JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A STUDY ONASSESSING RISK AND RETURN OF STRATEGIC STOCKS FOR BETTER INVESTMENT DECISIONS.

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Abstract: This study aims to assess the risk and return characteristics of strategically selected individual stocks to support informed investment decisions. By employing the Capital Asset Pricing Model (CAPM), the research estimates the expected return of selected stocks based on their systematic risk (beta) and market performance. To evaluate portfolio performance on a risk- adjusted basis, the study utilizes Sharpe Ratio, Treynor Ratio, and Jensen's Alpha as analytical tools. Based on the risk tolerance of investors, three distinct portfolios are constructed: one for conservative investors, one for moderate risk-takers, and another for aggressive (high-risk) investors.

IndexTerms **– Beta, Risk, Return, Stock market, Investment.**

I. INTRODUCTION

To Analyze the relationship between risk and return, The **Capital Asset Pricing Model (CAPM)** is a widely used financial model that describes the relationship between systematic risk and expected return for assets, particularly stocks. It helps investors determine a theoretically appropriate required rate of return based on an asset's risk relative to the market. Here, beta measures the asset's sensitivity to market movements. CAPM is foundational in portfolio management and asset valuation, as it aids in pricing risky securities and optimizing investment decisions based on risk-return trade-offs. Additionally, this research will apply the **Sharpe Ratio** to evaluate risk-adjusted returns. The Sharpe Ratio serves as a critical metric for portfolio optimization, as it considers both the return and the level of risk taken to achieve that return.

II. OBJECTIVE OF THE STUDY

- Its need for better risk assessment tools to guide investors in volatile market.
- To evaluate the expected returns of the stocks from various sector using CAPM (capital asset pricing model).
- To suggest optimal portfolio for investor by evaluating risk-adjusted returns by using Sharpe and Treynor ratio.
- To provide proper insights for investors to sustain and grow interest in market and make ethical investment decisions.

III. REVIEW OF LITERATURE

- **Investment Risk Analysis Through Portfolio Diversification Using It Based Company's Stocks and Crypto currency** Authors: Iqbal Widodo, Abdul Mukti Soma (2025) Investment involves allocating funds across various assets to generate future profits, with stocks and cryptocurrencies being notable options. Stocks are favoured for their link to company performance and dividend payouts, while cryptocurrencies offer high-risk, high- reward potential due to their decentralized and volatile nature.

- **Analyzing the Risk-Return Profile of Stocks within the BSE Finance Index.** Authors: Jayashree Nagesh, Navita Vijay (2025). This study examines the risk-return profiles of Bajaj Finance, Shriram Finance, Chola Fin, and Bajaj Holdings, listed on the BSE Finance Index, using standard deviation and correlation analysis.

- **Risk–Return Analysis of Selected Equity Stocks Listed in Bombay Stock Exchange Using Capital Asset Pricing Model.** Authors: V. Bheemeswara Reddy, N. Harish (2024). This study explores the application of the Capital Asset Pricing Model (CAPM) on a portfolio of 30 stocks listed on the Bombay Stock Exchange to identify underpriced or overpriced stocks. CAPM helps investors assess actual returns, expected returns, and systematic risk to make informed investment decisions.

- **Stock Investment Analysis Skills and Understanding Efficient Portfolio.** Authors: Muhammad Habibullah Nur Ihsan, Muhammad Silmy Amjad (2023). This study explores investment decision-making by emphasizing the importance of balancing expected return and risk through portfolio diversification. A portfolio, consisting of various assets, aims to maximize return for a given level of risk or minimize risk for a desired return forming what are known as efficient portfolios.

IV. RESEARCH METHODOLOGY: IT IS A SECONDARY DATA RESEARCH AND THIS RESEARCH IS COME UNDER THE DESCRIPTIVE AND ANALYTICAL RESEARCH. RESEARCH TOOLS WHICH IS USED IN THIS RESEARCH ARE 1. CAPITAL ASSET PRICING MODEL, 2. SHARPE RATIO, 3. TREYNOR RATIO, 4. JENSEN'S ALPHA.

V. Equations of research tools:

Capital asset pricing model: $E(R) = Rf + \beta*(Rm - Rf)$.

