



A COMPARATIVE STUDY ON STOCK PRICES OF M/S DABUR AND M/S EMAMI LTD USING VALUE AT RISK (VAR - NORMAL DISTRIBUTION) TECHNIQUE DURING THE PERIOD 2017-18

Management

M. Subramanian

Associate Professor, Amity School of Business, Amity University, Noida, Uttar Pradesh, India

ABSTRACT

With a population of over one billion, India is one of the largest economies in the world in terms of purchasing power and consumer spending. The International Monetary Fund has projected that India's GDP will grow by 7.4% during 2016–17, making it the world's fastest-growing large economy. The fast-moving consumer goods (FMCG) sector is an important contributor to India's GDP growth. The sector includes food & dairy products, packaged food products, household products, drinks and others. FMCG is the fourth largest sector in Indian economy and provides employment to around 3 million people accounting for approximately 5% of the total factory employment in India. The sector is characterized by strong presence of leading multinational companies, competition between organized and unorganized players, well established distribution network, and low operational cost. The growth of the FMCG sector, which primarily includes Food & beverages, personal care and household care, has been driven in both the rural and urban segments. Rural consumption growth has outpaced urban consumption with the increase in percentage in monthly per capita expenditure in rural markets surpassing its urban counterparts over the past five years.

This study is comparative & analytical in nature to analyze the stock price performance of M/s HUL and M/s ITC, leading FMCG companies in India. This study has used the following analytical tools to make the analysis (a) Descriptive Statistics (b) Value at Risk (VaR). The study period covers the stock price data of M/s Dabur and M/s Emami Ltd from first trading day of April 2017 till the last trading day of March 2018. Ultimately this study would analyze and suggest the investors, what is the maximum loss, if at they may incur, if they invest in M/s Dabur and M/s Emami Ltd.

KEYWORDS

Value at Risk, Market Price Analysis, Descriptive Statistics, Investors, Maximum Loss

Introduction

The FMCG sector in India has grown at an average of about 11 percent over the last decade. India's robust economic growth and rising household incomes are expected to increase consumer spending to US\$ 3.6 trillion by 2020. A country whose middle class population is as big as the entire population of USA is a market which no FMCG player can afford to overlook. In addition, as the fruits of economic growth become available to the masses and more people start to move up the economic strata, the Indian market only keeps on expanding. More importantly with a population where the median age is only 27, consumerism is on the rise in India with growing aspiration levels. This has been further aided by government's efforts to expand financial inclusion and creation of social security nets. With rural India accounting for more than 700 million consumers and accounting for 50 percent of the total FMCG market, there exists huge opportunity at the so called 'bottom of the pyramid'.

The market in India is fragmented with roughly half the market being dominated by unbranded, unpackaged, home-made products, operating mostly in the rural markets. The potential of the non-urban market is something which all FMCG players are very keen to tap. FMCG players are busy analyzing emerging consumer trends and identifying new consumer segments and accordingly drawing up plans and strategies to capture market share. On top of that, with growing penetration of telecom and internet, e-commerce is emerging as a viable alternative for traditional retail and kirana outlets. Thus, the choice of distribution channels in order to reach out to a larger market now forms an integral part of the planning process for FMCG players too.

The Indian FMCG sector is the fourth largest sector in the economy with a total market size of USD49 billion in 2016. The sector is projected to grow at a CAGR of 20.6% to reach USD103.7 billion by 2020. The FMCG industry in India, has grown rapidly over the last decade, predominantly on account of increasing income levels and changing lifestyle of Indian consumers.

Indian FMCG Industry Segmentation – A graphical depict



Source: IBEF Report on Indian FMCG Industry, February 2018

Indian FMCG Market Share, By Segment (%), year 2020 (Estimates)



Source: TechSci Research

Objectives of the study

(a) To make the comparative study and analyze the stock price returns of M/s Dabur and M/s Emami for the period starting from first trading day of April 2017 till last trading day of March 2018.

(b) To suggest the investors @ "what would be the maximum loss?" if they invest in M/s Dabur and M/s Emami during the year 2018-19.

Scope of the Study

- The analytical study of stock price returns of the M/s Dabur and M/s Emami would enable the investors (specifically, naïve investors) to make their investment decision, either to buy, sell or to hold.
- Though the investor's decision based on their risk appetite, personal financial plan, and market conditions at the time of investment; this study would envisage the investors to make a cautious call on their investment decision.
- Further the similar study shall be extended to other top-notch players in the Indian FMCG industry, in future.

Research Methodology

- The entire study is based on secondary data – from NSE, India (www.nseindia.com)
- The following analytical tools to make the thorough analysis:

(a) Descriptive Statistics (Using MS-Excel)

(b) Value at Risk (VaR) – (Using MS-Excel)

- The study period covers the stock price data of M/s Dabur and M/s Emami from first trading day of April 2017 till the last trading day of March 2018.

