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Study On Portfolio Management And Investment Decision

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Abstract : *Portfolio management is a process encompassing many activities of investment is assets and securities. it is a dynamic and flexible concept and involves regular and systematic analysis, judgment, and action. a combination of securities held together will give a beneficial result if they grouped in a manner to secure higher returns after taking into consideration the risk elements. The main objective of the portfolio management is to help the investors to make wise choice between alternative investment without a post trading shares, any portfolio management must specify the objectives like maximum returns, optimum returns, capital appreciation, safety etc,. in the same prospectus.This service renders optimum returns to the investors by proper selection and continuous shifting of portfolio from one scheme to another scheme of from one plan to another plan within the same scheme.five different companies are chosen for the study. WIPRO, ITC, DR.REDDY, ACC, BHEL. the companies chosen for the study are some of the top performers in the securities market.the study gives the returns offered by the companies of various securities are compared and conclusions are brought out which produces large and better portfolio combinations for the investors. It is evident from this analysis that 'BHEL ' and ' DR.REDDYS' are providing good returns when compared to other companies.*

Keywords - *Portfolio management; financial data; investment; securities; returns.*

I. INTRODUCTION

A portfolio is a collection of assets. The assets may be physical or financial like Shares, Bonds, Debentures, Preference Shares, etc. The individual investor or a fund manager would not like to put all his money in the shares of one company that would amount to great risk. He would therefore, follow the age old maxim that one should not put all the eggs into one basket. By doing so, he can achieve objective to maximize portfolio return and at the same time minimizing the portfolio risk by diversification. Portfolio management is the management of various financial assets which comprise the portfolio. Portfolio management is a decision – support system that is designed with a view to meet the multi-faced needs of investors.According to Securities and Exchange Board of India Portfolio Manager is defined as: ―Portfolio means the total holdings of securities belonging to any person‖.

REVIEW OF LITERATURE:

Werner F. M. De Bondt, **Richard** ***Thale (2004),*** Research in experimental psychology suggests that, in violation of Bayes' rule, most people tend to ―overreact‖ to unexpected and dramatic news events. This study of market efficiency investigates whether such behavior affects stock prices. The empirical evidence, based on CRSP monthly return data, is consistent with the overreaction hypothesis. Substantial weak form market inefficiencies are discovered. The results also shed new light on the January returns earned by prior ―winners‖ and ―losers.‖ Portfolios of losers experience exceptionally large January returns as late as five years after portfolio formation

Vikas Agarwal, Narayan Y. Naik Georgia ***Narayan Y. Naik. Narayan*** **(2004)**

This article characterizes the systematic risk exposures of hedge funds using buy-and-hold and option-based strategies. Our results show that a large number of equity-oriented hedge fund strategies exhibit payoffs resembling a short position in a put option on the market index and therefore bear significant left-tail risk, risk that is ignored by the commonly used mean-variance framework. Using a mean-conditional value-at-risk framework, we demonstrate the extent to which the mean-variance framework underestimates the tail risk. Finally, working with the systematic risk exposures of hedge funds, we show that their recent performance appears significantly better than their long-run performance. **Robert G. Cooper, Scott J. Edgett (2014),**portfolio Management in New Product Development: Lessons from the Leaders—Journal of Research _Technology Management, Vol.2, No.52 pp.37-A study of portfolio management practices in industry

reveals three goals: maximizing the value of the portfolio, achieving the right balance and mix of projects, and linking the portfolio to the business's strategy. This first of two articles provides examples of portfolio methods used to achieve the first two goals. Maximizing the portfolio's value is achieved by means of various financial models, including the Expected Commercial Value method and the Productivity Index, which are outlined and critiqued. Scoring models are also used to maximize the value of the portfolio. Achieving a balanced portfolio is quite a different issue, involving the use of bubble diagrams and other visual **Catherine P. Killen, Robert A. Hunt, Elko J. Kleinschmidt 2008** project portfolio management for product innovation *Journal of quality of reliable management , Vol*.35, No.3 pp.327-342.The purpose of this paper is to create a benchmark and identify best practices for Project Portfolio Management (PPM) for both tangible product‐based and service product‐based development project portfolios.

Design/methodology/approach

– A questionnaire was developed to gather data to comp are the PPM methods used PPM performance, PPM challenges, and resulting new product success measures in 60 Australian organizations in a diverse range of service and manufacturing industries. **Rogério Tadeu de Oliveira Lacerda** The main aim of this paper is to present a framework to create a better understanding of the context and aid the portfolio management process. The paper seeks to present a case to illustrate the proposed methodology, identifying and measuring the success parameters for a project in a portfolio.