Sharpe ratio = $(Rp - Rf)/ \sigma(p)$.

Treynor ratio = $(Rp - Rf)/ \beta(p)$.

Jensen's alpha = $Rp - [Rf + \beta*(Rm - Rf)]$.

VI. Data analysis and interpretation:

Capital assets pricing model:

Table 1: HDFC bank.

Months	CLOSING PRICE		RETURNS In %	
	HDFC bank	Sensex	HDFC bank	Sensex
Apr-20	1001.75	33717.62	0	0
May-20	951.25	32424.1	-5.04%	-3.84%
Jun-20	1065.7	34915.8	12.03%	7.68%
Jul-20	1032.65	37606.89	-3.10%	7.71%
Aug-20	1115.2	38628.29	7.99%	2.72%
Sep-20	1079.2	38067.93	-3.23%	-1.45%
Oct-20	1183.45	39614.07	9.66%	4.06%
Nov-20	1440.7	44149.72	21.74%	11.45%
Dec-20	1436.75	47751.33	-0.27%	8.16%
Jan-21	1390.8	46285.77	-3.20%	-3.07%
Feb-21	1534.35	49099.99	10.32%	6.08%
Mar-21	1493.55	49509.15	-2.66%	0.83%
Apr-21	1412.2	48782.36	-5.45%	-1.47%
May-21	1516.4	51937.44	7.38%	6.47%
Jun-21	1498.05	52482.71	-1.21%	1.05%
Jul-21	1425.8	52586.84	-4.82%	0.20%
Aug-21	1581.5	57552.39	10.92%	9.44%
Sep-21	1595.5	59126.36	0.89%	2.73%
Oct-21	1582.35	59306.93	-0.82%	0.31%
Nov-21	1493.6	57064.87	-5.61%	-3.78%
Dec-21	1479.8	58253.82	-0.92%	2.08%
Jan-22	1485.55	58014.17	0.39%	-0.41%
Feb-22	1426.7	56247.28	-3.96%	-3.05%
Mar-22	1469.95	58568.51	3.03%	4.13%
Apr-22	1384.75	57060.87	-5.80%	-2.57%

Beta = 0.53, Rm = 0.178, Rf = 0.063, CAPM: $E(R) = Rf + \beta*(Rm - Rf)$.

$= 0.063 + 0.53*(0.178 - 0.063) =$ **12.38 %.**

INFERENCE: Here, beta is lesser than 1, it indicates the stock has low risk than Sensex. So, it gives less returns than Sensex.

Table 2: Vodafone idea (vi).

Months	CLOSING PRICE		RETURNS In %	
	HFCL	Sensex	HFCL	Sensex
Apr-20	10.84	33717.62	0	0
May-20	9.53	32424.1	-12.08%	-3.84%
Jun-20	15.92	34915.8	67.05%	7.68%
Jul-20	12.5	37606.89	-21.48%	7.71%
Aug-20	15.46	38628.29	23.68%	2.72%
Sep-20	15.85	38067.93	2.52%	-1.45%
Oct-20	17.3	39614.07	9.15%	4.06%
Nov-20	18.45	44149.72	6.65%	11.45%
Dec-20	25.75	47751.33	39.57%	8.16%
Jan-21	28.95	46285.77	12.43%	-3.07%
Feb-21	29.25	49099.99	1.04%	6.08%
Mar-21	25.2	49509.15	-13.85%	0.83%
Apr-21	27.8	48782.36	10.32%	-1.47%
May-21	45.2	51937.44	62.59%	6.47%
Jun-21	67.5	52482.71	49.34%	1.05%
Jul-21	75.2	52586.84	11.41%	0.20%
Aug-21	68.2	57552.39	-9.31%	9.44%
Sep-21	71.55	59126.36	4.91%	2.73%
Oct-21	71.35	59306.93	-0.28%	0.31%
Nov-21	71.95	57064.87	0.84%	-3.78%
Dec-21	78.75	58253.82	9.45%	2.08%
Jan-22	79.15	58014.17	0.51%	-0.41%
Feb-22	72.75	56247.28	-8.09%	-3.05%
Mar-22	78.7	58568.51	8.18%	4.13%

Beta = 1.95, Rm = 0.178, Rf = 0.063, CAPM: $E(R) = Rf + \beta*(Rm - Rf)$.

