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A Study on Beta – FMCG Sector Companies Listed in NSE

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ABSTRACT

To calculate the projected return on a stock, financial professionals have created a variety of methods. Estimating the beta value for the securities listed on the National Stock Exchange is the goal of this article (NSE). With rising savings interest and people's need for additional income, investment in securities is mostly rising. Investors are prepared to make investments in securities that will yield large returns, but the stock market's volatility is preventing them from doing so. Lack of capital is the main issue that investors encounter.

Keywords: Beta, NSE, FMCG sector.

INTRODUCTION

A measure of a security's volatility is called beta (). A stock's volatility can be compared to the systematic risk of the entire market using a beta coefficient. The slope of a line through a regression of data points is known statistically as beta. Each of these financial data points compares the returns of a certain stock to those of the overall market. The activity of a security's returns as they change in response to market fluctuations is adequately described by beta. The beta of a security is derived by multiplying the covariance between the returns of the security and the market over a certain period by the market's variance. In the end, an investor uses beta to determine the amount of risk that a stock adds to a portfolio. While a stock with minimal market variance doesn't significantly raise risk in a portfolio, it also reduces the possibility of higher gains. A gauge for a stock's riskiness or volatility in relation to the whole market is its beta value. So, a good beta will depend on your objectives and risk tolerance. A beta of 1.0 would be perfect if you wanted to imitate the larger market in your portfolio, perhaps through an index ETF. A smaller beta can be more suitable for you if you are a cautious investor who wants to protect your money. In a bull market, betas greater than 1.0 tend to yield returns that are above average, but they also A stock increases the risk of higher losses in a bear market. Although beta offers some insight into risk, many experts concur that it is insufficient as a risk indicator on its own. Beta just looks at a stock's previous performance relative to the NSE and does not provide any forward guidance. However, it ignores a company's foundational factors, including its earnings and expansion potential.

The beta coefficient theory makes the statistical assumption that stock returns are normally distributed. But, there could be a big surprise in the financial markets. Returns aren't always normally distributed in reality. Thus, what a stock's beta may suggest about its potential future movement isn't necessarily accurate. An extremely low beta stock may have less pronounced price fluctuations, yet it can still be in a long-lasting downturn. So, adding a stock in a downtrend with a low beta only reduces risk in a portfolio if the investor narrowly defines risk in terms of volatility (rather than as the potential for losses). Practically speaking, a down trending low beta stock is unlikely to boost the performance of a portfolio. Similar to this, a portfolio's risk will increase if a high beta stock is highly volatile in an upward trend, but it may also contribute gains. Before assuming a stock will increase or decrease risk in a portfolio, it is advised that investors who use beta to evaluate a stock also evaluate it from other viewpoints, such as fundamental or technical characteristic what fashion Should financial experts consider risk while buying or selling stocks? Even though it might be challenging to account for risk in stock analysis and valuation, beta is one of the most widely used indicators. Investigators frequently use it to determine the risk profile of a stock. Whatever the case, even while beta has something to say about how to value chance, it has its cut-off points for financial experts looking to identify important risk elements. Using relapse investigation, beta is calculated. In terms of numbers, it illustrates the propensity for a security's earnings to respond to changes in the market. The formula for determining beta is the covariance of an advantage's arrival with the market's arrival, separated by a change in the arrival of the market during a certain time.

BETA FORMULA

Beta is calculated as

$\beta = Cov(X,Y)/ Var(Y)$

Where

- Y is the returns on your portfolio or stock – Dependent variable
- X is the market returns or index – Independent variable
- Variance is the square of standard deviation.

Covariance is a statistic that measures how two variables co-vary, and is given by:

Cov(x,y) = [1/(N-1)] $\sum_{t=1}^{N}[Xt - X\hat{}-][Yt - Y\hat{}-]$

Where, N denotes the total number of observations.

REVIEW OF LITERATURE

In 2020, researchers Dr. S. Saravanan and R. Vidhyatharan plan to estimate the listing in the National Stock Exchange (NSE). The stock's beta value estimates its volatility and establishes the degree of risk it entails. For a period of ten years, from 2010 to 2020, data is gathered for the securities included in the Nifty 50 in order to calculate the beta value. Based on the beta value over a given time period, equities are ranked.

According to Dr. R. Nalini (2014), building an ideal portfolio is a difficult endeavour for both individual and institutional investors. This study aims to raise investor knowledge of the usefulness of Sharpe's single index model in portfolio development. 15 Companies chosen for this study use SIM to discover the best portfolio.

