



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

IN SCIENCE, ENGINEERING, TECHNOLOGY AND MANAGEMENT

Volume 9, Issue 9, September 2022



INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.580



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A Study on Security Analysis and Portfolio Management” Kotak Securities

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ABSTRACT: Instead of using an ad hoc strategy, planning your investments with a monetary representative may additionally permit you to get towards your investment desires. The importance of portfolio development some man or woman buyers place a number of emphasis on selecting the great fund supervisor or security in terms of establishing a portfolio. However, choosing a manager is just a minor part of the manner. A extra standard aim of portfolio creation should be to structure your portfolio such that it has the best possibility of attaining your said investing dreams while staying within your chance tolerance. Professional and man or woman traders most customarily talk constructing making an investment portfolios in particular methods. These techniques may be summed up in phrases: backside-up and top-down.

I. INTRODUCTION

Securities investments inside the form of bonds, debentures, and stocks can be beneficial and interesting. While it is recognized that investing in monetary belongings is one of the riskiest varieties of investment, it is currently seemed as one of the finest. Investors seldom placed all in their money or savings right into a unmarried funding. They commonly spend money on a collection of securities instead. A portfolio is a group of securities on this manner. By building a portfolio, risk may be decreased with out lowering income. Portfolio control encompass both the idea and guidance of selecting the quality manner to combine stocks into portfolios, in addition to the study of person securities. An investor has a better chance of fulfillment if they understand the analytical and core principles of portfolio control.

Portfolio management: what is it?

The task of selecting from amongst a spread of securities confronts an investor thinking about making an investment in securities. His decision is stimulated by means of the risk-go back traits of positive securities. He could make the effort to select the most appealing shares and like to distribute his cash amongst those securities. He ought to over again select which securities to keep and how much cash to position into each. The capability portfolios or agencies of securities to be had to the investor are endless.

The hazard-return characteristics of individual securities and portfolios differ along side the ongoing changes within the monetary and economic surroundings. This necessitates the ordinary evaluation and updating of traders' funding portfolios.

II. OBJECTIVES OF THE STUDY

- To compare the share performance of agencies in the steel and cement sectors at the Indian inventory market in mild of the expansion of India's infrastructure.
- To studies the variables affecting the company's inventory charge.
- To do a essential evaluation and TR Imodel evaluation of the companies.
- To create a portfolio (balanced fund) that consists of each debt and stocks. The Fundamental Analysis Model would be the foundation for the constructing.



SCOPE OF THE STUDY

The studies' focus is restricted to portfolio design based totally on evaluation, stock valuation, and determining if there are large variations in portfolio returns.

RESEARCH METHODOLOGY

Form of observe

The studies is descriptive in nature and describes how portfolios are constructed.

Tools for gathering information:

Data from secondary resources, such as the internet, periodicals, newspapers, and research publications, are accrued for the look at.

Sampling:

Species of sampling judgment sampling using non-chance.

Four equities from the metallic industry, six from the cement region, ten company bonds from different corporations, and ten government securities make up the sample length; and 364 day-T-bills

LIMITATION OF THE STUDY

- The studies turned into limited to the selected industries alone.
- Secondary records constrained the studies further.
- The evaluation makes no assumptions about changes to the kingdom's tax rates.
- Because the researcher defines the scope, it limits the wide variety of things that have an effect on the world.
- Revenues growth turned into predicated at the distinction between the years 2017 and 2021's income.

III. REVIEW OF LITERATURE

Managing portfolios in public coverage This have a look at's number one intention is to pay attention on economic coverage, which entails making selections. Public coverage organisations (Council) that place a excessive priority on NIACL legal responsibility management guidance in these regions. Portfolio Choice Employing the CAPM Probes provide an unbiased assessment of real hazard and dye return. Using SML, constant go back chains had been computed. Investigators have resisted emphasising that traders aren't in rate of assisting investors in making informed picks.

