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OPTIMAL PORTFOLIO CONSTRUCTION OF REALTY SECTOR SELECTED COMPANIES REGISTERED ON NSE

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Abstract

This research work is on the Construction Portfolio of selected stocks from realty industries which are listed on NSE (National Stock Exchange). Indian stock market is a highly volatile market where portfolio construction is too much highly important to minimization of risk and to get good returns for that reason conducting this study the researcher can get a practical knowledge and also create awareness in the minds of the investors. For this research paper realty sector companies which are listed on the NSE had been selected. Out of the ten companies only five companies were included in the optimal portfolio construction study. In this research work the construction of portfolio using Sharpe Index model for investor. Construction of portfolio is used for the diversify of risk and maximize of return.

Introduction:

Today If the investor doesn't have a proper knowledge on investment and portfolio management they can't make wise decisions regarding their investments. Presently all the investor does not know where they invest the money so that they get maximum return with the minimum risk. Portfolio give them a basic idea where they should invest their hard earn money so the risk can be diversified in a proper way. Where the stock market is too much volatile at that time design a proper portfolio which is necessary but before designing any portfolio first we have to identify the which factor are important for designing a portfolio. Today setting financial goals is also getting tough day by day. People do not have any specific financial goals so they can't invest their saving in to appropriate portfolios and there is a lack of knowledge of risk return trade off. Investors read many financial magazine, financial report, news papers by which they get the knowledge about investment option but they don't how to design proper portfolio.

This study will help the investor to get the knowledge about portfolio management and basic perception about investor in Indian market. It also helps the economic development as more investors will be ready to investment in the finance market.

Meaning of Portfolio

The term investment portfolio refers to the various assets of an investor which are to be considered as a unit. It is not merely a collection of unrelated assets but a carefully blended asset combination within a unified framework. It is necessary for investors to take all decisions as regards their wealth position in a context of portfolio. Making a portfolio means putting one's eggs in different baskets with varying element of risk and return. The object of portfolio is to reduce risk by diversification and maximise gains.

Reasons for selecting realty sectors

In last one year most of the sectors gave negative return like a PSU Bank sector, Media sector, Metal sector, Pharma Sector but in the last year realty sectors gave not only positive returns but also gave the highest return as compared to the other sectors.

Index Returns (%)	QTD	YTD	1 Year	5 Years
Price return	15.3	28.4	28.49	8.01
Total Return	15.3	29.2	29.26	8.67

Statistic	1 Year	5 Years	Since Inception
S,D	24.18	28.86	42.53
Beta (Nifty)	1.14	1.42	1.48
Co-relation(Nifty)	0.65	0.67	0.76

Review of Literature:

- **Francis Mary and G. Rathika (2015):** Their study focussed on portfolio construction by using the monthly closing prices of ten companies listed in NSE and CNX Pharma. The period of study was from September 2010 to September 2014. Based up on the cut-off value out of the ten companies only one company is selected for the optimal portfolio construction.

- **Gopalakrishna, Muthu (2014)** explains the investment alternatives available for rational investor. A comparison of traditional portfolio theory with that of modern portfolio theory is made in this study. This study aims to test whether single index model offers an appropriate explanation of stock returns on IT stocks. The samples included in this study consists of 13

actively traded scripts listed in the National Stock Exchange Limited, Bombay (NSE). The scrips in the sample are selected from NSE IT index. The secondary data for a period 2004-2008 has been used for the study. By applying regression on the market return and excess security return it is found that IT index has a phenomenal amount of sensitiveness over S&P CNX Nifty. The study investigated that there are four aggressive stocks having beta coefficient of more than one. It is recommended that among the sample companies all the stocks are undervalued except one stock and thus the investors can pick these stocks to revise their portfolio.

- **R. Nalini (2014):** The main purpose of her study is to construct an optimal portfolio by using Sharpe's single index model. For that, fifteen companies from the S&P BSE Sensex index were selected for the study. Only secondary data had been used for conducting the study. The main objective of the study is to calculate the proportion of investment to be made in to each of the stock that is included in the optimal portfolio

Research Methodology

Objectives

1. To measure the risk and return of the selected sample for the study period.

2. To construct an optimal portfolio and analyze its risk and return for Investors in realty sector.

3. To calculate the proportion of money to be invested in each security by Investors.

4. To guide investors to find out the company that gives the maximum return with minimum risk.

5. To study the volatility of companies in comparison with the market.

Nature and Sources of Data

Secondary data is collected from the websites. For research work five companies are selected from realty sector which are listed on the National stock exchange. Secondary data is collected for 1 year i.e form April-2019 to March-2020.

Data Analysis

M.S. Excel is used for analysing the secondary data. Under this research the portfolio Construction Sharpe Index Model is use.

