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A STUDY ON BENEFITS OF CONSTRUCTING PORTFOLIO

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ABSTRACT

For the purpose of better understanding how to build portfolios and mitigate risk, this study compares the risk-return profiles of various equities. It is recommended to spread investments across assets that have low correlation coefficients in order to reduce risk and increase the possibility of return. Investors are encouraged to consider their risk tolerance and financial objectives when balancing risk and return. For optimal asset allocation according to risk and return profiles, portfolio optimisation methods are proposed. It is recommended to regularly check and rebalance in order to stay in line with investing goals. Finally, if you want tailored assistance navigating the financial world, it's a good idea to consult a specialist. The key to successful investing over the long run is building a diverse portfolio and using strong risk management techniques.

INTRODUCTION

The investors' holdings are compiled into portfolios. Blue chip equities or scrip's of developing blue chip businesses, as well as discount bonds, warrants, debentures, and other instruments, as well as different issuers (such as government bonds and corporate debt), can be combined in these ways.

Choosing stocks that are a good fit for an investor's asset preferences, needs, and choices is the goal of conventional Portfolio Theory. The tenets of modern portfolio theory state that, in order to optimise returns, one must either maximise returns or minimise risk. Investors' choices and attitudes are merely a starting point when making investment decisions, according to this theory. A portfolio's return is the average of its individual stocks' returns, with weights that are proportional to the percentages of each stock in the total.

Building and evaluating a portfolio are both part of a comprehensive study. All of these things go under the umbrella of portfolio management, a notion that is always evolving as a result of the countless economic and non-economic factors that impact national markets and securities on a daily and even hourly basis. After a portfolio is chosen, it needs to be monitored throughout time and adjusted as needed to meet the investor's goals. Reviewing and revising a portfolio should be just as meticulous as building it. Investors stand to win or lose a lot of money depending on how the stock market performs.

When making changes to their portfolio, investors should have the necessary expertise. The allocation of assets, including stocks and bonds, must be adjusted on a regular basis as part of portfolio management. The portfolio policy should be followed when revising the types of securities to be held.

REVIEW OF LITERATURE

1. Rong Huang, Dimos Kambouroudis & David G. McMillan (2025)

The efficacy of portfolio diversity in weathering various U.S. market crises was the subject of the study. Instead of putting all of one's money into American stocks, the authors discovered that a diversified portfolio including bonds, gold, and oil did better. According to the study's findings, reducing volatility and increasing risk-adjusted returns are two major benefits of diversifying across asset classes.

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As stated by Francesco Cesarone and colleagues in the year 2024,
An method to portfolio selection based on return diversification was suggested in this research. Diversified portfolios reduce total investment risk while increasing projected returns, according to the results. The study highlighted the significance of finding a balance between diversification and profitability while building a portfolio efficiently.
3. In 2023, Chang Wu
A look at how institutional investment managers have used Modern Portfolio Theory was done by the author. Investors can attain steady returns and systematic risk reduction through diversification, according to the study. The study found that MPT is still useful for making investments today.
In 2022, Yuyu Hsiao
Using machine learning and sophisticated analytics, this survey investigated current methods for optimising investment portfolios. The research concluded that the efficiency and accuracy of forecasts might be greatly enhanced by integrating AI models with conventional diversification strategies.
Fifthly, in 2021, Serdar Yaman and Mert Baran Tunçel
Scientists looked into the advantages of sectoral diversification for different types of investors based on their risk tolerance. According to the results, investors can feel more secure during times of market instability when their investments are spread across several sectors.
Hossein Nezamabadi-Pour and Mohadese Rezaei (2020)
Using deep reinforcement learning as a focal point, the research categorised the literature on portfolio management. The authors draw the conclusion that AI-enhanced diversified portfolio management boosts returns and cuts losses over the long run.
Torrente, Maria-Laura, and Uberti, Pierpaolo (2019)
Strategies including least risk and maximum diversification were compared in the study. Superior out-of-sample performance and reduced portfolio risk over time were obtained by maximal diversification portfolios, according to the authors.
8. Markov, Vladimir (2018)
Portfolio allocation strategies that are based on utility were the focus of the paper. Optimal diversification increases portfolio stability and boosts investor utility in times of market uncertainty, according to the findings.
As of 2017, Maciej Wysocki and Paweł Sakowski
Incorporating deep learning models into MPT was the focus of this work. Higher annualised returns and better information ratios were attained by diversified portfolios using improved covariance estimation approaches, according to the results.
10—Rodriguez Alejandro et al. (2016)
The study suggested using ensemble learning to optimise investment portfolios. According to the research, diversification of assets improves portfolio performance outside of the sample and lowers investment risk.
Eleven. Harry Markowitz (1952–2015)
To lower portfolio risk without compromising returns, diversity was a central tenet of Modern Portfolio Theory. This research laid the groundwork for portfolio building by defining efficient frontier.
12. In 2014, Eugene McCombs
Successful portfolio diversification in today's markets was covered in the article. It found that investors are better protected from economic downturns and have more financial stability when they diversify across sectors and asset classes.
Gabriel Malta Castro et al. (2013), number thirteen.
The research looked at power grids and plans for renewable energy sources through the lens of Modern Portfolio Theory. Diversification, the scientists discovered, makes systems more stable and less prone to operational uncertainty.