Design/methodology/approach

– The research method is a qualitative and quantitative mixture and it is presented as a study case. The primary data were obtained using semi‐structured interviews with decision makers. Bibliographic research is used in order to construct the theoretical framework and the intervention instrument adopted is the multi-criteria decision aiding methodology – constructivist (MCDA‐C).

OBJECTIVES OF THE STUDY:

- To study the investment pattern and its related risks & returns.
- To see whether the portfolio risk is less than individual risk on whose basis the portfolios are constituted.
- To see whether the selected portfolios is yielding a satisfactory and constant return to the investor.
- To understand, analyze and select the best portfolio

RESEARCH METHODOLOGY:

The data which is used for the study is purely from secondary source, books, journals, articles, newspapers. The monthly closing prices have been collected from the official website of National stock exchange for a period of 3 years from 2011-2016. Tools which are used for the analysis is risk, the average, standard deviation, mean, through risk return analysis of Markowitz model.

Sample size I have taken 6 companies from different sectors.

HYPOTHESIS:

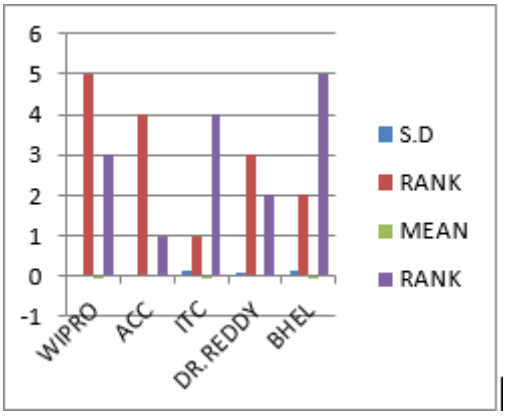
Hypothesis refers to the assumption which is made about the sample before reading the final result. It gives the direction for the whole project of the research. In our study, the hypotheses
Which have been adopted given below:

H0: There is a relationship between risk and return.**H0**:There is a relationship between standard deviation and correlation coefficient.

DATA ANALYSIS AND INTERPREATION PORTFOLIO ANALYSIS

RANKING OF STANDARD DEVIATION AND MEAN:

S.NO	COMPANY	S.D	MEAN
1	WIPRO	0.0528	-0.01
2	ACC	0.0592	0.007
3	ITC	0.1554	-0.01
4	DR.REDDY	0.0807	0.001
5	BHEL	0.1248	-0.03



Interpretation: From the above analysis the standard deviation of wipro is 0.052,ACC is 0.059, ITC is 0.155, DR.REDDYS is 0.080,BHEL is 0.12. therefore the above analysis is observed that ACC is 1st in rank, DR.REDDYS is 2nd in rank, WIPRO IS 3rd in rank, ITC is 4th in rank, BHEL is 5th.

CALCULATION OF PORTFOLIO WEIGHTS:

$$Wa = \frac{\sigma b\,[\sigma b-(nab*\sigma a)]}{\sigma a^2+\sigma b^2-2nab*\sigma a*\sigma b}$$

$$Wb = 1 - Wa$$

COMBINATION OF ACC &WIPRO:

σa = 0.059185395

σw = 0.052794507

naw = 0.175061193

$$Wa = \frac{0.0527[0.0527-(0.175*0.059)]}{(0.059)^2 + (0.0527)^2 - 2(0.175)*(0.059)*(0.0527)}$$

$$Wa = \frac{0.002233162}{0.00625829}$$

Wa = 0.86

Wb = 1 − Wa

COMBINATION OF DR.REDDYS & BHEL:

σR = 0.080689928

σB= 0.124784675

nRB = 0.167448171

$$Wa = \frac{0.1247[0.1247-(0.167*0.0806)]}{(0.0806)^2+(0.1247)^2-2(0.167)*(0.0806)*(0.1247)}$$

$$Wa = \frac{0.0138}{0.1586}$$

Wa = 0.78

Wb = 1 − Wa

Wb = 1- 0.087 = 0.91

COMBINATION OF ITC & WIPRO:

$\sigma i = 0.155383138$

$\sigma w = 0.052794507$

$niw = 0.272731155$

$$Wa = \frac{0.0527[0.0527-(0.2727*0.1553)]}{(0.1553)^2 + (0.0527)^2 - 2(0.2727)*(0.1553)*(0.0527)}$$

$$Wa = \frac{0.0005454}{0.0044637}$$

$Wa = 0.122$

CALCULATION OF PORTFOLIO RISK:

$$R_p = \sqrt{(\sigma a*Wa)^2+(\sigma b*Wb)^2 2*\sigma a*\sigma b*Wa*Wb*nab}$$

ACC (a) & WIPRO (b):