Data Analysis and Findings

Realty Sector Optimum Portfolio Construction

Step 1: Give Rank according to Returns (Highest Returns give first Rank)

Company	R_i	β	α	ei^2	(R_i-R_f)	$(R_i-R_f)/Bi$	Rank
MAHLIFE	9.20	0.75	0.42	3.07	4.78	6.39	**4**
DLF	22.94	2.16	-2.39	-21.91	18.52	8.59	**2**
GODREJPROP	6.62	0.62	-0.70	4.99	2.20	3.53	**5**
SOBHA	14.19	1.14	0.76	-1.43	9.77	8.55	**3**
BRIGADE	17.90	1.53	-0.05	-8.76	13.48	8.83	**1**

Interpretation

Here for finding out the Companies Returns (**R**ı**)**, Beta(β) , Alph (α) and risk (**ei²**) is used and gave ranks to companies according to their returns. Company which got highest return got first rank and lowest returns got last rank. In the Above table BRIGADE has the highest return so BRIGADE got first rank. DLF has second highest returns so got second rank. SOBHA got third ranks, fourth rank is given to MAHLIFE and last rank given to GODREJPROP.

Step: 2 Arrange Company According to Rank and Calculation of C*

Company	$(R_i-R_f)/B_i$	$(R_i-R_f)*\beta/E_i^2$	$E(R_i-R_f)*\beta/E_i^2$	$Bi2/Ei2$	$E\ Bi2/Ei2$	Ci
BRIGADE	8.83	-2.35	-2.35	-0.27	-0.27	0.64
DLF	8.59	-1.82	-4.17	-0.21	-0.48	2.05
SOBHA	8.55	-7.80	-11.97	-0.91	-1.39	**17.92= C***
MAHLIFE	6.39	1.16	-10.81	0.18	-1.21	13.92
GODREJPROP	3.53	0.27	-10.54	0.08	-1.13	12.64

Interpretation

Second Step for Construction of portfolio is to arrange the Companies according to Rank and Calculation of cut- off rate (C*). The selection of the stocks depends on a unique cut- off rate so that all the stocks with higher ratio are included and lower Stocks with lower ratio are excluded.

According Sharpe single Index Model, when cut- off rate value starts to decline than the company is not included in the portfolio. In the above table cut- off rate is **17.92 (C*)** which means that above this cut- off rate all the securities are included in the portfolio. Here according

to the cut- off rate all the securities named BRIGADE, DLF and SOBHA are selected. Here two securities are excluded after the cut off rate so MAHLIFE and GODREJPROP are not selected in the portfolio.

Step : 3 Find Out weights (Zi) for allocation of fund in to each security.

Company	b_{i2}/e_i^2	Z_i	X_i	β	P.F.Ret>(Rp)
BRIGADE	-0.267	2.423	18.72%	1.53	4.082
DLF	-0.212	1.979	15.28%	2.16	2.367
SOBHA	-0.912	8.546	66.00%	1.14	6.516
		12.948	**100.00%**		**12.964**

Findings

- Out of the five securities, only three securities are selected in optimum portfolio named BRIGADE, DLF and SOBHA. Investment allocations according to the calculation are:

  1   18.72 % of fund allocate in to BRIGADE security.
  2   15.28 % of fund allocate in to DLF security.
  3   66.00 % of fund allocate in to SOBHA security.

- Total returns of these Portfolios are 12.9 here return is more than risk free return so according to this research work investment in to realty sector is better than risk free return

- Here SOBHA has highest allocation of fund because beta of this security is low and risk is also low.

- Here DLF has lowest allocation of fund because beta of this security is high.

- Banking industry gave   negative return in the selected research time.

Investment
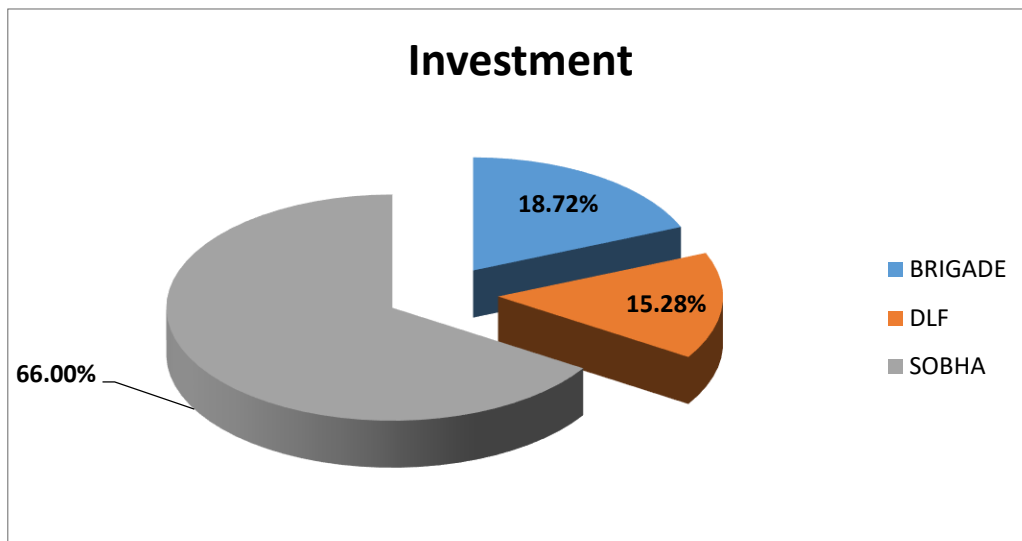
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