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Ben Felix (Discussion from 2012) 14.
An important point made during the session on Post-Modern Portfolio Theory was the need of diversifying holdings across different asset classes in order to mitigate losses. Researchers stressed the need of more comprehensive asset allocation strategies for contemporary investors.
15. Lopez de Prado (2011 Citation)
Diversified allocation strategies, according to Hierarchical Risk Parity research, reduce concentration risk in unstable markets better than conventional equal-weight solutions.
15. Warren Buffett (as cited in studies on diversity, 2010)
Although concentrated investment may be more suited to seasoned experts, the research showed that diversity helped ordinary investors lower their risk. For the sake of safeguarding wealth over the long run, diversification is still vital.
17. Peter Lynch (The year 2009 was cited)
Research on balanced diversification techniques led to the conclusion that diverse portfolios help investors keep their returns stable while reducing their risk of loss due to market volatility.
18. In 2008, Valdimir Markov
Optimal investor returns and reduced financial uncertainty in ever-changing markets are achieved through utility-based diversified portfolios, according to research on leverage and diversification.
Nineteen. Jared Scrawford
Diversifying holdings among equities, bonds, and real estate, as discussed in the Modern Portfolio Theory article, lessens exposure to market volatility and enhances capital appreciation over the long run.
20. The Bogleheads' Research Community (2006)
Portfolio efficiency and Sharpe ratios over extended investment horizons are enhanced by diversification across global asset classes, according to the discussion.

Theoretical Framework

One of the most basic principles of investment management is portfolio development, which entails balancing the risk and return of various financial assets. Harry M. Markowitz's Modern Portfolio Theory (MPT), which he established in 1952, is the primary theoretical basis upon which portfolio design is built. Those who put their money into assets that aren't perfectly connected can lower their portfolio risk, the reasoning goes, by spreading it out. Maximising Returns with a Fixed Amount of Risk (MPT) is an approach to investing that places more emphasis on studying the interplay between securities in a portfolio than on assessing them independently. Efficient portfolio management and well-informed investment decisions are both aided by this method.

According to the notion, diversification is a major advantage of building a portfolio. The risk connected with certain businesses or industries, known as unsystematic risk, can be reduced by diversifying an investor's holdings across other industries, sectors, or asset classes. It is possible to make up for losses in one investment by making gains in another, since various assets react differently to market conditions. Therefore, investors can lessen the blow of market volatility and enjoy more consistent returns with a diversified portfolio. Since the goal of investors is to maximise profits while minimising risk, the correlation between the two is fundamental to portfolio theory.

