

**RISK AND RETURN ANALYSIS OF SELECT FOOD AND BEVERAGES COMPANIES
LISTED IN BSE INDIA**

HARSHITA JINDAL¹ AND MRS. SNEHA GHAI²

Student –MBA Agriculture and Food Business¹ and Associate professor²

AMITY INSTITUTE OF ORGANIC AGRICULTURE,AIOA

NOIDA

ABSTRACT

The study aims to compare the stocks of the selected companies from the Food and Beverages sector. This also helps to generate awareness about the stocks among the investors to invest in this particular sector. The risk and return is the basal concept not only in financial analysis but in every aspect of life. If the decisions escorts to benefit maximization, it is important for the person/institution to know about the integrate influence on the expected return or benefit as well as the on the risk and cost. The statistical aids used for this study include standard deviation, variance, covariance, beta and coefficient of correlation. The results estimated in the study are for the period 2018-2020. The data used for the estimation is purely secondary base. The study revealed how volatile the companies are and also which company is better to invest for the investor to get more returns.

Key words- risk, return, investment, beta.

1. INTRODUCTION

1.1 INVESTMENT-

It is an asset that comes by with the goal of generating either income or appreciation. In an economic sense, it is considered as the purchase of goods that are not consumed immediately but

are used in the future to create wealth. In finance , it is known as the a monetary asset purchased with an idea that this asset will provide income in the future or can later when it will be sold at a higher price for the profit. The Economic growth can also be encouraged by the use of the sound investments at business level. When a company constructs any new piece of the production equipment in order to increase the total output of goods within the facility, the increase in production can cause the gross domestic product to increase. This allows the economic growth by the increased production based on the previous equipment investment.

1.2. Concept of Risk and Return

There are various motives of an investor while making an investment. The most prominent among all the motives is to earn a return on the investment made by the investor. However selection of the investment on this basis of return is not possible since the investors usually invest their funds in more than one security which depicts that there are various other factors which are considered besides return also. The investor likes the return but at the same dislikes the risk too. It is necessary for an investor to consider the following points while making an investment, these points include-

- a) Clear understanding regarding what risk and return actually are
- b) What are the reasons that led to risk and return?
- c) How the risk and return can be measured.

Return- It is considered to be the motivating force as well the principal reward in the investment process. So the term return can be defined as realized return which means the return that has been earned or can also be termed as expected return which means the return that an investor

anticipates to earn during the future investment period. The return for the investment can be measured as the total gain or the loss to the investor over a given period of time and may also be interpreted as the percentage return on the initial amount which is invested. With the citation of investment in the equity shares, the returns have the chances of either gain or loss during the time of sale of these equity shares.

Risk-The term risk indicates that the future returns from an investment are unforeseeable. It can be said that it might not always be possible for an investor to get the expected return. With a reference to a firm, it can be explained that the actual outcome that was expected by an investor while making a financial decision might be different from the outcome which is incurred by the firm, basically a risk is considered to be a variation that occurs in the return. The investment which consists of more variations is considered to be more risky rather than the ones with smaller variations.

Types Of Risk in a stock-

- a) **Diversifiable Risk-**It is also called as Company Specifics or Non Systematic risk and is concerned with the random events of a company whose stocks are purchased. Diversification helps in the reduction of such type of risk. Example of the random events consists of a successful marketing campaign, losing a charismatic CEO or losing a court case etc.
- b) **Market Risk-**It is called as beta or non-diversifiable risk which is concerned with the socioeconomic and macroeconomic events which are occurring on a global basis. The investment in the stock market is influenced by the inflation, interest rates, recession and war. This type of risk can never be reduced by diversification.

1.3 BETA

It is used to measure Market risk. Beta depicts how the price of the reliability depends upon the forces of market. In effect, the high the price of the reliability the higher are the chances of changes in the market. It is analyzed by relating the returns of reliability to the returns of the market. The value can be negative or can be positive depending upon the cases. The Stock Beta pre-owned to measure the volatility; basically it can be described as the changes in the stock prices as well as in the market prices.