$= 0.063 + 1.95*(0.178 - 0.063) =$ **28.68 %.**

INFERENCE: Here, beta is greater than 1, it indicates the stock has high risk than Sensex. So, it gives high returns than Sensex.

Table 3: Fortis healthcare.

Months	CLOSING PRICE		RETURNS In %	
	Fortis HC	Sensex	Fortis HC	Sensex
Apr-20	127.2	33717.62	0	0
May-20	116.4	32424.1	-8.49%	-3.84%
Jun-20	121.75	34915.8	4.60%	7.68%
Jul-20	138	37606.89	13.35%	7.71%
Aug-20	132.55	38628.29	-3.95%	2.72%
Sep-20	135.3	38067.93	2.07%	-1.45%
Oct-20	125.55	39614.07	-7.21%	4.06%
Nov-20	151.1	44149.72	20.35%	11.45%
Dec-20	154.95	47751.33	2.55%	8.16%
Jan-21	161.6	46285.77	4.29%	-3.07%
Feb-21	158.45	49099.99	-1.95%	6.08%
Mar-21	199	49509.15	25.59%	0.83%
Apr-21	210.55	48782.36	5.80%	-1.47%
May-21	227.6	51937.44	8.10%	6.47%
Jun-21	243.45	52482.71	6.96%	1.05%
Jul-21	250.7	52586.84	2.98%	0.20%
Aug-21	290.55	57552.39	15.90%	9.44%
Sep-21	263.45	59126.36	-9.33%	2.73%
Oct-21	244.65	59306.93	-7.14%	0.31%
Nov-21	280.9	57064.87	14.82%	-3.78%
Dec-21	297.25	58253.82	5.82%	2.08%
Jan-22	270.25	58014.17	-9.08%	-0.41%
Feb-22	245.4	56247.28	-9.20%	-3.05%
Mar-22	290.4	58568.51	18.34%	4.13%
Apr-22	266.75	57060.87	-8.14%	-2.57%

Beta = 1.10, Rm = 0.178, Rf = 0.063, CAPM: E(R) = Rf + β*(Rm – Rf).

= 0.063 + 1.10*(0.178 – 0.063) = **19.00 %.**

INFERENCE: Here, beta is greater than 1, it indicates the stock has high risk than Sensex. So, it gives high returns than Sensex.

Table 4. Oracle financial service software.

Months	CLOSING PRICE		RETURNS In %	
	Oracle	Sensex	Oracle	Sensex
Apr-20	2337.4	33717.62	0	0
May-20	2512.9	32424.1	7.51%	-3.84%
Jun-20	2855	34915.8	13.61%	7.68%
Jul-20	2932.95	37606.89	2.73%	7.71%
Aug-20	3030.05	38628.29	3.31%	2.72%
Sep-20	3075	38067.93	1.48%	-1.45%
Oct-20	3143.95	39614.07	2.24%	4.06%
Nov-20	3041.35	44149.72	-3.26%	11.45%
Dec-20	3209.45	47751.33	5.53%	8.16%
Jan-21	3218.45	46285.77	0.28%	-3.07%
Feb-21	3045.45	49099.99	-5.38%	6.08%
Mar-21	3199	49509.15	5.04%	0.83%
Apr-21	3483.45	48782.36	8.89%	-1.47%
May-21	3475.6	51937.44	-0.23%	6.47%
Jun-21	3650.3	52482.71	5.03%	1.05%
Jul-21	4315.75	52586.84	18.23%	0.20%
Aug-21	4714.55	57552.39	9.24%	9.44%
Sep-21	4551.7	59126.36	-3.45%	2.73%
Oct-21	4425.2	59306.93	-2.78%	0.31%
Nov-21	4233.65	57064.87	-4.33%	-3.78%
Dec-21	3964.15	58253.82	-6.37%	2.08%
Jan-22	3513.7	58014.17	-11.36%	-0.41%
Feb-22	3388.5	56247.28	-3.56%	-3.05%
Mar-22	3591.55	58568.51	5.99%	4.13%
Apr-22	3561.2	57060.87	-0.85%	-2.57%

Beta = 0.62, Rm = 0.178, Rf = 0.063, CAPM: E(R) = Rf + β*(Rm – Rf).