Limitations to the Study

- The study has been carried out through the secondary source of data – though the authenticity has been verified by the researcher, there are chances of mis-representation of data. The study covers only 12 months stock price data, which may not be sufficient to conduct a detailed research. The study has been done for only two of the leading manufacturing (FMCG) companies in India (Dabur & Emami), which may not be a conclusive study of the entire FMCG industry in India.

Company – Background

DABUR – Company Details

Dabur India, that made its beginnings with a small pharmacy, but has continued to learn and grow to a commanding status in the industry is now the fourth largest FMCG company of the country with a turnover of Rs2,396 crore. It was established over 100 years ago presently catering to health care, personal care & food segment. In April 2009, the Hon'ble High Court of Judicature at Delhi has sanctioned the Scheme of Amalgamation of Fem Care Pharma with Dabur India. In July 2010, the Company's wholly owned subsidiary Dabur International entered into an agreement to acquire 100% stake in leading personal care Company in Turkey i.e. Hobi Group firms– Hobi Kozmetik, Zeki Plastik and Ra Pazarlama at a total consideration of US\$ 69 million.

The company operates through three business units, namely consumer care division (CCD), international business division (IBD) and consumer health division (CHD). Their CCD business is divided into four key portfolios: healthcare, personal care, home care and foods. Their CHD business offers a range of healthcare products. Their IBD business includes brands, such as Dabur Amla and Vatika. Dabur India Ltd was incorporated on September 16, 1975 for manufacture of high-grade edible & industrial guar gum powder and its sophisticated derivatives. In the year 1978, the company launched Hajmola tablet, an Ayurvedic medicine used as a digestive aid. In the year 1979, they set Dabur Research Foundation. Also, they commenced commercial production at the most modern herbal medicines plant in Sahibabad. In the year 1986, the company was converted into a public limited company. In the year 1988, they launched the pharmaceutical medicines.

On 26 September 2017, Dabur India announced its alliance with Amazon to take its products global. Dabur's collaboration with Amazon will help it expand and increase its product penetration into the US market. Under this collaboration, Amazon will help Dabur take around 30 products from its popular range such as, Vatika hair oil, Meswak toothpaste, Red toothpaste, Chyawanprash to name a few, to consumers in the US. As part of this association, Amazon through its Global Selling Program will provide an avenue to Dabur to take its vast range of well-known and sought-after ayurvedic and natural products to millions of global customers on Amazon.com in the US and eventually across other Amazon marketplaces.

EMAMI – Company Details

Emami Limited is one of India's leading FMCG companies engaged in manufacturing & marketing of personal care & healthcare products. Emami is the flagship company of the diversified Emami Group. The company sells over 300 diverse products. Emami's portfolio includes brands like Navratna, BoroPlus, Fair & Handsome, Zandu Balm, Kesh King & Mentho Plus. The company's product categories consist of hair care, skin creams, soaps and lotions, talcum powder and ayurvedic healthcare products. Their product portfolio includes Navratna Oil, BoroPlus Antiseptic Cream, Fair and Handsome, Navratna Cool Talc, Sona Chandhi Chyawanprash, Zandu Balm, Himani Fast Relief, Emami Healthy & Fair, Emami Malai Kesar Cold Cream, Lalima, Sardi Ja and Zandu Pancharishta.

Emami Ltd was incorporated on March 11, 1983 with the name AMP Udyog Viniyog Ltd. Initially, R S Agarwal and R S Goenka set up a cosmetic manufacturing unit in Kolkata in 1974 under the name of Kemco Chemicals, a partnership firm. The cosmetic products, as well as Ayurvedic medicines, manufactured by the unit were marketed under the brand name of Emami. In the year 1978, Himani Ltd, a sick unit, was taken over by the Group and the new management decided to produce different types of health care items and toiletries with Ayurvedic preparation.

Started by Mr. R.S. Agarwal and Mr. R.S. Goenka in 1974 a medicine

and cosmetic manufacturing facility was set up. The company was set up with a seed capital of Rs 20,000. The company gradually created brands under medicine and cosmetics segment. Emami Talcum, Emami Vanishing Cream and Emami Cold Cream were great favorite brands with the quality conscious consumers in the mid-seventies.

On 5 February 2018, Emami Limited announced that it has entered into an agreement for strategic investment in Brillare Science Pvt Ltd (Brillare) through compulsory convertible preference shares (CCPS), which on conversion will result in 26% equity stake in Brillare basis the achievement of agreed future performance of the company. Brillare owns the premium hair & skin care portfolio for use in professional salons. Brillare also provides customised beauty treatment which enables salon professionals to treat multiple hair & skin concerns simultaneously.