The idea of the Efficient Frontier, which stands for a collection of ideal portfolios providing the maximum predicted return for a specific degree of risk, is another critical component of portfolio creation. Depending on their risk appetite and investing goals, investors can choose portfolios along the efficient frontier. William F. Sharpe's Capital Asset Pricing Model (CAPM) provides more evidence in favour of portfolio theory by outlining the connection between systematic risk and anticipated return. Better risk management, higher return potential, more efficient investment, and better asset allocation are all advantages of building a portfolio. Consequently,

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individuals who want to build wealth and financial security over the long term through disciplined investment techniques can benefit greatly from portfolio construction.

OBJECTIVES OF THE STUDY

- To compare and contrast the risk-reward profiles of equities from different industries.
- To determine the degree of association between various stock prices.
- Determine the weights of the portfolio.
- In order to calculate the portfolio's returns and risks.
- To build a portfolio that provides optimal return with less risk

DATA ANALYSIS AND INTERPRETATION

TABLE SHOWING THAT RISK AND RETURNS OF BAJAJ FINANCE LTD

Date	Open Price	Close Price	Returns	Average Returns	Difference	Diff*Diff
30-Apr-25	6836.8	6931.05	1.3598	-0.1468	-1.5066	2.2698
29-Apr-25	6839.15	6827.4	-0.1721	-0.1468	0.0253	0.0006
26-Apr-25	7008.6	6729.85	-4.1420	-0.1468	3.9952	15.9619
25-Apr-25	7330	7293.9	-0.4949	-0.1468	0.3482	0.1212
25-Apr-25	7285.85	7327.7	0.5711	-0.1468	-0.7179	0.5154
23-Apr-25	7300	7259.25	-0.5614	-0.1468	0.4146	0.1719
22-Apr-25	7150.4	7290.7	1.9254	-0.1468	-2.0711	4.2896
19-Apr-25	6849.95	7122.3	3.8239	-0.1468	-3.9707	15.7662
18-Apr-25	6945.25	6889.25	-0.8129	-0.1468	0.6661	0.4437
16-Apr-25	7001.35	6947.35	-0.7773	-0.1468	0.6305	0.3975
15-Apr-25	7081.5	7075	-0.0919	-0.1468	-0.0549	0.0030
12-Apr-25	7230	7226	-0.0554	-0.1468	-0.0914	0.0084
10-Apr-25	7221.05	7229.1	0.1114	-0.1468	-0.2581	0.0666
09-Apr-25	7215	7192.9	-0.3072	-0.1468	0.1605	0.0258
08-Apr-25	7200.05	7178.6	-0.2988	-0.1468	0.1520	0.0231
05-Apr-25	7263.95	7175.2	-1.2369	-0.1468	1.0901	1.1884
04-Apr-25	7325.05	7282.2	-0.5884	-0.1468	0.4417	0.1951
03-Apr-25	7200	7308.2	1.4805	-0.1468	-1.6273	2.6481
02-Apr-25	7250	7207.65	-0.5876	-0.1468	0.4408	0.1943
01-Apr-25	7269.25	7259.1	-0.2780	-0.1468	0.1312	0.0172
28-Mar-25	7038	7250.35	2.7948	-0.1468	-2.9415	8.6525
27-Mar-25	6950	7023.2	1.0423	-0.1468	-1.1890	1.4138
26-Mar-25	6710.3	6910.35	2.8949	-0.1468	-3.0417	9.2519
22-Mar-25	6690.05	6763.1	1.0801	-0.1468	-1.2269	1.5053
21-Mar-25	6700.65	6715.7	0.2251	-0.1468	-0.3709	0.1375
20-Mar-25	6600.05	6647.05	0.7071	-0.1468	-0.8538	0.7290
19-Mar-25	6510	6592.25	1.2577	-0.1468	-1.3944	1.9445
18-Mar-25	6527.35	6502.65	-0.3798	-0.1468	0.2331	0.0543
15-Mar-25	6386.6	6513.2	1.9437	-0.1468	-2.0905	4.3702

