

An Empirical Evidence of Risk and Return Pattern and its Effects in Selection of Stock – Evidence from NSE Index, India

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ABSTRACT

The investor always seek about to earn more possible return or profit from investment which made on a specific securities, but there is connection of certain amount of risk with investment. The investor should be very carefully about risk associated with securities, in order to help investor the security analysis leads parts to measure the risk and return to determine their profit and capital appreciation. Present study based on analytical nature, the necessary data are collected from the official website of NSE as a secondary source of data, and the selected companies stock taken as sample unit on the basis performance which has placed in the top 10 of Nifty Index during the year 2015-2017. In order to analyse the risk and return pattern of selected stocks, the covariance, variance and Beta has been used. Finally this study conclude that the stocks of different sector under the NSE index which has different pattern of risk and return which is based on the capital market fluctuation and company's financial performance.

Keywords - Risk and Return Pattern, Securities, Index, Stock market, Profit Margin.

INTRODUCTION

In the modern financial market segmentation, the concept of risk and return management plays vital role among the stock market investors. The phenomena stock prices movement towards upwards and downwards will be determine the profit margin to investor, also its indicators of economic growth of country. In the present investment world, risk is attached with every security that traded in the stock market. The investor always seek about to earn more possible return or profit from investment which made on a specific securities, but there is connection of certain amount of risk with investment. The investor should be very carefully about risk associated with securities, in order to help investor the security analysis leads parts to measure the risk and return to determine their profit and capital appreciation.

The concept of risks management involves that analysing the available securities in the market in terms of risk, return, time and liquidity. The investor decision on a particular security investment is depends on their ability tolerate risk level, when the investor expect more return from their investment, they must be ready to bear high risk level because the motive of every investor is to maximise return and minimise the level of risk. The risk and return are most important consideration in the investment decision making process. There is big challenges in front of ordinary investor is estimating required rate of return on investment. Hence there are different types of securities, with different nature, maturity, and different segmentation, so the investor should made detailed investigation before investing.

REVIEW OF LITERATURE

Jack clark francis (1986) dealt about return on investment and possibility of the risk default and also he described as there is no any possibility to determine return on investment in the uncertainty situation. He conclude that the possible return can be determined based on the probability distribution and financial position of the company.

John H. Cochrane Quarter (1999) examined the return predictability and described selection of different securities based on risk and return, and he conclude that the investor has various option to reduce risk associated with the different securities and also they should understand the market situation.

De bond and Thaler (1985) investigated investor behaviour with possible psychological basis and he found that the reversion of mean value shows as evidence of investor reaction based on future return expectation.

Shanmugam (1990) studied about the various factors influencing on investor decision, based on a wareness and investment objectives and he conclude that investors are much interest in capital gains and current

dividend income and also they have adequate knowledge possesses through various capital market and government regulations like fiscal and monetary policy.

Sitkin and Pablo (1992) dealt about the risk evaluation under uncertainty to define the different perception of investor is depends on investment information availability and management system which the companies have. He found that there are some factors which create more impact on individual risk preference such as risk behaviour, risk preference, past experience and social influence.

Krishnamoorthi (2018) studied about the risk and return performance of various stock listed in NSE index in Indian stock market and examined the various price movement in different periods, finally he conclude that the stocks belongs to different industry have different pattern of risk, so the investor should study about the present situation of market and then they can select best portfolio to invest.