2.1 REVIEW OF LITERATURE

Dr. P. Karthika P. Karthikeyan (2011) sights to make a comparison among stocks of various companies selected from various sectors such as IT, Automobile, Banking and Oil sectors in the semblance of their risk, return and liquidity. It also helps to make an awareness regarding the stock among the investors while they are investing in any particular sector. The statistical aids used during the analysis include beta, standard deviation and coefficient of correlation tools and also gives the methodology for the quantifying risk.

Dr. Ratna Sinha (2013) convey a study based on the risk and return analysis in the equity investment in the banking sector. The analysis is used to make the relative study on the banking equity performance with two other main sectors including IT and real. In order to handle the study, he grabs the sample of eight banking companies which are listed in BSE India. The aids pre owned for the study are beta, alpha, variance, SD and correlation. The study depicts that there is no consequential relationship between banking and non-banking sectors.

Mr. Sunil M Rashinkarand Mrs. Divya U (2014) proposed a study on Market Analysis of determined Banking stock in India, the study was restricted to five nationalized banks in India. It

comprised of State Bank of India, Industrial bank of India, syndicate bank, Punjab national bank, Bank of Baroda. The time period for the study is for one year which is 1 July 2013- 31 March 2014. The statistical Aid used for the study was Beta coefficient. The beta depicts that the stock of these banks are at odds with the market and are minimally affected by the market risk.

Mr. K.O Emenike and Mr. W.U. Ani (2014) convey a study on the fluctuations of banking sectors stock return in Nigeria. The span of the study begins from 3rd January 2006 and ends at 31st March 2012. The aids used for the study is ARMA GARCH MODEL. The analysis depicts that the fluctuations in the stock returns of Nigerian banking sector moves in clump and the fluctuations is high for the sample time. The analysis also depicts that the stock return is leptokurtic and innovations don't have a great significance in the fluctuations of the stock exchange.

Dr. S. Krishnaprabha & Mr. M. Vijayakumar (2015) convey a study on the risk and return analysis of selected stock in India. The study was not only restricted to the banking sector but also comprised of the various other sectors. The study includes at least five companies of every sector and the span for the study was five years and the major aids used for the analyses include beta, standard deviation and variance. The analysis depicts that the banking and automobile sector comprised of high risk and truncated return while the situation is a vice versa for the IT and pharmaceutical companies.

Dr. Premachandran (2016), gave a study on the fluctuations and the return of the banking sector index, this analyses is conducted to know about the risk and return analysis of 12 banks listed in banks nifty. The analysis was limited to span of year starting from first April 2015 to 31st March 2016. The statistical aids used for the study includes beta, rate of return and standard

deviation to measure the fluctuations and correlation. The analyses depicts that except HDFC bank all others have high fluctuations than market since the value of beta is more than one.

Shobha C.V and Navaneeth K (2017), convey a study that depicts that the banking sector is the foundation of the Indian economy when it comes about the share market it is not only a progenitive avenue for the investment but is also volatile. This analysis helps to know about the risk and return of the five of the five selected bank stocks (AXIS, ICICI, PNB, SBI CANARA). The result mentioned depicts the daily return from period 2010-2013. The statistical Model used in this are-Garch 1, 1. The study depicts that the daily returns shows the arch effect and also that the performance of private banks is better than the chosen public sector banks.

RaviNararyana K.S.(2018), investigates a study on risk and return relationship of selected companies Mining industry. The statistical tools used for this study are beta, standard deviation, coefficient of correlation, returns, skewness and kurtosis. The sample size comprised of 6 public limited mining that are listed in BSE. The data is collected from year 2011-2016. The study depicts that there is a positive relationship between security and market return and value of beta shows that it is unstable during this period.

Dr. P. Subramanyam, Dr. Nalla Bala kalian (2018), The study was proposed to give investors a basic idea of investing in mutual funds to motivate them to make investment in those areas where they can increase the returns on their capital. This helps to provide the interesting understanding about the mutual funds, risk taking abilities of the investors and investment options chosen etc. The statistical aids used for this study are – risk, return, coefficient of variation and difference. This study helps us to understand how companies differentiate

themselves in the different sectors and also how to increase the returns and decrease the risk for the respective companies involves.