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14-Mar-25	6455.1	6392.1	-0.9856	-0.1468	0.8388	0.7036
13-Mar-25	6434.1	6455.25	0.3276	-0.1468	-0.4744	0.2251
12-Mar-25	6412	6434.1	0.3435	-0.1468	-0.4902	0.2503
11-Mar-25	6555.5	6456.2	-1.5381	-0.1468	1.3913	1.9357
07-Mar-25	6350	6419.3	1.0796	-0.1468	-1.2263	1.5039
06-Mar-25	6326.35	6311.25	-0.2393	-0.1468	0.0925	0.0086
05-Mar-25	6588.25	6325.25	-4.1579	-0.1468	4.0112	16.0895
04-Mar-25	6586.35	6600.45	0.2136	-0.1468	-0.3604	0.1299
02-Mar-25	6532	6586.35	0.8252	-0.1468	-0.9720	0.9447
01-Mar-25	6519.95	6571	0.7769	-0.1468	-0.9237	0.8532
29-Feb-25	6495	6495.9	0.0139	-0.1468	-0.1606	0.0258
28-Feb-25	6555.2	6499.95	-0.8500	-0.1468	0.7032	0.4946
27-Feb-25	6664.8	6555.15	-1.6727	-0.1468	1.5260	2.3286
26-Feb-25	6678.45	6641.1	-0.5625	-0.1468	0.4156	0.1728
23-Feb-25	6691.05	6698.3	0.1082	-0.1468	-0.2550	0.0650
22-Feb-25	6747.35	6673.95	-1.0998	-0.1468	0.9530	0.9083
21-Feb-25	6825.45	6687.85	-2.0425	-0.1468	1.8957	3.5939
20-Feb-25	6725.9	6768.65	0.6464	-0.1468	-0.7931	0.6290
19-Feb-25	6641	6714.6	1.0961	-0.1468	-1.2529	1.5448
16-Feb-25	6698.45	6621.25	-1.1659	-0.1468	1.0192	1.0387
15-Feb-25	6645.7	6619.9	-0.3897	-0.1468	0.2530	0.0590
14-Feb-25	6599.9	6645.7	0.6892	-0.1468	-0.8359	0.6988
13-Feb-25	6600	6603.05	0.0462	-0.1468	-0.1930	0.0372
12-Feb-25	6654.95	6575.6	-1.2067	-0.1468	1.0600	1.1235
09-Feb-25	6597.35	6654.8	0.8633	-0.1468	-1.0100	1.0202
08-Feb-25	6717.75	6577.9	-2.1261	-0.1468	1.9793	3.9176
07-Feb-25	6637.05	6717.7	1.2006	-0.1468	-1.3473	1.8153
06-Feb-25	6669.95	6601.8	-1.0323	-0.1468	0.8855	0.7842
05-Feb-25	6894.75	6605.9	-4.3726	-0.1468	4.2258	17.8578
02-Feb-25	6744.05	6847.7	1.5136	-0.1468	-1.6604	2.7570
01-Feb-25	6870	6743.8	-1.8713	-0.1468	1.7256	2.9742
31-Jan-25	6827	6863.8	0.5361	-0.1468	-0.6829	0.4664
30-Jan-25	6993	6815.6	-2.6029	-0.1468	2.4561	6.0325
29-Jan-25	7099.9	7187.5	1.2188	-0.1468	-1.3655	1.8647
25-Jan-25	7055	7085.15	0.4255	-0.1468	-0.5723	0.3275
25-Jan-25	7095.15	7058.8	-0.5150	-0.1468	0.3682	0.1356
23-Jan-25	7340.1	7070.7	-3.8101	-0.1468	3.6633	13.4200
20-Jan-25	7300.1	7301.35	0.0171	-0.1468	-0.1639	0.0269
19-Jan-25	7350	7320.35	-0.4050	-0.1468	0.2583	0.0667