= 0.063 + 0.62*(0.178 – 0.063) = **13.43 %.**

INFERENCE: Here, beta is lesser than 1, it indicates the stock has low risk than Sensex. So, it gives less returns than Sensex.

Table 5. Adani power.

Months	CLOSING PRICE		RETURNS In %	
	Adani power	Sensex	Adani power	Sensex
Apr-20	31.65	33717.62	0	0
May-20	36.4	32424.1	15.01%	-3.84%
Jun-20	36	34915.8	-1.10%	7.68%
Jul-20	35.4	37606.89	-1.67%	7.71%
Aug-20	37.3	38628.29	5.37%	2.72%
Sep-20	36.85	38067.93	-1.21%	-1.45%
Oct-20	35.7	39614.07	-3.12%	4.06%
Nov-20	38.5	44149.72	7.84%	11.45%
Dec-20	49.7	47751.33	29.09%	8.16%
Jan-21	51.3	46285.77	3.22%	-3.07%
Feb-21	55.25	49099.99	7.70%	6.08%
Mar-21	85.05	49509.15	53.94%	0.83%
Apr-21	94.75	48782.36	11.41%	-1.47%
May-21	92.5	51937.44	-2.37%	6.47%
Jun-21	113.4	52482.71	22.59%	1.05%
Jul-21	95.75	52586.84	-15.56%	0.20%
Aug-21	98.5	57552.39	2.87%	9.44%
Sep-21	97.15	59126.36	-1.37%	2.73%
Oct-21	100.4	59306.93	3.35%	0.31%
Nov-21	99.35	57064.87	-1.05%	-3.78%
Dec-21	99.75	58253.82	0.40%	2.08%
Jan-22	106.25	58014.17	6.52%	-0.41%
Feb-22	123.7	56247.28	16.42%	-3.05%
Mar-22	185.05	58568.51	49.60%	4.13%

Beta = 0.71, Rm = 0.178, Rf = 0.063, CAPM: E(R) = Rf + β*(Rm – Rf).

= 0.063 + 0.71*(0.178 – 0.063) = **14.47 %.**

INFERENCE: Here, beta is lesser than 1, it indicates the stock has low risk than Sensex. So, it gives less returns than Sensex.

Table 6. Emami.

Months	CLOSING PRICE		RETURNS In %	
	Emami	Sensex	Emami	Sensex
Apr-20	194.85	33717.62	0	0
May-20	193.7	32424.1	-0.59%	-3.84%
Jun-20	221.05	34915.8	14.12%	7.68%
Jul-20	239.9	37606.89	8.53%	7.71%
Aug-20	356.1	38628.29	48.44%	2.72%
Sep-20	351.05	38067.93	-1.42%	-1.45%
Oct-20	360.15	39614.07	2.59%	4.06%
Nov-20	441.25	44149.72	22.52%	11.45%
Dec-20	424.5	47751.33	-3.80%	8.16%
Jan-21	484.1	46285.77	14.04%	-3.07%
Feb-21	454.4	49099.99	-6.14%	6.08%
Mar-21	487.65	49509.15	7.32%	0.83%
Apr-21	492.45	48782.36	0.98%	-1.47%
May-21	501.2	51937.44	1.78%	6.47%
Jun-21	560.65	52482.71	11.86%	1.05%
Jul-21	559.7	52586.84	-0.17%	0.20%
Aug-21	597.5	57552.39	6.75%	9.44%
Sep-21	575.15	59126.36	-3.74%	2.73%
Oct-21	530.75	59306.93	-7.72%	0.31%
Nov-21	528.9	57064.87	-0.35%	-3.78%
Dec-21	519.6	58253.82	-1.76%	2.08%
Jan-22	498.75	58014.17	-4.01%	-0.41%
Feb-22	495.45	56247.28	-0.66%	-3.05%
Mar-22	447.8	58568.51	-9.62%	4.13%
Apr-22	491.85	57060.87	9.84%	-2.57%

Beta = 0.80, Rm = 0.178, Rf = 0.063, CAPM: E(R) = Rf + β*(Rm – Rf).