Research on Classification and Predictive Analysis of the Stocks Listed with NIFTY50 changed into carried out via Keerti Jain and Neeti Mathur in 2019. The goal in their study was to determine the common go back, risk, and beta of the Nifty 50 element equities from March 31, 2016, to March 31, 2019, respectively. It is located that share returns do not significantly rely on risk or beta. Based on hazard, return, and beta, the 50 stocks that make up the Nifty50 have been divided into 5 businesses. Based on their risk-return profiles, every cluster incorporates corporations which can be comparable.

Ruchi Nityanand Prabhu (2018) Nifty inventory's chance and go back evaluation at the Indian stock marketplace. For the purpose of calculating hazard and return in this have a look at, the researcher computes preferred deviation, covariance, coefficient of correlation, and beta. She determined that, based at the betas of fifty shares, some stocks flow in opposition to the market, some shares circulate with the market, some stocks are much less unstable than the marketplace, and other shares are extra unstable than the marketplace.

Research became conducted in 2017 with the aid of Dr. Nalla Bala Kalyan and S. MD. Salman on the assessment of portfolio evaluation on positive NSE securities in India. The goal of this research changed into to have a look at the chance, return, and relationship among risk and return for the chosen securities. They get the first records: Primary facts are produced by way of doing in-intensity private research on the businesses. Secondary Data: The secondary statistics became amassed from the employer's public annual reports, statistics, web sites, magazines, books, newspapers, and journals, amongst other assets. To decide the average go back, they use statistics from July 2016 to June 2017. They observed that stock threat stages are determined by way of the enterprise's character overall performance, no longer with the aid of area overall performance. Additionally, they located that shares in associated industries may show off nice

correlation, however studies advocate that other industries, along with IT, showcase both negative and no connection. Contrary to the pharmaceutical and cement industries, which display no links among them, the automotive and cement industries show robust correlations.

DATA ANALYSIS

Calculation of Total Return on Index (TRI)

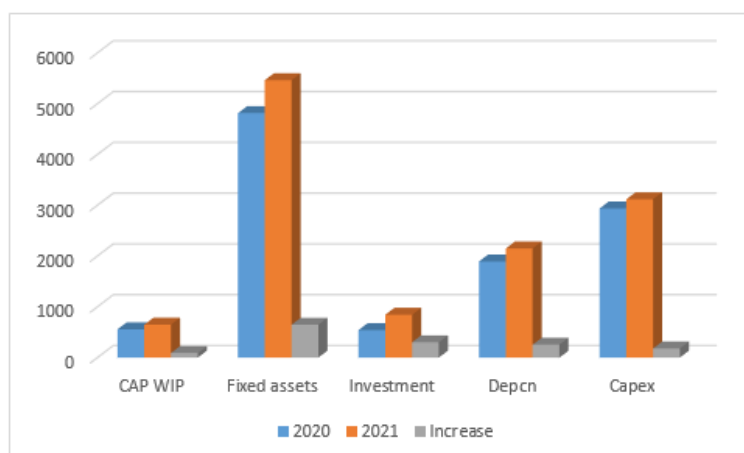
Total Return Index = ($\frac{\text{Pre TR Index}}{\text{Prev. TR Index}}$

Index Returns) + (Indexed Divs + (Indexed Divs * index Returns) yrs

Returns

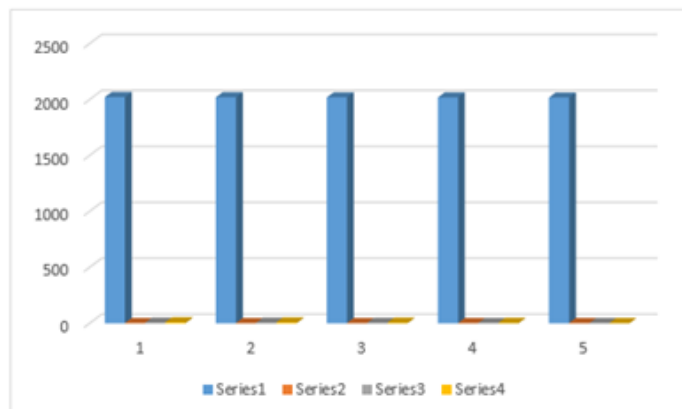
CAPEX = (increase in fixed assets) + (increase in Capital WIP) – (increase in investments)
– (increase in depcn)

Particulars	2020	2021	Increase
CAP WIP	558.42	649.19	90.77
Fixed assets	4,816.25	5,464.07	647.82
Investment	543.09	844.81	301.72
Depcn	1,893.76	2,149.35	255.59
Capex	2937.57	3119.1	181.28



We find fixed assets turnover ratio for previous year.