By comparing portfolio design and risk management theory and practise, **Stefan Colza Lee and William Eid (Jr.) (2017)** hope to find any discrepancies between academic theory and the practises of Brazilian investment managers. Out of 274 asset management organisations, 78 responded to an online survey posted for this reason, making it a bibliographical and field survey. This study could be regarded as a ground-breaking effort in Brazil for portfolio construction, risk management, and performance evaluation. According to the findings of the tests, one of the eight hypotheses was largely rejected, showing that practise in the country diverges from theory. The fact that few academic studies in Brazil take transaction costs such brokerage fees, bid-ask spreads, and when examining the advantages of quantitative portfolio optimization, liquidity.

Markowitz portfolio theory and capital asset pricing model (CAPM) for Kuala Lumpur stock exchange: a case revisited the idea now speculators could use CAPM to evaluate the behaviour and the precise risk of the stocks in Malaysia before investing resources in financial exchange, according to **Hui-Shan Leel and Fan-Fah Chang Chon (2016)**. This could be a strategy to lower their downside risk given that they are knowledgeable about the organization's stock structure and can therefore make objective contributions. Additionally, portfolio diversification could increase investor confidence in the venture decision and help Malaysia achieve its strategic goal of being a developed nation by 2020 by creating a strong speculating financial market.

Johan Christian Hilsted (2012) seeks to develop an active portfolio management investment approach to outperform the MSCI Denmark from 1992 to 2011. In this regard, he concludes that active portfolio management increases the investor's value..

NEED FOR THE STUDY

a) To comprehend the significance of the beta value for shares in the FMCG industry.

b) To comprehend how the beta value affects each stock in the FMCG sector in the relevant market.

OBJECTIVE OF THE STUDY

a) To gather and analyse price data on specific FMCG sector enterprises.

b) To calculate each security's beta value.

c) To order the securities according to the calculated beta value..

Data

Because of the very specific aims and precise data needs in this study design, the researcher has chosen to utilise a descriptive research methodology. Daily information for 19 securities in the FMCG sector was gathered for six years, from January 1st, 2017, to December 31st, 2022. Data was gathered from the NSE website and is secondary data.

Table 1.1 for securities listed in Nifty pharma

S.NO	SYMBOL
1.	BRITANNIA
2.	COLPAL
3.	DABUR

4.	EMAMILTD
5.	GODREJCP
6.	HINDUNILVR
7.	ITC
8.	MARICO
9.	MCDOWELL
10.	NESTLEIND
11.	PGHH
12.	RADICO
13.	TATACONSUM
14.	UBL
15.	VBL

Estimation of beta

The following formula yields the beta value for each individual security:

Where, = cov(x,y)/ var(x),

• Y is the return on securities which is viewed as a dependent variable.

Market returns or index returns are referred to as "X" and are regarded as an independent variable.

• Variance equals standard deviation squared.

A metric called covariance assesses how two variables co-vary one another.

Table 1.2 showing beta value for listed securities:

S.NO	**SYMBOL**	**BETA**
1.	BRITANNIA	-0.097050393
2.	COLPAL	-0.094053635
3.	DABUR	-0.416423545
4.	EMAMILTD	-0.093114564
5.	GODREJCP	-0.107085767
6.	HINDUNILVR	-0.487806236
7.	ITC	-0.534722932
8.	MARICO	-0.361272578
9.	MCDOWELL	-0.009938204
10.	NESTLEIND	-0.466754946
11.	PGHH	-0.223962199
12.	RADICO	-0.118102595
13.	TATACONSUM	-0.202175197
14.	UBL	-0.258786344
15.	VBL	-0.120891913

INTERPRETATION

A fund is said to be more volatile than the market if its beta value is larger than 1.0, and less volatile than the market if it is less than 1.0. A beta of 1.5 suggests that a stock's excess return is predicted to move 1.5 times the market excess returns. Table 1.2 above shows that 15 companies in the FMCG industry have beta values smaller than 1. It suggests that certain assets are less prone to market volatility than the entire market**.**

Table 1.3 shows ranking of companies based on the beta value

S.NO	**SYMBOL**	**RANK**
1.	BRITANNIA	4
2.	COLPAL	3
3.	DABUR	10
4.	EMAMILTD	2
5.	GODREJCP	2
6.	HINDUNILVR	9
7.	ITC	9
8.	MARICO	7

9.	MCDOWELL	1
10.	NESTLEIND	6
11.	PGHH	4
12.	RADICO	1
13.	TATACONSUM	2
14.	UBL	2
15.	VBL	1

Table 1.3 shows that the FMCG sector securities listed as rank based on the beta value.

CONCLUSION

According to the study's findings, out of all the securities listed in Nifty FMCG, NESTLE INDIA has the highest beta value, while DABUR has the lowest beta value, based on historical data. Each and every security in NIFTY FMCG has a beta rating that is less than 1, indicating that it is less volatile than the market as a whole**.**

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