B. Vijyalakshmi(2017),the study convey that a successful investment requires a cautious assessment of the risk and the returns involved with the investment This study basically depicts a statistically significant positive relationship between risk and return at the individual as well as at portfolio level, telling regarding the theoretical and empirical findings on the problems created in market.

A.M. Mohamed Sindhasha , S Mohammed Safi(2018),propose a study which analyses the risk and return analysis of selected stock listed in BSE India. The main aim of this study is to estimate the return on the investment in the share prices of the selected companies for the time period of five years from 2013 to 2017. It evaluates risk and return analysis of selected 10 companies for the three sectors which IT, Automobile and Banking based on their share prices are. The statistical aids used are beta, alpha and coorelation.to estimated the risk and return from the shares of the selected companies. The study depicts that the from the selected ten companies Maruti Suzuki, HCL and HDFC have gained very high profitable return.

3. RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN- This paper uses **descriptive research** design

3.2. OBJECTIVES OF THE STUDY-

- .1. To compare the risk and return of both the companies
2. To estimate the associated systematic risk using beta.

3.3 DATA AND THEIR SOURCES-

The facts and figures pre-owned in the research are of secondary type. The facts and figures are poised through various secondary pedigrees which includes various websites, articles, research papers etc. The study pre-owned in the research has been done utilizing technical aids. In the Equity market, risk is examined and the trading decisions are taken on the foundation of the technical examination. The collection of share prices of two leading food and beverages company i.e. NESTLE AND BRITANNIA for a period of 2018-2020 from BSE India. Data on shares prices is extracted from www.bseindia.com website.

3.4. SAMPLING TECHNIQUE

The sampling technique used for this study is **Convenience sampling technique**.