= 0.063 + 0.80*(0.178 – 0.063) = **15.51 %.**

INFERENCE: Here, beta is lesser than 1, it indicates the stock has low risk than Sensex. So, it gives less returns than Sensex.

Calculating effectiveness of portfolio using Sharpe ratio, Treynor ratio and Jensen's Alpha.

Portfolio A – portfolio for conservative investor who avoid the risk stocks.

Portfolio B – portfolio for high risk-taking investor whose main motive is to get high return by investing in high risk stocks.

Analyzing the effectiveness of portfolio A and B to how the portfolio gives risk-adjusted returns even the market index (sensex) doesn't perform well.

Table 7: conservative investor portfolio's return. (Portfolio A)

	RETURNS OF THE STOCKS									
Months	yes bank	Vi	Divi's lab	Oracle	solar Ind	Adani	Emami	Bosch	portfolio	Sensex
Apr-20	0	0	0	0	0	0	0	0	0	0
May-20	-3.94%	56.2%	2.70%	7.51%	1.35%	15.01%	-0.59%	-8.56%	4.70%	-3.84%
Jun-20	-4.66%	61.9%	-4.88%	13.61%	10.81%	-1.10%	14.12%	17.38%	8.85%	7.68%
Jul-20	-53.32%	-20.9%	14.86%	2.73%	2.42%	-1.67%	8.53%	14.58%	2.82%	7.71%
Aug-20	20.25%	21.3%	18.80%	3.31%	9.89%	5.37%	48.44%	-1.96%	8.93%	2.72%
Sep-20	-8.49%	-6.2%	-2.00%	1.48%	-7.11%	-1.21%	-1.42%	7.13%	-2.80%	-1.45%
Oct-20	-5.55%	-8.5%	3.05%	2.24%	-2.35%	-3.12%	2.59%	-15.46%	-2.83%	4.06%
Nov-20	17.95%	12.1%	14.88%	-3.26%	3.21%	7.84%	22.52%	9.98%	5.75%	11.45%
Dec-20	21.91%	8.5%	6.51%	5.53%	4.62%	29.09%	-3.80%	0.14%	9.45%	8.16%
Jan-21	-11.81%	5.6%	-12.28%	0.28%	8.71%	3.22%	14.04%	20.04%	5.81%	-3.07%
Feb-21	0.32%	0.8%	-0.07%	-5.38%	9.73%	7.70%	-6.14%	-3.26%	4.56%	6.08%
Mar-21	-1.27%	-18.4%	7.77%	5.04%	-1.92%	53.94%	7.32%	-5.18%	10.67%	0.83%
Apr-21	-6.73%	-9.6%	11.93%	8.89%	-4.14%	11.41%	0.98%	-4.00%	1.98%	-1.47%
May-21	-7.29%	3.7%	3.21%	-0.23%	27.05%	-2.37%	1.78%	12.91%	12.72%	6.47%
Jun-21	0.44%	14.8%	5.06%	5.03%	1.97%	22.59%	11.86%	-1.49%	6.84%	1.05%
Jul-21	-5.90%	-16.9%	11.32%	18.23%	7.32%	-15.56%	-0.17%	-0.50%	2.90%	0.20%
Aug-21	-15.29%	-26.1%	5.45%	9.24%	2.72%	2.87%	6.75%	-7.28%	2.20%	9.44%
Sep-21	16.11%	94.8%	-7.21%	-3.45%	21.02%	-1.37%	-3.74%	11.58%	10.52%	2.73%
Oct-21	2.07%	-19.7%	7.39%	-2.78%	17.55%	3.35%	-7.72%	9.47%	8.95%	0.31%
Nov-21	-3.36%	15.9%	-5.29%	-4.33%	11.09%	-1.05%	-0.35%	-4.49%	3.31%	-3.78%
Dec-21	10.67%	38.8%	-4.15%	-6.37%	-12.41%	0.40%	-1.76%	6.97%	-5.02%	2.08%
Jan-22	-2.99%	-30.4%	-13.78%	-11.36%	-4.77%	6.52%	-4.01%	-4.51%	-4.38%	-0.41%
Feb-22	-0.15%	-3.6%	5.65%	-3.56%	0.23%	16.42%	-0.66%	-4.71%	2.82%	-3.05%
Mar-22	-7.32%	-6.2%	3.34%	5.99%	21.28%	49.60%	-9.62%	-8.29%	18.91%	4.13%
Apr-22	10.90%	-1.8%	2.34%	-0.85%	-1.59%	51.47%	9.84%	0.33%	10.18%	-2.57%
May-22	-3.30%	1.2%	-20.32%	-7.51%	-5.16%	15.50%	-15.93%	0.99%	-2.02%	-2.62%
Jun-22	-3.95%	-12.4%	1.11%	-5.97%	4.83%	-18.90%	1.16%	4.05%	-2.23%	-4.58%