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18-Jan-25	7331.45	7265.2	-0.9119	-0.1468	0.7651	0.5854
17-Jan-25	7300	7357.15	0.7768	-0.1468	-0.9236	0.8530
16-Jan-25	7475	7472.7	-0.0308	-0.1468	-0.1160	0.0135
15-Jan-25	7662.1	7476.5	-2.4825	-0.1468	2.3357	5.4554
12-Jan-25	7675.85	7655.35	-0.2678	-0.1468	0.1210	0.0146
11-Jan-25	7684.65	7670.7	-0.1819	-0.1468	0.0351	0.0012
10-Jan-25	7719.9	7678.2	-0.5431	-0.1468	0.3963	0.1571
09-Jan-25	7829.95	7721.25	-1.4078	-0.1468	1.2610	1.5902
08-Jan-25	7676.8	7734.05	0.7402	-0.1468	-0.8870	0.7868
05-Jan-25	7727.1	7710.55	-0.2146	-0.1468	0.0679	0.0046
04-Jan-25	7545.1	7704.25	2.0657	-0.1468	-2.2125	4.8952
03-Jan-25	7431.1	7382.15	-0.6631	-0.1468	0.5163	0.2666
02-Jan-25	7300.15	7431.8	1.7714	-0.1468	-1.9182	3.6795
01-Jan-25	7327.8	7298.45	-0.4021	-0.1468	0.2554	0.0652
			-0.1468			179.5557

Average returns=-0.1468

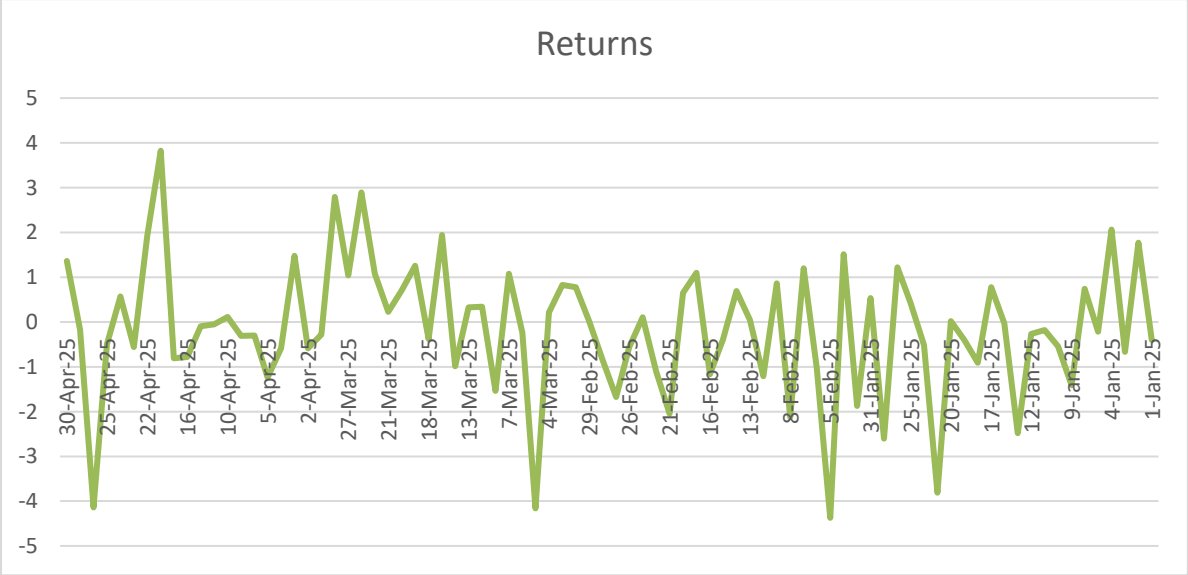
Variance=$\frac{\sum d^2}{n-1}$

=2.216737

Risk(σ) = $\sqrt[2]{variance}$

=1.488871

Graphical representation



Interpretation

From the above table it represents the risk and return of Bajaj finance for a period of 4 months i.e. from 01-jan-2025 to 30-april 2025 the company has average returns of -0.1468 Variance =2.216737 Risk=1.48887 The company has the Max= 7829.95 Min= 6326.35 it representing the