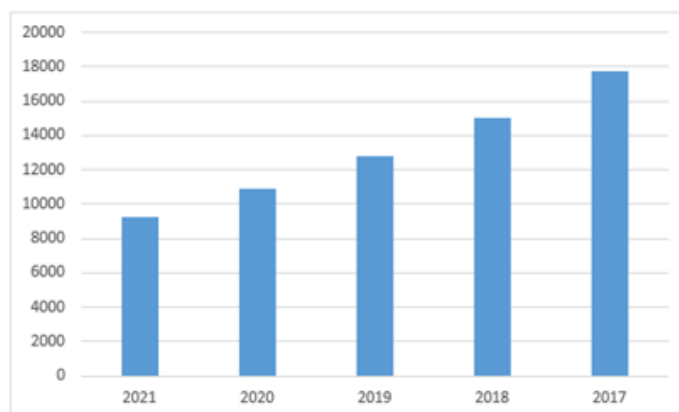
FATR					
Year	2021	2020	2019	2018	2017
FATR	1.74	1.65	1.35	1.32	1.17
Weights	5	4	3	2	1
	8.7	6.6	4.05	2.64	1.17
Avg FATR	4.63				



Assumed to be 17.68 % year on year (i.e. average % sales change from)

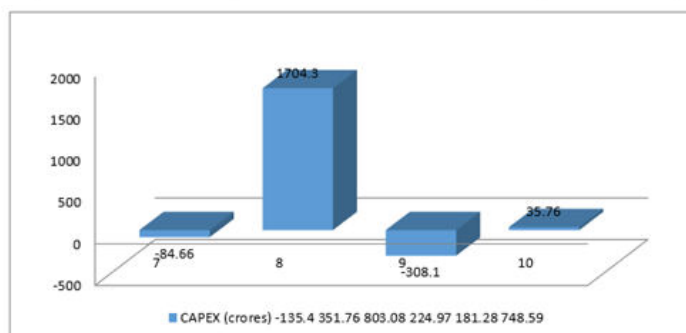
SALES Sales Growth

	2021	2020	2019	2018	2017
2017	7,848.32	9235.9	10868.8	12790.4	15051.74
	7,848.32	9235.9	10868.8	12790.4	15051.74



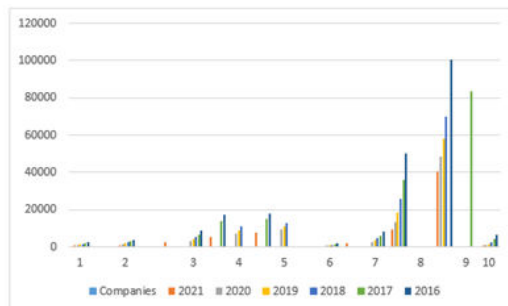
PRESENT CAPEX

	Companies	CAPEX (crores)
1	PRISM	-135.4
	DALMIA	
2	CEMENTS	351.76
3	INDIA CEMENTS	803.08
	ULTRATECH	
4	EMENTS	224.97
5	ACC CEMENTS	181.28
	MANGALAM	748.59
6	CEMENTS	
7	LLYODS STEEL	-84.66
8	JSW STEELS	1704.3
9	SAIL	-308.1
10	TATA METALIKS	35.76



Expected Future Sales (in crores)