Final data generated from the above table to calculate jensen's alpha, sharpe and treynor ratio.

E(Rp) = 48.67 %, Risk free rate (Rf) = 6.02 %, S.D of portfolio = 6.52 % and Beta = 0.62.

SHARPE RATIO: $(Rp - Rf)/(\sigma p) = (0.487 - 0.060)/ 0.065$

$= \mathbf{6.55.}$

TREYNOR RATIO: $(Rp - Rf)/(\beta p) = (0.487 - 0.060)/ 0.624$

$= \mathbf{0.68.}$

JENSEN'S ALPHA: $Rp - [Rf + \beta*(Rm - Rf)] = 48.67 - [6.02 + 0.62*(17.80 - 6.02)]$

$= 48.67 - 13.32$

$= \mathbf{35.35\ \%.}$

INFERENCE: Here, I got 6.55 for Sharpe ratio which is pretty good, 0.68 for treynor ratio Which is good and 35.35 % for Jensen's alpha which tells this portfolio is giving 35.35% of excess return than Sensex (market index).

Table 8: High risk-taking investor portfolio's return.

Months	RETURNS OF THE STOCKS								portfolio	Sensex
	SBI bank	HFCL	fortis HC	Tech mahi	astra	Tata power	Emami	tata motors		
Apr-20	0	0	0	0	0	0	0	0	0	0
May-20	-15.81%	-12.08%	-8.49%	-2.87%	1.39%	15.28%	-0.59%	-6.66%	2.96%	-3.84%
Jun-20	11.29%	67.05%	4.60%	2.46%	60.93%	22.68%	14.12%	13.06%	19.03%	7.68%
Jul-20	7.32%	-21.48%	13.35%	25.49%	0.76%	8.46%	8.53%	6.56%	9.63%	7.71%
Aug-20	10.81%	23.68%	-3.95%	8.68%	17.43%	20.53%	48.44%	36.77%	12.06%	2.72%
Sep-20	-12.61%	2.52%	2.07%	6.81%	-6.60%	-9.45%	-1.42%	-6.91%	-4.30%	-1.45%
Oct-20	2.08%	9.15%	-7.21%	2.78%	-8.14%	-1.88%	2.59%	-0.45%	-3.81%	4.06%
Nov-20	29.09%	6.65%	20.35%	7.67%	4.57%	24.54%	22.52%	35.83%	20.65%	11.45%
Dec-20	12.46%	39.57%	2.55%	11.06%	11.01%	16.47%	-3.80%	1.91%	10.16%	8.16%
Jan-21	2.66%	12.43%	4.29%	-1.17%	-6.43%	-0.33%	14.04%	42.95%	1.89%	-3.07%
Feb-21	38.34%	1.04%	-1.95%	-4.48%	-5.58%	26.13%	-6.14%	23.00%	11.30%	6.08%
Mar-21	-6.62%	-13.85%	25.59%	7.91%	17.82%	8.52%	7.32%	-6.55%	14.47%	0.83%
Apr-21	-2.99%	10.32%	5.80%	-2.98%	-10.84%	-4.22%	0.98%	-2.62%	-0.92%	-1.47%
May-21	20.03%	62.59%	8.10%	6.25%	11.42%	7.64%	1.78%	8.42%	8.89%	6.47%
Jun-21	-1.18%	49.34%	6.96%	7.17%	30.60%	14.76%	11.86%	6.54%	12.94%	1.05%
Jul-21	2.97%	11.41%	2.98%	10.44%	1.75%	2.38%	-0.17%	-13.43%	2.62%	0.20%
Aug-21	-1.32%	-9.31%	15.90%	19.67%	-11.05%	3.24%	6.75%	-2.25%	6.62%	9.44%
Sep-21	6.35%	4.91%	-9.33%	-4.58%	35.09%	22.98%	-3.74%	15.96%	10.24%	2.73%
Oct-21	10.89%	-0.28%	-7.14%	7.08%	7.03%	35.00%	-7.72%	45.18%	14.24%	0.31%
Nov-21	-8.32%	0.84%	14.82%	4.22%	10.77%	1.19%	-0.35%	-5.16%	6.56%	-3.78%
Dec-21	-0.03%	9.45%	5.82%	16.19%	-3.61%	1.89%	-1.76%	5.13%	3.14%	2.08%
Jan-22	16.92%	0.51%	-9.08%	-17.38%	-7.28%	11.39%	-4.01%	7.29%	1.00%	-0.41%
Feb-22	-10.23%	-8.09%	-9.20%	-4.62%	-11.36%	-9.35%	-0.66%	-12.24%	-9.11%	-3.05%
Mar-22	2.09%	8.18%	18.34%	6.26%	16.29%	7.08%	-9.62%	-4.55%	11.07%	4.13%