OBJECTIVE OF STUDY

To evaluate of risk and return pattern of the selected stocks listed in NSE

RESEARCH METHODOLOGY

Present study based on analytical nature, the necessary data are collected from the official website of NSE as a secondary source of data, and the selected companies stock taken as sample unit on the basis performance which has placed in the top 10 of Nifty Index during the year 2015-2017. In order to analyse the risk and return pattern of selected stocks, the covariance, variance and Beta has been used

DATA ANALYSIS AND INTERPRETATION

TABLE I. BETA OF SELECTED STOCKS WITH RESPECT TO NIFTY 50 FOR THE FY 2014-15

Stocks	Covariance	NIFTY variance	Beta, β	Result
MARUTI SUZUKI	76.806	49.330	0.61	Conservative
TATA MOTORS	73.294	49.330	3.16	Aggressive
WIPRO	33.618	49.330	2.6	Aggressive

Table 1 reveals that the co-variance, NIFTY variance and Beta of the selected stocks with respects to NIFY 50 index in India for the financial year 2014-15, which resulted Beta value for TATA MOTORS 3.16 and WIPRO 2.6 shows as aggressive stocks , and MARUTI SUZUKI indicates as conservative stock with Beta value of 0.6.

TABLE II. BETA OF SELECTED STOCKS WITH RESPECT TO NIFTY 50 FOR THE FY 2015-16

Stocks	Covariance	NIFTY variance	Beta, β	Result
MARUTI SUZUKI	104.870	65.925	0.84	Conservative
TATA MOTORS	249.514	65.925	-2.15	Conservative
WIPRO	36.741	65.925	1.3	Aggressive

Table 2 indicates that the co-variance, NIFTY variance and Beta of the selected stocks with respects to NIFY 50 index in India for the financial year 2015-16, which resulted Beta value for MARUTI SUZUKI 0.84 and TATA MOTORS -2.15 shows as conservative stocks , and WIPRO indicates as aggressive stock with Beta value of 1.3.

TABLE III. BETA OF SELECTED STOCKS WITH RESPECT TO NIFTY 50 FOR THE FY 2016-17

Stocks	Covariance	NIFTY variance	Beta, β	Result
MARUTI SUZUKI	42.338	19.764	4.5	Aggressive
TATA MOTORS	24.526	19.764	1.8	Aggressive
WIPRO	24.526	19.764	-0.4	Conservative

Table 3 shows that the co-variance, NIFTY variance and Beta of the selected stocks with respects to NIFY 50 index in India for the financial year 2016-17, which resulted Beta value for MARUTI SUZUKI 4.5 and TATA MOTORS 1.8 shows as Aggressive stocks , and WIPRO indicates as Conservative stock with Beta value of -0.4.

TABLE IV. RETURN, RISK AND BETA OF INDIVIDUAL STOCK FOR THE FY 2014-15

Stocks	Return, R	Risk, S.D.	Beta, β
MARUTI SUZUKI	0.61	8.8	0.61

TATA MOTORS	3.16	8.7	3.16
WIPRO	2.6	5.8	2.6

Table 4 reveals that the return, risk and beta calculation of individual stock for the financial year 2014-15, from the calculation TATA MOTORS shows good return of 3.16 with risk associated 8.7 and beta value estimated to 3.16, WIPRO shows moderated return of 2.6 with 5.8 risk factor and its beta value shows about 2.6 and MARUTI SUZUKI identified as the least performer with 0.16 of return, 8.8 of associated risk and estimated beta value of 0.61. TATA MOTORS is the top performer in terms of return. But while comparing the risk adjusted return against MARUTI SUZUKI is the out-performer compared to rest stock.

TABLE V. RETURN, RISK AND BETA OF INDIVIDUAL STOCK FOR THE FY 2015-16

Stocks	Return ,R	Risk, S.D.	Beta, β
MARUTI SUZUKI	0.84	10.2	0.84
TATA MOTORS	-2.15	15.8	-2.15
WIPRO	1.3	6	1.3

Table 5 indicates that the return, risk and beta calculation of individual stock for the financial year 2014-15, from the calculation WIPRO shows good return of 1.3 with risk associated 6 and beta value estimated to 1.3, MARUTI SUZUKI shows moderated return of 0.84 with 10.2 of risk factor and its beta value shows about 0.84 and TATA MOTORS identified as the least performer with -2.15 of return, 15.8 of associated risk and estimated beta value of -2.15. WIPRO and MARUTI SUZUKI are economy performers in terms of return. But while comparing the risk adjusted return against TATA MOTORS is the out-performer.