3.5. STATISTICAL TOOLS AND FORMULAS-

1. Rate of return = (closing price – opening price / opening price) * 100

2. Computation of beta = (covariance of Sensex and selected company / variance of selected company)

3. Variance

$$s^2 = \frac{\sum (X - \bar{X})^2}{N-1}$$

4. Standard deviation

$$SD = \sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

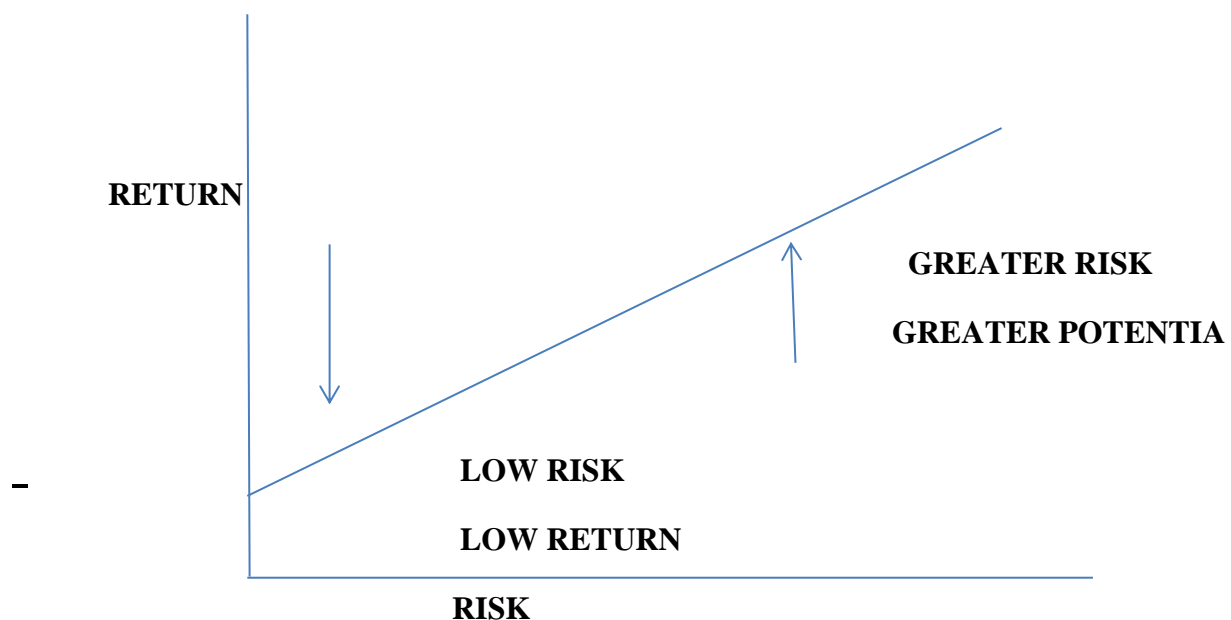
5. Coefficient of correlation=

$$\text{Correlation} = \frac{\text{Cov}(x, y)}{\sigma_x * \sigma_y}$$

6. Covariance=

$$\text{Cov}_{xy} = \frac{\sum(x - \bar{x})(y - \bar{y})}{(n-1)} = \frac{\sum xy - n\bar{x}\bar{y}}{(n-1)}$$

7. Risk and Return Relationship



8. SPSS 20-

It is used for the sample test i.e. independent sample test.

9. MS EXCEL

It is used for the calculation of returns, standard deviation , variance, covariance , beta and coefficient of correlation

3.6. SCOPE OF THE STUDY

The study encloses all the particulars related to investor risk-return relationship of securities. It is confined to two years data of BSE limited and food and beverages sector of the selected companies.it comprised of the calculation of individual standard deviation that helps to allocate the funds that are available for investment based risky portfolios.

3.7.. HYPOTHESIS TESTING-

H0- There is no significance relationship between the mean returns of two companies.

H1- There is a significance relationship between the mean returns of two companies.

3.8. LIMITATIONS OF THE STUDY-

1. This learning has been done to purely understand regarding the Risk-Return attributes for the investor.
2. The learning is confined to only two selected companies of the food and beverages industry.
- 3.. The research purely based on secondary data and the inherent problem in secondary data may affect the quality of research.

4.1. DATA ANALYSIS

NESTLE-The relationship between the risk and return of nestle from Feb 2018 to Feb 2020 is discussed here.

Average	0.183
variance	2.223
Standard deviation	1.491
covariance	0.510
beta	0.229
Coefficient of correlation	0.402