Data Analysis – based on Stock Price of DABUR (April 2017 – March 2018)

An illustrative set of stock price data @ DABUR hereunder:

Date	Close Price	Price Returns
03-Apr-17	280.3	(Using Log Returns)
05-Apr-17	283.9	1.276%
06-Apr-17	284.8	0.317%
07-Apr-17	282.4	-0.846%
10-Apr-17	286.9	1.581%
11-Apr-17	289.45	0.885%
12-Apr-17	288.95	-0.173%
13-Apr-17	287.75	-0.416%
17-Apr-17	292.9	1.774%
18-Apr-17	289.65	-1.116%
19-Apr-17	290.3	0.224%
20-Apr-17	290.7	0.138%

Day-wise closing stock price data, till 31.03.2018

21-Mar-18	322.45	0.966%
22-Mar-18	316.95	-1.720%
23-Mar-18	318.2	0.394%
26-Mar-18	315.55	-0.836%
27-Mar-18	324.85	2.905%
28-Mar-18	328.4	1.087%

Source: Primary (Calculated through Data Analysis @ MS Excel)

Value at Risk (VaR) – Analysis (Normal Distribution) – DABUR

Bottom 10%	-1.46%
Bottom 5%	-1.89%

Source: Primary (Calculated through Data Analysis @ MS Excel)

Data Analysis – based on Stock Price of EMAMI (April 2017 – March 2018)

An illustrative set of stock price data @ EMAMI hereunder:

Date	Close Price	Price Returns
03-Apr-17	1049.25	(Using Log Returns)
05-Apr-17	1036.95	-1.18%
06-Apr-17	1037.95	0.10%
07-Apr-17	1034.1	-0.37%
10-Apr-17	1037.2	0.30%
11-Apr-17	1031.75	-0.53%
12-Apr-17	1029.65	-0.20%
13-Apr-17	1027.35	-0.22%
17-Apr-17	1023.25	-0.40%
18-Apr-17	1013.95	-0.91%
19-Apr-17	1019.45	0.54%
20-Apr-17	1015	-0.44%

Day-wise closing stock price data, till 31.03.2018

21-Mar-18	1056.1	2.34%
22-Mar-18	1056.85	0.07%

23-Mar-18	1060.15	0.31%
26-Mar-18	1073.35	1.24%
27-Mar-18	1061.2	-1.14%
28-Mar-18	1068.85	0.72%

Source: Primary (Calculated through Data Analysis @ MS Excel)

Value at Risk (VaR) – Analysis (Normal Distribution) – EMAMI

Bottom 10%	-1.87%
Bottom 5%	-2.41%

Source: Primary (Calculated through Data Analysis @ MS Excel)

Data Analysis – based on Stock Price of DABUR & EMAMI (April 2017 – March 2018) Based on stock price returns (2017-18)

Descriptive Statistics	DABUR	EMAMI
Mean	0.065%	0.008%
Standard Error	0.000761	0.000937476
Median	0.000177	-0.000092971
Mode	#N/A	#N/A
Standard Deviation	0.0119	0.0147
Sample Variance	0.000142	0.000215321
Kurtosis	1.664409	2.717637959
Skewness	0.688575	-0.237716288
Range	0.081598	0.118561407
Minimum	-0.032644	-0.074073589
Maximum	0.048955	0.044487818
Sum	0.158372	0.018507681
Count	245	245
Co-efficient of Variation	18.42	194.25

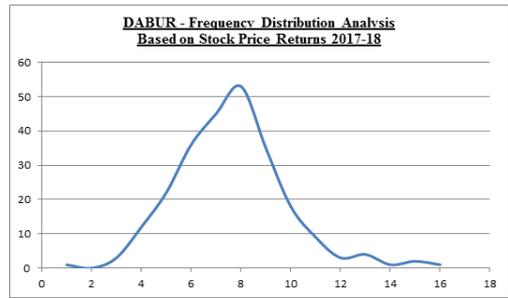
Source: Primary (Calculated through Data Analysis @ MS Excel)

Frequency Distribution Analysis - (Based on stock price returns 2017-18)