$\sigma a = 0.0591$

$\sigma b = 0.0527$

$Wa = 0.86$

$Wb = 0.135$

$nab = 0.175$

$$R_p = \sqrt{(0.0591*0.86)^2+(0.0527*0.135)^2+2(0.0591)*(0.0527)*(0.86)*(0.135)*(0.175)}$$

$$= \sqrt{0.0077675}$$

$=0.088\ \%$

DR.REDDYS(a) &BHEL(b):

$\sigma a = 0.0806$

$\sigma b = 0.1247$

Wa = 0.78

Wb = 0.91

nab = 0.167

$$R_P = \sqrt{(0.0806*0.78)^2+(0.1247*0.91)^2+2(0.0806)*(0.1247)*(0.78)*(0.91)*(0.167)}$$

$$= \sqrt{0.0192122}$$

=0.138 %

ITC(a) &WIPRO(b):

σa = 0.155383138

σb = 0.052794507

Wa = 0.122

Wb = 0.87

nab = 0.272731155

$$R_P = \sqrt{(0.155383138*0.122)^2+(0.0527*0.87)^2+2(0.1553)*(0.0527)*(0.122)*(0.87)*(0.2727)}$$

$$= \sqrt{0.01144012}$$

=0.107 %

CALCULATION OF PORTFOLIO RETURN:

Rp=(RA*WA) + (RB*WB)

Where Rp = portfolio return

RA= return of A WA= weight of A

RB= return of B WB= weight of B

CALCULATION OF PORTFOLIO RETURN

ACC (a) & WIPRO (b):

RA= 0.059185395

WA=0.86

RB= 0.052794507

WB=0.135

Rp = (0.0591*0.86) + (0.0527*0.135)

Rp = (0.050826+ 0.0071145)

Rp = 5.79%

DR.REDDYS (a) & BHEL(b):

RA= 0.080689928

WA=0.78

RB= 0.124784675

WB=0.91

Rp = (0.0806*0.78) + (0.1247*0.91)

Rp = (0.062868 + 0.113477)

Rp = 17.63%

ITC (a) & WIPRO(b):

RA= 0.155383138

WA=0.122

RB= 0.052794507

WB=0.87

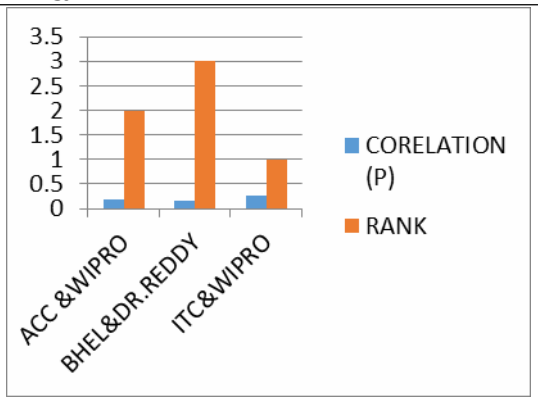
Rp = (0.1553*0.122) + (0.0527*0.87)

Rp = (0.0189466 + 0.045849)

Rp = 6.47%

CORRELATION OF COMPANIES:

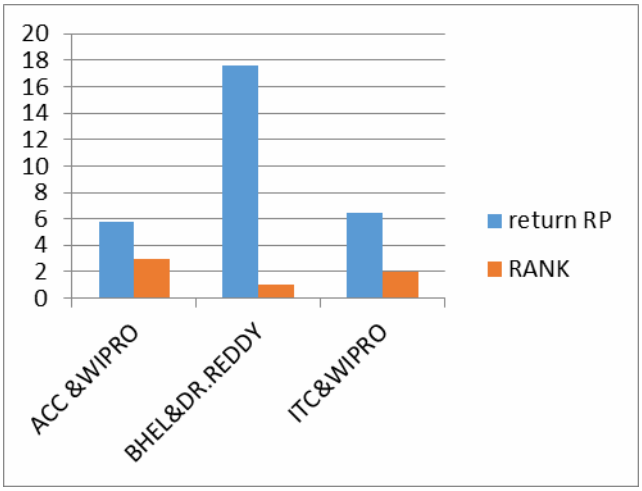
PORTFOLIOS	CORELATION(P)	RANK
ACC &WIPRO	0.175	2
BHEL&DR.REDDY	0.167	3
ITC&WIPRO	0.273	1



INTERPRETATION: From the above analysis the combination of portfolio return is 17.63 for DR.REDDYS which gives 1st rank with 0.138 risk,5.79 for ACC &WIPRO which gives 2nd rank with 0.107 risk,6.47 for ITC&WIPRO which gives 3rd rank with 0.088 risk .risk and return ranks are same for the companies.