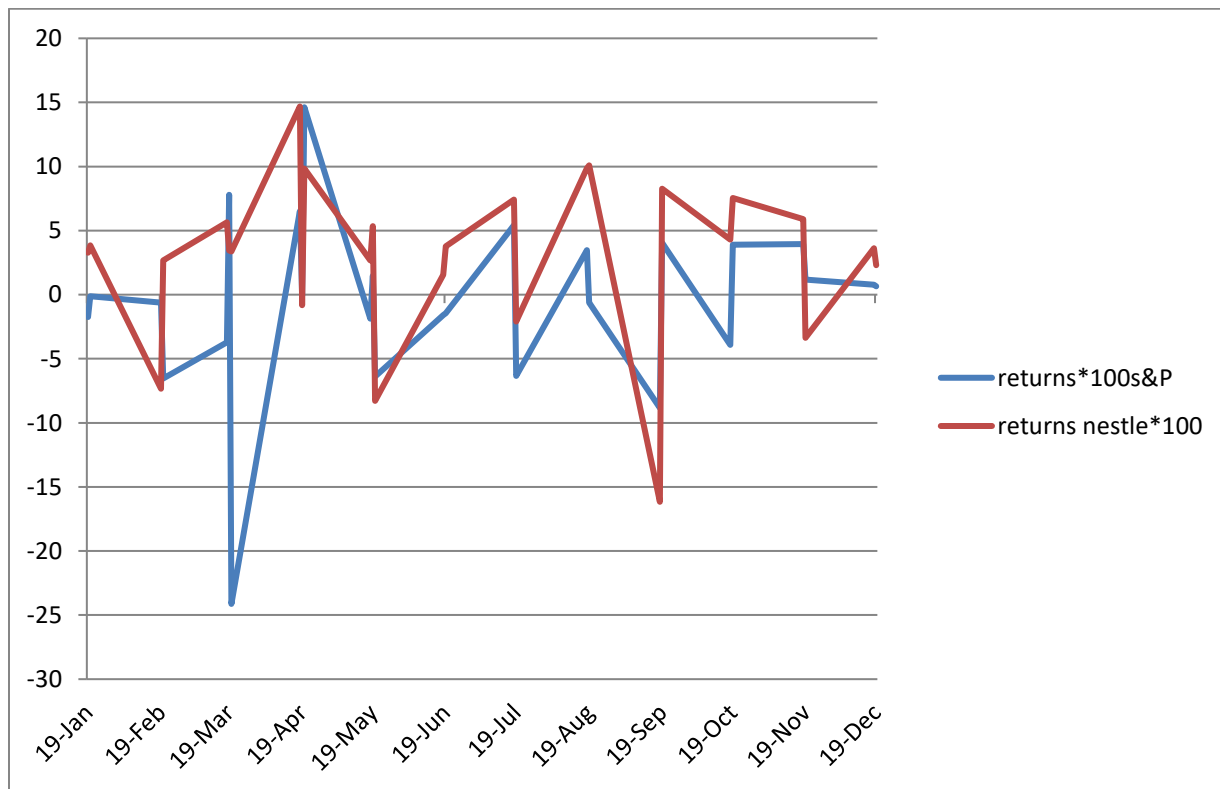


Chart 1 stock and market returns of nestle

BRITANNIA-The relationship between the risk and return of Britannia from Feb 2018 to Feb 2020 is discussed here.

Average	-0.023
variance	7.090
Standard deviation	2.662
covariance	0.510
beta	0.37
Coefficient of correlation	0.225