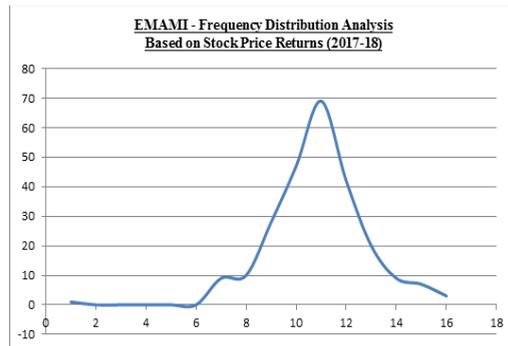
DABUR			EMAMI		
Bin	Frequency	Cumulative %	Bin	Frequency	Cumulative %
-0.032643583	1	0.41%	-0.074073589	1	0.41%
-0.027203699	0	0.41%	-0.066169495	0	0.41%
-0.021763816	3	1.63%	-0.058265401	0	0.41%
-0.016323932	12	6.53%	-0.050361307	0	0.41%
-0.010884048	22	15.51%	-0.042457214	0	0.41%
-0.005444164	36	30.20%	-0.03455312	0	0.41%
-4.28006E-06	45	48.57%	-0.0266490926	9	4.08%
0.005435604	53	70.20%	-0.018744932	10	8.16%
0.010875488	35	84.49%	-0.010840839	28	19.59%
0.016315372	18	91.84%	-0.002936745	47	38.78%
0.021755255	9	95.51%	0.004967349	69	66.94%
0.027195139	3	96.73%	0.012871443	42	84.08%
0.032635023	4	98.37%	0.020775536	20	92.24%
0.038074907	1	98.78%	0.02867963	9	95.92%

0.043514791	2	99.59%	0.036583724	7	98.78%
More	1	100.00%	More	3	100.00%

Source: Primary (Calculated through Data Analysis @ MS Excel)



Source: Primary (Chart Depiction @ MS Excel)



Source: Primary (Chart Depiction @ MS Excel)

Summary of Findings, Suggestions & Conclusion

- From the above VaR analysis for M/s DABUR we may infer the following as finding:
 - With 90% confidence we can say that the loss to the investors will not exceed 1.46%.
 - With 95% confidence we can say that the loss to the investors will not exceed 1.89%.
- From the above VaR analysis for M/s EMAMI we may infer the following as finding:
 - With 90% confidence we can say that the loss to the investors will not exceed 1.87%.
 - With 95% confidence we can say that the loss to the investors will not exceed 2.41%.
- From the frequency distribution analysis of M/s DABUR we may infer that the normal distribution is not skewed towards left side, which means the loss is limited to a negligible level.
- From the frequency distribution analysis of M/s EMAMI we may infer that the normal distribution is not too much skewed towards left side, which means the loss is limited to a minimal or negligible level.
- We shall suggest to the investors / naïve investors, to invest in M/s DABUR during the financial year 2018-19, as the loss is very much limited, to a negligible level and the financial fundamentals also supports an organic growth of the company's stock price in the upcoming period – Suggested to BUY and accumulate the stocks.
- We shall suggest to the investors / naïve investors, to invest in M/s EMAMI during the financial year 2018-19, as the loss is limited, to a minimal or negligible level and the financial fundamentals also supports growth of the company's stock price in the upcoming period – Suggested to BUY and hold the stocks.

Conclusion

As stated earlier in the objective the researcher(s) were able to accomplish both the objectives (a) Studied and analyzed the stock price returns of M/s DABUR and M/s EMAMI for the period starting from first trading day of April 2017 till last trading day of March 2018. (b) Through the research and analysis researcher(s) were able to suggest the investors @ “what would be the maximum loss?” if they invest in M/s DABUR and M/s EMAMI during the year 2018-19.

References

1. <https://www.ibef.org/download/FMCG-February-2018.pdf>
2. https://www.techsciresearch.com/admin/gall_content/2016/11/2016_11Stumbing102_Nov_2016_004628313.pdf
3. https://www.ndtv.com/business/stock/dabur-india-ltd_dabur/reports
4. <https://www.indiaonline.com/company/dabur-india-ltd/summary/3392>
5. <https://www.indiaonline.com/company/emami-ltd/summary/6423>
6. https://www.ndtv.com/business/stock/ite-ltd_ite/reports
7. Batra, Amita. "Stock return volatility patterns in India." (2009).
8. Becchetti, Leonardo. "The effect of bond plus equity warrant issues on underlying asset volatility: an empirical analysis with conditional and unconditional volatility measures." *Applied Financial Economics* 6.4 (1996): 327-335.
9. Campbell, John Y., and Samuel B. Thompson. "Predicting excess stock returns out of sample: Can anything beat the historical average?." *Review of Financial Studies* 21.4 (2008): 1509-1531.
10. Gochoco-Bautista, Maria Socorro, Jianxin Wang, and Minxian Yang. "Commodity Price, Carry Trade, and the Volatility and Liquidity of Asian Currencies." *The World Economy* (2013).
11. Sharma, J. L., and Robert E. Kennedy. "A comparative analysis of stock price behavior on the Bombay, London, and New York stock exchanges." *Journal of Financial and Quantitative Analysis* 12.03 (1977): 391-413
12. Wang, Jianxin. "Forecasting Volatility in Asian Stock Markets: Contributions of Local, Regional, and Global Factors." *Asian Development Review* 28.2 (2011): 32-57.