TABLE VI. RETURN, RISK AND BETA OF INDIVIDUAL STOCK FOR THE FY 2016-17

Stocks	Return ,R	Risk, S.D.	Beta, β
MARUTI SUZUKI	0.84	10.2	0.84
TATA MOTORS	-2.15	15.8	-2.15
WIPRO	1.3	6	1.3

Table 6 shows that the return, risk and beta calculation of individual stock for the financial year 2014-15, from the calculation MARUTI SUZUKI shows good return of 4.5 with risk associated 6.5 and beta value estimated to 4.5, TATA MOTORS shows moderated return of 0.18 with 5 of risk factor and its beta value shows about 1.8 and WIPRO identified as the least performer with -0.4 of return, 5 of associated risk and estimated beta value of -0.4. MARUTI SUZUKI and TATA MOTORS are economy performers in terms of return.

VI. CONCLUSION

In the present investment world, risk is attached with every security that traded in the stock market. The investor always seek about to earn more possible return or profit from investment which made on a specific securities, but there is connection of certain amount of risk with investment. The risk and return are most important consideration in the investment decision making process. There is big challenges in front of ordinary investor is estimating required rate of return on investment. Investors are much interest in capital gains and current dividend income and also they have adequate knowledge possesses through various capital market and government regulations like fiscal and monetary policy. This study conclude that the stocks of different sector under the NSE index which has different pattern of risk and return which is based on the capital market fluctuation and company's financial performance.

REFERENCES

[1] Behr, P "On Portfolio Optimisation: Imposing The Right Constraints," Journal of Banking and Finance, vol. 37(4), pp. 1232-1242, 2013.

[2] Bird and Gallagher "Note Naïve Diversification And Portfolio Risk – A note," Management Science, vol 32(2), pp. 224-25, 1986.

[3] Brands and Gallagher "Portfolio Selection, Diversification and Fund of Fund; a note," Accounting and Finance, vol. 45(2), pp. 185-197, 2005.