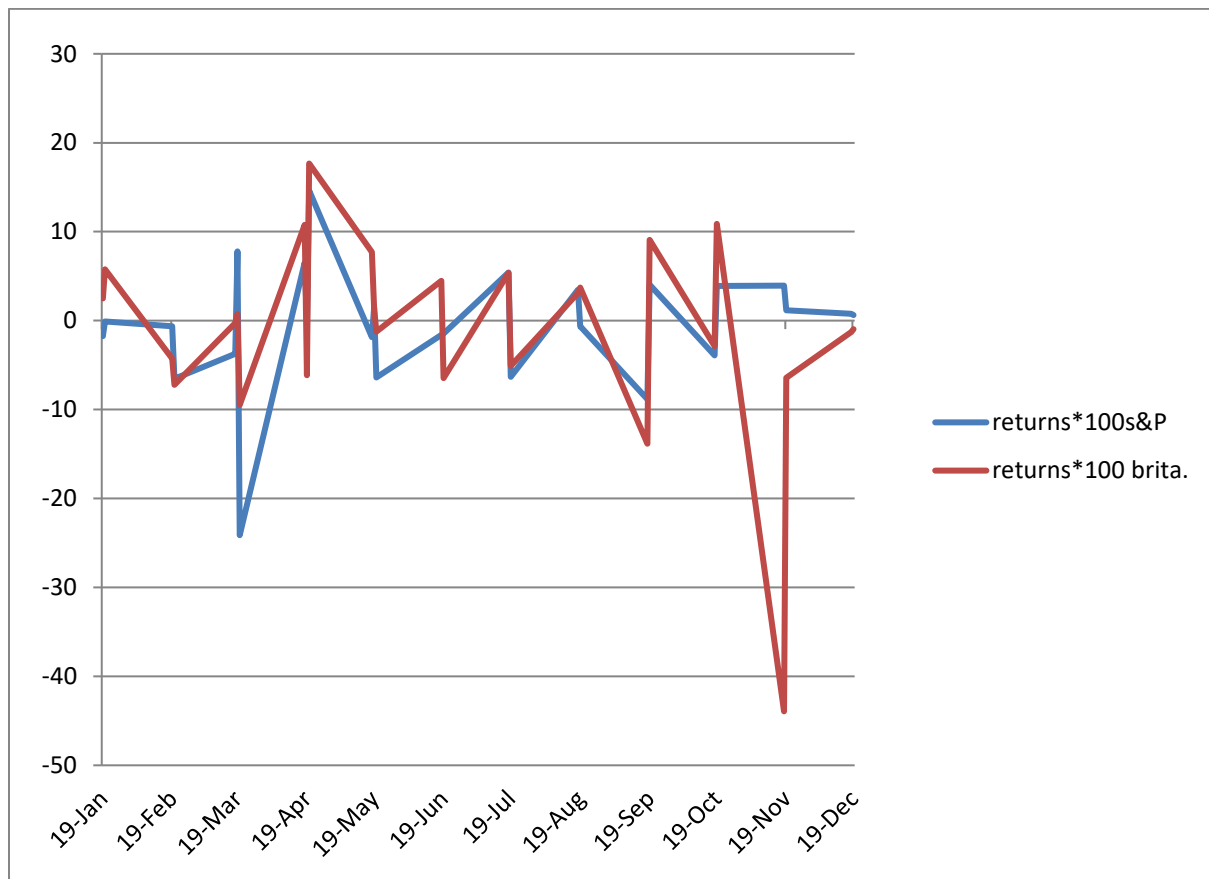


Chart 2 stock and market returns of Britannia

5.1 FINDING

1. The value of beta for both the food companies taken is less than 1 which depicts that the companies are less volatile and less risky.
2. The value of Standard deviation is less for both the companies which depicts that the companies are less volatile and hence the companies will earn the good return.
3. The value of coefficient of correlation is positive for both the companies which means when the market return increases the return for these companies will also increase.
4. The value of beta is high for Britannia than nestle which indicates that the systematic risk was high for the company Britannia during the period (2018-2020), from this it can be concluded that the company will have higher chances of return.
5. Beta is 0.37 for Britannia which reflects that when there is 100 points Movement in index, Britannia moves in the same direction.
6. beta is 0.22 for nestle which reflects that when there is 100 points Movement in index, Nestle moves in the same direction.

5.2. Suggestions-

1. If an investor has a desire of bearing high risk than he can go for the companies having the more value of systematic risk.
2. Investor should discover the level of the risk for stock and also the risk tolerance. If they are willing to have high returns then they should be able to bear high losses too.

5.3. Conclusion

The stock investment is always put through high risk and high return. so timely investment plans should be considered into order to survive and obtain the benefit from the market. The present study on risk and return analysis of selected food and beverages company stocks using statistical tools which comprised of standard deviation, variance, covariance, beta and coefficient of correlation. The value of beta for both the food companies taken is less than 1 which depicts that the companies are less volatile and less risky. The value of Standard deviation is less for both the companies which depicts that the companies are less volatile and hence the companies will earn the good return. The value of coefficient of correlation is positive for both the companies which means when the market return increases the return for these companies will also increase. It is therefore important for an investor to analyze the daily volatility of food and beverages stocks to construct a profitable portfolio.

5.4 References

www.Bseindia.com.

Dr.P.Karthika P. Karthikeyan(2011) THE COMPARITIVE STUDY ON RISK AND RETURN ANALYSIS WITH REFERENCE TO SELCTED STOCKS OF BSE SENSEX, INDIA.

Dr. Ratna Sinha(2013) COMPARITIVE STUDY ON THE ON THE BANKING EQUITY PERFORMANCE

MR.Sunil M Rashinkarand Mrs Divya U(2014) MARKET ANALYSIS OF DETERMINED BANKING STOCKS IN INDIA

MR. K. OEmenike and Mr. W.U. Ani (2014) STUDY ON THE FLUCATIONS OF BANKING SECTOR STOCK IN NIGERIA

Dr. S. Krishnaprabha&Mr. M. vijjaykumar(2015)RISK AND RETURN ANALYSIS OF BANKING SECTOR, INDIA

Dr. Premchandra (2016) STUDY ON THE FLUCTUATIONS AND RETURN OF BANKING SECTOR INDEX.

Shobha C.V and Navaneeth K (2017) STUDY ON THE BANKING SECTORS

RaviNarayana K.S.(2018)RISK AND RETURN RELATIONSHIP OF SELECTED MINING INDUSTRY

Dr. P.Suramanyam, Dr. Nalla Bala kaliaan(2018)RISK AND RETURN ANALYSIS OF SELECTED SECURITIES IN INDIA.

B.Vijyalakshmi(2017)STUDY ON RISK AND RETURN ANALYSIS OF SELECTED INDUSTRIES IN INDIA.

A.M. Mohamed Sindhasha , S Mohammed Safi(2018) RISK AND RETURN ANALYSIS OF SELECTED STOCK IN BSE, Vol 8. No 1.2