PORTFOLIO RETURNS:

PORTFOLIOS	return RP	RANK
ACC &WIPRO	5.79	3
BHEL&DR.REDDY	17.63	1
ITC&WIPRO	6.47	2

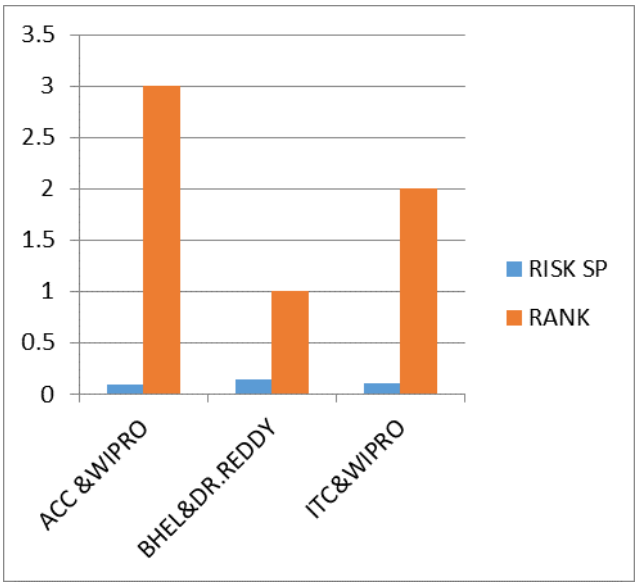


INTERPRETATION: From the above analysis the combination of portfolio return is 17.63 for DR.REDDYS which gives 1st rank ,5.79 for ACC &WIPRO which gives 2nd rank ,6.47 for ITC&WIPRO which gives 3rd rank .

PORTFOLIO RISK:

PORTFOLIOS	RISK SP	RANK
ACC &WIPRO	0.088	3

BHEL&DR.REDDY	0.138	1
ITC&WIPRO	0.107	2



INTERPRETATION:

From the above analysis the combination of portfolio risk is 0.138 for DR.REDDYS which gives 1st rank ,0.088 for ACC &WIPRO which gives 2nd rank ,0.107 for ITC&WIPRO which gives 3rd rank .

FINDINGS:

1. The standard deviation for ACC is 0.059 and for wipro is 0.052. when compared to both the risk is almost same,hence the risk is same when invested in either of the security.
2. The combination of ACC & WIPRO gives the proportion of investment is 0.86 and 0.13 for ACC & WIPRO, based on the standard deviation.
3. The combination of BHEL &DR.REDDY'S gives the proportion of investment is 0.78 and 0.91 for BHEL & WIPRO, based on standard deviation.
4. The correlation coefficient for ITC & WIPRO combination is 0.2727 and least combination correlation coeffient is 0.167 for BHEL & DR.REDDYS.
5. The highest portfolio return of combination BHEL & DR.REDDYS is 17.63 and the least portfolio return is ACC & WIPRO as 5.79. by this it is clear that the return from portfolios are high if investor is investing in BHEL & DR.REDDYS.
6. The highest portfolio risk of combination BHEL & DR.REDDYS is 0.138 and the least portfolio risk is ACC & WIPRO as 0.088.

SUGGESTIONS:

1. Investor would be able to achieve when the returns of share and debentures resultant portfolio would be known as diversified portfolio.
2. Thus portfolio construction would addresses itself to three major via. Selectivity , timings and diversification.
3. Incase portfolio management negatively correlated assets are most profitable.
4. Investor may invest their money for long run, as both the combinations are almost suitable portfolios.
5. A rational investor would constantly examine his chosen portfolio both for average return and risk.

CONCUSION:

In case of perfectly correlated securities or stocks , the risk can be reduced to a minimum point. In case of negatively correlative securities the risk can be reduced to a zero. (which is company's risk) but the market risk prevails the same for security or stock in the portfolio.In case of perfect positive co-relation securities or stock, the risk can be reduced to a minimum level, were as in the case of negative correlated securities the risk can be reduced to zero, which is company risk but the market risk prevails the same for the security or stock in portfolio.Positive correlation means both the securities are moving in the same direction i.e., either upward or downward. Whereas negative correlation means, the securities are moving in opposite direction, which is more portfolio.

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