- [4] Domain and Louton “Diversification In Portfolios Of Individual Stocks; 100 Stock are Not Enough,” *Financial Review*, vol. 42(4), pp. 557-570, 2007.
- [5] Evans and Archer “Diversification and the Reduction of Dispersion; an Empirical Analysis, *The Journal of Finance*, vol. 23 (5), pp. 761-767, 1968.
- [6] Fama Eugene “Risk, Return and Equilibrium; Some Clarifying Comments,” *Journal of Finance*, vol. 23, pp. 29-40, 1968.
- [7] Johnson and Donald “A note on Diversification and Reduction of Dispersion, *Journal of Financial Economics*, vol. 1, pp. 365-375, 1974.
- [8] Sentana “Factors Representing Portfolios in Large Assets Market, *Journal of Econometrics*, vol. 119(2), pp. 257-289, 2004.
- [9] Krishnamoorthi and Murugesan “Analysis of Risk and Return of Selected Mutual Funds Schemes in India,” *International Journal of Mechanical and Production Engineering Research and Development*, vol. 8, (3), pp.884-890, 2018.
- [10] Krishnamoorthi, “Measure the Risk and Return Performance of the Selected Stock in NSE Index,” *An International Multidisciplinary Quarterly Research Journal Ajanta*, vol. 7(4) pp. 14-20, 2018
- [11] Krishnamoorthi “Measurement of Risk and Return of Equity oriented Dividend Funds of selected Mutual Funds companies in India” , *M- Infiniti Journal of Management*, Vol. 12(1), pp. 149-158, 2018.
- [12] Dr.M.Krishnamoorthi and P.Venkatesh “ A Descriptive Analysis Of Short Term Solvency And Profitability Of Selected Pharmaceutical Companies In India” *Journal of Advanced Research in Dynamical and Control Systems*, 13-Special Issue, PP 677-682, November 2017.
- [13] Dr. M. Krishnamoorthi and P. Venkatesh “ Measurement the Profitability Position of Select Steel Companies in India – Descriptive Study” *SHANLAX International Journal Of Management*, Vol 5, (2), pp 290-294 August 2017.
- [14] Dr.M.Krishnamoorthi and P.Venkatesh “An Evaluation Of Liquidity And Profitability Of Selected Pharmaceutical Companies In India” *Journal of Advanced Research in Dynamical and Control* vol. 07, pp 101-104, July 2017 .
- [15] Dr. M. Krishnamoorthi and P. Venkatesh “Measurement of Profitability, Liquidity And Dividend Progress Of Select Steel Companies In India - A Discriminant Function Analysis,” *SHANLAX International Journal Of Management*, Vol 5,(1), pp 75-82, July 2017.
- [16] M. Krishnamoorthi “ Financial Liquidity Performance Evaluation Of Select Steel Companies In India- A Descriptive Study” *Aayvagam An International Journal Of Multidisciplinary Research*, vol 5A, (2), pp 75-81, 2017.
- [17] M. Krishnamoorthi “ Financial Liquidity Variance Analysis Of Select Steel Companies In India” *International Journal of Economic Behavior and Organization* 4 (5), pp. 40-44, 2016
- [18] Dr. M. Krishnamoorthi “ Impact Of Liquidity , Turnover And Profitability On Dividend Payment Of Select Steel Companies India” *Asian Journal Of Research In Social Science And Humanities* Vol. 6, (7), pp. 1176-1188, July 2016.
- [19] Dr. M. Krishnamoorthi “ Forecast Analysis Of Profitability In The Select Steel Companies In India” *International Journal Of Research In Computer Application & Management*, Vol. 6 (06), pp 49-54, June 2016.
- [20] M. Krishnamoorthi “Liquidity Performance Evaluation Of Select Steel Companies In India – Descriptive Study *International Journal Of Social Science And Management*” Vol. 3(3) pp.193-202 , 2016.

- [21] Dr.M.Krishnamoorthi “Testing Significance Relationship In The Profitability Of Select Steel Companies In India” International Journal Of Engineering And Management Research “Vol.6(3), pp.223-230, May-June 2016.
- [22] Dr. M. Krishnamoorthi “ A Study On Profitability Growth Analysis Of Selected Steel Companies In India” Indian Journal Of Research In Commerce, Management, Engineering And Applied Science, Vol.2, PP 48-56, April-2016.
- [23] Dr. M. Krishnamoorthi “Forecast Of Liquidity Position Of Select Steel Companies In India” International Journal Of Arts, Science And Commerce Vol.7. 2(2), pp 154-160, April 2016.
- [24] M. Krishnamoorthi and D. Vetrivelan “Dividend Analysis Of Selected Steel Companies In India – A Analytical Study” Middle East Journal Of Scientific Research Vol. 24, (6), pp.62-68, 2016.
- [25] M. Krishnamoorthi, and Dr. M. Ramesh “ A Study On Profitability Analysis Of Selected Steel Companies In India” Asian Journal Of Research In Social Science And Humanities, Vol. 2, (10), pp.16-40, October, 2012.
- [26] M. Krishnamoorthi and Dr. M. Ramesh ” (2012) “The Solvency Analysis Of Selected Steel Companies In India –An Empirical Study” Asian Journal Of Research In Business Economic And Management, Vol . 2 (6), pp. 161-179, June 2012.
- [27] M. Krishnamoorthi and Dr. M. Ramesh “Long Term Solvency (Leverage) Analysis Of Selected Steel Companies In India – An Empirical Study” International Journal Of Management Research and review, vol.2(4), pp. 525-538, April 2012.