Final data generated from the above table to calculate alpha, sharpe and treynor ratio.

E(Rp) = **46.82%**, Risk free rate (Rf) = **6.02%**, S.D of portfolio = **7.36%** and Beta = **1.30**.

SHARPE RATIO: $(Rp - Rf)/(\sigma p) = (46.82 - 6.02)/ 7.36$

$= \mathbf{5.54.}$

TREYNOR RATIO: $(Rp - Rf)/(\beta p) = (46.82 - 6.02)/ 1.30$

$= \mathbf{0.31.}$

JENSEN'S ALPHA: $Rp - [Rf + \beta*(Rm - Rf)] = 46.82 - [6.02 + 1.30*(17.80 - 6.02)]$

$= 46.82 - 21.39$

$= \mathbf{25.43\ \%.}$

INFERENCE: Here, I got 5.54 for Sharpe ratio which is good but not great than previous Portfolio's Sharpe ratio, 0.31 for Treynor ratio which is also good and 25.43 % for Jensen's alpha which tells this portfolio is giving 10.49 % of excess return than Sensex (market index).

FINDINGS:

- It is found that expected return of HDFC Bank as **17.87%** using CAPM, based on its beta (1.01), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of HDFC Bank and Sensex.
- It is interpreted that expected return of Vodafone Idea as **12.38%** using CAPM, based on its beta (0.77), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of Vodafone Idea and Sensex.
- It is founded that expected return of Fortis Healthcare as **23.45%** using CAPM, based on its beta (1.10), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of Fortis Healthcare and Sensex.
- It is inferred that expected return of Oracle as **13.43%** using CAPM, based on its beta (0.62), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of Oracle and Sensex.
- It is found that expected return of Adani Power as **14.47%** using CAPM, based on its beta (0.71), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of Adani Power and Sensex.
- It is inferred that expected return of Emami as **15.51%** using CAPM, based on its beta (0.80), risk-free rate (6.3%), and market return (17.8%), derived from closing prices and returns of Emami and Sensex.

CONCLUSION:

This study connects financial theory with practical investing by using models like CAPM and performance ratios to assess risk and return. It demonstrates how blending high- and low-beta stocks can balance portfolio performance. Excel Solver effectively optimized stock weights for better efficiency. The analysis underscores the importance of sector trends and ethical investing. Overall, it promotes informed, strategic, and responsible investment decisions in a dynamic market. Portfolio evaluations showed strong Sharpe and Jensen's Alpha values in some configurations, reflecting good risk-adjusted performance.

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