	Companies	2021	2020	2019	2018	2017	2016
1	PRISM	883.48	1081.29	1323.39	1619.69	1982.34	2426.18
	DALMIA CEMENTS	1,117.5					
2	DALMIA CEMENTS	1438	1850.27	2380.74	3063.29	3941.53	
		2,610.7					
3	INDIA CEMENTS	5	3310.43	4197.62	5322.58	6749.03	8557.77
	ULTRATECH	5,509.2				13797.8	17357.3
4	EMENTS	2	6930.59	8718.68	10968.1	6	1
		7,848.3				15051.7	17712.8
5	ACC CEMENTS	2	9235.9	10868.8	12790.4	4	8
	MANGALAM						
6	CEMENTS	548.24	697.03	886.2	1126.71	1432.5	1821.48
		1,932.0					
7	LLYODS STEEL	5	2588.93	3469.16	4648.67	6229.21	8347.14
		9,337.3	13,072.2	18301.1	25621.6	35870.0	50218.0
8	JSW STEELS	4	7	8	5	5	7
		40,291.	48382.1	58097.3	69763.2		100592.
9	SAIL	75	9	3	7	83771.6	93
10	TATA METALIKS	681.15	1076.21	1700.41	2686.84	4245.09	6707.24



Portfolio Construction Based on Fundamental Analysis

By allocating weights to the predicted destiny increase quotes (income growth) of corporations, the percentage of every stock to be covered is decided on the idea of Excess returns to beta. Portfolio and Beta calculations are finished the use of weights.

Sr. No	Company	Expec. growth rate	Weights	Prop Returns
				(<u>exp</u> GR *W)
1	PRISM	22.39%	7.44%	1.67%
2	LLYODS STEEL	33.96%	11.29%	3.83%
3	DALMIA		9.53%	2.73%
4	CEMENTS INDIA	28.67%	8.91%	2.39%
5	CEMENTS ULTRATECH	26.80%	8.58%	2.21%
6	EMENTS ACC	25.80%	5.22%	0.92%
	CEMENTS	17.68%		
7	JSW STEELS	39.67%	13.19%	5.23%
8	MANGALAM		9.02%	2.45%
	CEMENTS	27.14%		
9	SAIL	20.08%	6.68%	1.34%
10	TATA METALIKS	58.55%	19.47%	11.40%

300 % 100.00
%
34.18% |

BETA OF THE PORTFOLIO

Company	Weights	Beta
PRISM	7.44%	1.02
LLYODS STEEL	11.29%	0.91
DALMIA CEMENTS	9.53%	1.25
INDIA CEMENTS	8.91%	1.36
ULTRATECH CEMENTS	8.58%	0.92
ACC CEMENTS	5.22%	0.97
JSW STEELS	13.19%	1.14
MANGALAM CEMENTS	9.02%	1.06
SAIL	6.68%	1.48
TATA METALIKS	19.47%	0.81
	Avg. Beta of portfolio	1.1

PORTFOLIO OF DEBT

First, 10 of the biggest business loans were randomly selected from the market.

Step 2: The weights assigned to each of the ten debts are decided by way of the rankings provided by way of the corporations the usage of the scale shown below.

Debt Assessment

consists of analysis of numerous fixed income devices, inclusive of government securities, company debt, and Treasury Bills.

Corporate Debt: First, a random pattern of 10 corporate loans is selected from the market.

Step 2: All securities are assigned weights based on the scale under and the rankings supplied by the corporations

RATING	Weight
AAA	5
AA+	4
AA	3
AA-	2

Step 3: The YTM, Durations, and Modified Durations of all 10 (debt) securities are obtained from the market and given weights for YTM, with the assumption that a extra YTM might bring about higher returns.

YTM	YTM	Weight
12.42	3.42	1
3.42	5.67	2
5.67	7.92	3
7.92	10.17	4
10.17	12.42	5

Step four: The up to date length suggests the bond's (or bonds') sensitivity to adjustments in hobby quotes. We may



additionally country that the danger is larger the longer the changed time. Modified period is calculated as a percentage and subtracted from the overall weights on this basis.

$$\text{Rating} - (\% \text{ MOD DUR}) - (\text{YTM} + \text{YTM})$$

Step five: Using the returns as a basis, the proportion to be invested is decided. In order to decide anticipated returns, the proportions and the returns are increased.

