for years ranging from 2014-15 to 2018-19.Market returns of NIFTY are also computed on an average.

CORRELATION MATRIX						
CORREL B/W	**NIFTY**	**HUL**	**GODREJ CONSUMERS**	**ITC**	**MARICO**	**DABUR**
NIFTY	1	0.63699	0.03853	-0.32991	-0.00415	0.73333
HUL	0.636993	1	0.20278	-0.88063	0.16056	0.89373
GODREJ CONSUMERS	0.038527	0.20278	1	0.11560	0.61414	0.06298
ITC	-0.329909	-0.88063	0.11560	1	0.12488	-0.70182
MARICO	-0.004149	0.16056	0.61414	0.12487963	1	0.35928
DABUR	0.733326	0.89373	0.06298	-0.70182	0.35928	1

Table-4.17 Correlation matrix

ITC & Marico are negatively correlated with the market returns (on an average) during the period of study i.e. from 2014-15 to 2018-19 whereas HUL & Dabur are strongly correlated with market returns. Godrej's stock is very weakly correlated with market.

- When market returns are increasing, HUL & Dabur's returns are also increasing & vice-versa.
- Both ITC & Marico's stocks are negatively correlated with the market on an average that means when market is up, stock is down & vice versa.
- Godrej Consumers' stock is weakly positive correlated with market that means it slowly moves in relation to market.

BMW MODEL (BEST, MODERATE & WORST MODEL)

AVERAGE OF FUNDAMENTAL RATIOS					
RATIOS	**HUL**	**GODREJ CONSUMERS**	**ITC**	**MARICO**	**DABUR**
Operating Profit Margin(%)	19.60	23.04	37.72	16.99	20.23
PBIT Margin(%)	18.10	21.64	33.31	15.01	17.98
Gross Profit(GP) Margin(%)	18.41	21.93	34.97	15.66	18.74
Cash Profit (CP) Margin(%)	14.99	20.37	27.92	16.22	18.56
Net Profit (NP) (%)	14.47	19.58	26.76	15.21	17.71
Adjusted NP (%)	14.22	19.31	25.49	14.56	16.99
ROCE(%)	111.61	27.24	37.92	34.18	36.83
Return On Net Worth(%)	80.80	23.04	25.57	26.99	30.09
Adjusted Return on Net Worth(%)	77.36	22.99	25.41	27.67	30.36
Current Ratio	0.91	0.86	1.61	1.82	0.88
Quick/Acid Test Ratio	0.61	0.48	0.96	0.88	0.49
Inventory Turnover Ratio	14.23	9.28	6.35	5.13	8.99
Debtors Turnover Ratio	32.91	23.14	18.75	24.80	15.87
Investments Turnover Ratio	14.23	7.66	6.35	5.13	8.99
Fixed Assets Turnover Ratio	7.63	8.07	2.03	7.38	4.17
Total Assets Turnover Ratio	5.79	1.47	0.98	1.74	1.66
Asset Turnover Ratio	6.06	1.24	1.02	1.80	1.78

Table-4.18 Average of fundamental ratios of companies feom 2014-15 to 2018-19

WEIGHTAGE OF FUNDAMENTAL RATIOS					
RATIOS	**HUL**	**GODREJ CONSUMERS**	**ITC**	**MARICO**	**DABUR**
Operating Profit Margin (%)	2	4	5	1	3
Profit Before Interest & Tax Margin (%)	3	4	5	1	2
Gross Profit Margin (%)	3	4	5	1	2
Cash Profit Margin (%)	1	4	5	2	3
Net Profit Margin (%)	1	4	5	2	3
Adjusted Net Profit Margin (%)	1	4	5	2	3
Return On Capital Employed (%)	5	1	4	2	3
Return On Net Worth (%)	5	1	2	3	4
Adjusted Return on Net Worth (%)	5	1	2	3	4
Current Ratio	3	1	4	5	2
Quick Ratio	3	1	5	4	2
Inventory Turnover Ratio	5	4	2	1	3
Debtors Turnover Ratio	5	3	2	4	1
Investments Turnover Ratio	5	3	2	1	4
Fixed Assets Turnover Ratio	4	5	1	3	2
Total Assets Turnover Ratio	5	2	1	4	3
Asset Turnover Ratio	5	2	1	4	3
TOTAL	**61**	**48**	**56**	**43**	**47**
RANK	**1**	**3**	**2**	**5**	**4**

Table-4.19 Weightage of Fundamental ratios

INTEPRETATION (AS PER RATIOS):

- The weights have been assigned in the table as per the performance of each ratio. Finally, weights are summed upon & rank is computed based on the total weights secured by the top FMCG prominent companies.
- From the table we can conclude that :
  i. HUL secured the highest rank.
  ii. MARICO has the least rank.
  iii. ITC, Godrej & Dabur also are having decent ranks.
  iv. Thus, best performing stock amongst these five companies is HUL & worst performing stock as per ratios is MARICO.

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