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profits

FINDINGS

- the Bajaj finance has average returns of -0.1468 Variance =2.216737 Risk=1.48887.
- The IDFC Bank has average returns of =-0.095841 variance = 1.22698 risk = 1.10769.
- The BAJAJ FINANCE LIMITED and IDFC BANK LIMITED has covariance 0.00592 and corelation coefficient 0.0028. portfolio returns is 0.1209 and portfolio risk is 0.949
- The Religare LTD has average returns of =0.11035717 variance = 1180.31 risk =1.107694.
- The Tata Investment Corporation Limited has average returns of 0.134521429 variance = 9.359774164 risk =3.059375
- The RELIGARE LIMITED And TATA INVESTMENT CORPORATION LIMITED has covariance =7.9096 and corelation coefficient=1.5209. portfolio returns is 0.3125 and portfolio risk is 2.02608
- The IIFL Finance Ltd has average returns of =0.514775 variance = 12.0183849 risk =3.46675423
- The motilal oswal financial serices Ltd has average returns of 0.205679363 variance = 13.700928 risk =3.46675423
- The IIFL FINANCE LIMITED and MOTILAL OSWAL FINANCE SERVICES has covariance =1.534855 and corelation coefficient=0.11956. portfolio returns is 0.1285 and portfolio risk is 2.078

SUGGESTIONS

Based on the provided data, here are some suggestions for portfolio construction and risk management:

Diversifying your portfolio across different asset classes and sectors can help reduce overall risk. While Bajaj Finance and IDFC Bank have a low correlation coefficient and relatively low portfolio risk, considering investments in other sectors can further enhance diversification benefits.

Evaluate the risk-return tradeoff of each investment option. For example, Religare LTD and Tata Investment Corporation Limited exhibit higher average returns but also higher portfolio risk compared to Bajaj Finance and IDFC Bank. Assess whether the potential returns justify the increased risk.

Utilize portfolio optimization techniques to construct portfolios that maximize returns for a given level of risk or minimize risk for a target level of returns. This involves weighing the individual risk and return characteristics of each asset and adjusting their allocations accordingly.

CONCLUSION

In conclusion, the analysis of the provided data underscores the importance of thoughtful portfolio construction and risk management in achieving investment objectives. Through the examination of various stocks and their risk-return characteristics, several key insights have emerged.

Firstly, diversification remains a cornerstone of effective portfolio management. While some assets may offer higher average returns, they often come with increased risk. By diversifying across assets with low correlation coefficients, investors can mitigate risk while potentially enhancing returns.

Secondly, the risk-return tradeoff must be carefully evaluated. Investments with higher potential returns often entail higher levels of risk. Balancing risk and return is essential to aligning investment strategies with individual risk tolerances and financial goals.

Additionally, portfolio optimization techniques can enhance the efficiency of asset allocation. By systematically weighing risk and return characteristics, investors can construct portfolios that

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maximize returns for a given level of risk or minimize risk for a target level of returns.
Furthermore, regular monitoring and rebalancing are critical to maintaining portfolio alignment with investment objectives. Market conditions and individual asset performance may necessitate adjustments to ensure portfolios remain well-diversified and risk-managed.

REFERENCES

- Investment Analysis and Portfolio Management, written by M.Ranganathan, R.Madhumathi published by Dorling Kindersley (India) Pvt.Ltd., 3rdEdititon.
- Investment Analysis and Portfolio Management, written by Prasanna Chandra Published by Tata Mc.Graw-Hill, 3rd Edition.
- Security Analysis and Portfolio Management, written by V.A.Avadhani, Published by Himayala Publishing house Pvt.Ltd.9th Revised Edition.

Newspapers:

The Economic times
Financial Express

Websites:

- www.bseindia.com
- www.nseindia.com
- www.moneycontrol.com
- www.religare.com