Table 11: Corporate Debt Portfolio

Mod	Exp				
ISIN Number	Issue Description	AYTM	Duration	Weights	Returns
	IDFC 9.10% 2018(S-		%	%	%
INE043D08862	PP342008O-II) STATE	9.6492	6.31	9.4	0.59314
	BANK OF				
	PATIALA 9.3 % LOA				
INE652A09054	20DC22 FVRS10LAC	9.5949	7.58	11.66	0.883828
	RECL 9.07% 2018				
INE020B07DE1	(SERIES-83)	9.53	5.79	8.9	0.51531
	IDFC LTD 8.88 LOA				
INE043D08813	07JN11 FVRS10LAC	9.6267	5.93	9.12	0.540816
	HDFC 8.5 NCD 15OT08				
INE001A07CW7	FVRS10LAC	9.1845	6.46	9.93	0.641478
	EXIM BANK 9.1 BD				
INE514E08423	18SP10 FVRS10LAC IDB	9.08	6.39	9.78	0.624942
	LTD OMNI-1 6.75				
INE008A08PR2	LAC	9.5356	6.67	10.26	0.684342
	PGC 7.39% 2016 (S-				
INE752E07AB5	XVIIISTP-H) STATE	8.7508	7.11	10.88	0.773568
	BANK OF				
	INDIA 10.1 BD 12SP22				
INE062A09155	FVRS10LAC	9.7517	6.67	10.26	0.684342
	IRFC 8.69 BD 07JN11				
	FVRS10LAC LOA				
INE053F09FL9	UPTO 01FB08	9.5342	6.38	9.81	0.625878
Total		Approx =	65	100	6.567644

Government Securities: In step 1, a pattern of 10 government securities is randomly decided on from the marketplace.
 Step 2: Data on day by day fluctuations within the marketplace price of the underlying asset had been with ease handy. We determine the security's common returns the use of the facts that is currently reachable from the marketplace.
 Step 3: Next, the amount to put money into each funding is decided.
 Step four: The expected go back is decided

G-Sec portfolio

Symbol	Cpn rate	Avg Returns	Proportion to invest	Exp Returns
0740E12	7.4	10.32%	23.41%	2.42%
0939G11	9.39	8.72%	19.79%	1.73%
1305D07	13.05	8.55%	19.38%	1.66%
1200E08	12	8.31%	18.85%	1.57%
1210F08	12.1	8.19%	18.57%	1.52%
				8.89%

Introduction of a debt and fairness portfolio

a portfolio that invests in a mix of short-term bonds, common shares, and bonds to provide earnings and capital growth while minimising danger. By investing in each equities (for growth) and bonds (for income), a balanced portfolio (once in a while referred to as hybrid budget) aims to provide investors access to a unmarried portfolio that contains both boom and earnings dreams (for income). These portfolios' various assets guarantee that they are able to climate stock marketplace downturns with out struggling an excessive amount of loss; then again, balanced funds regularly grow less throughout bull markets than an all-stock fund.

Equity Portfolio:

Co Names	Exp Growth rate	Weights	Prop returns	Port Beta
PRISM	22.39%	7.44%	1.67%	1.02
LLYODS STEEL	33.96%	11.29%	3.83%	0.91
DALMIA CEMENTS	28.67%	9.53%	2.73%	1.25
INDIA CEMENTS	26.80%	8.91%	2.39%	1.36
ULTRATECH CEMENTS	25.80%	8.58%	2.21%	0.92
ACC CEMENTS	17.68%	5.22%	0.92%	0.97
JSW STEELS	39.67%	13.19%	5.23%	1.14
MANGALAM CEMENTS	27.14%	9.02%	2.45%	1.06
SAIL	20.08%	6.68%	1.34%	1.48
TATA METALIKS	58.55%	19.47%	11.40%	0.81
		Returns	34.18 %	1.1

Debt portfolio:

Composition of Funds	Avg Returns	Prop Invested	Prop Returns
Corporate debt	6.56%	50.00%	3.28%
G Sec	8.89%	30.00%	2.67%
364 T-bill and cash	6.50%	20.00%	1.30%
Annual Returns		100.00%	7.25%

Now based on the above tables we construct a balanced portfolio with different combinations of debt and equity where we try to trace the one combination which gives the optimum returns with least risk (beta).

Table showing different combinations of debt and equity

Different combinations of Debt and Equity.

Equity	Debt	Equity Returns	Debt returns	Beta	Total returns
1	0	34.18 %	0.00 %	1.1	34.18 %
0.9	0.1	30.76 %	.72 %	1	31.48 %
0.8	0.2	27.34%	1.45 %	0.88	50.25%
0.7	0.3	23.92%	2.17 %	0.77	44.87%
0.6	0.4	20.50%	2.9 %	0.66	39.5%
0.5	0.5	17.09 %	3.62 %	0.55	34.12%
0.4	0.6	13.67%	4.35 %	0.44	28.75%
0.3	0.7	10.25%	5.07 %	0.33	23.37%
0.2	0.8	6.83%	5.8 %	0.22	18.00%
0.1	0.9	3.41%	6.52 %	0.11	12.62%
0	1	0.00%	7.25 %	0	7.25%

An anyone with a rudimentary information of finance may also speedy decide the best blend by examining the table above. The selected portfolio has a beta of one and returns of 31.48%. The beta = 1 is the maximum interesting thing of this. Assuming no systematic hazard, the perfect portfolio, the Nifty marketplace portfolio, has a beta of 1. We can accordingly assert that the created portfolio moves in keeping with the marketplace and is nearly corresponding to the Nifty.

	Portfolio	Nifty
Annual Returns	34.18%	31.48 %
Beta	1	1

- The objective of any fund manager for any portfolio created by him/her is Returns maximization at a fixed level of risk
- Risk minimization at a fixed level of returns.
- In this case, researcher has achieved his objective hence forth.

FINDINGS

- Proportionate returns came to be 34.18% whilst the Equity portfolio become built utilizing 10 sectors of stocks and a 55% annual common increase charge.
- The combined debt portfolio comprising company debt, G-Sec, and 365-day T-Bills generated annualised returns of seven.25%.
- A calculation of the three Total Return Index revealed annualised market returns of 31.14%.
- Six equities from the cement enterprise and four from the metal quarter make up the equity portfolio.
- The average FATR of the 10 fairness stocks has been decided, and the results display that Tata Metaliks, SAIL, Mangalam, and Ultratech Cement all have excessive FATO ratios, indicating that their fixed assets had been used properly. All of the last agencies, but, have instead average FATO ratios, which calls for stepped forward fixed asset use within the destiny.
- When a new portfolio become created the use of diverse combos of debt and equity, the aggregate of ninety% equity and 10% debt gave an annualized go back of 31.48% in contrast to the full index returns of 31.14% at the same degree of beta (systematic threat), i.E. 1. The optimal portfolio changed into located whilst the combinations have been. Nine from the equity component and.1 from the debt component with an annualized go back of 31.48%.



SUGGESTIONS

- The only advice is that an investor hire fundamental studies and portfolio value in order to diversify threat.
- In line with the adage "more the threat, larger might be the reward," the metal region portfolio gives a very excessive go back and a high danger.
- 3 It is also recommended that the investor substantially look into the business enterprise's basics, for the reason that bulk of inventory price adjustments are the effect of investor perceptions of cost and insider information.
- Four
- The statistical metric of anticipated return to beta may be used to diversify the groups with extra expected go back to beta within the future.
- The final mixture, i.e., (zero, 1) and the alternative sectors, respectively, which has a risk of round less than, is virtually what the investor could select if he have been an optimist due to the fact that it is obvious that he could continually are seeking for the lowest risk degree
- 6 On the other hand, if an investor enjoys taking risks, he could surely choose the very last aggregate, which yields an annualised projected go back of 34.18% or mixtures of (.9,.1), which give an annualised return of 31.Forty eight%.

IV. CONCLUSION

- After analyzing the data in detail, it was found that, majority of the companies have given good returns historically as well and they will continue to perform well in the future also. it is a time and good opportunity for the investors to invest in the steel and cement sector stocks as demand will only increase.
- Whenever, an investor wants to construct portfolio, he should go for portfolio consisting of equity and debt combinations, which will minimize risk and maximize returns as we have found out from project.
- Portfolio constructed has given higher returns than market returns at same level of risk.

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