

**Portfolio Management of CNX Midcap Index  
Companies at Sharekhan Securities Ltd.**

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## **Comments by the Faculty**

In India investment in stock markets has gained momentum over the last 20 years or so. Although speculations are still rampant, we see a lot of information and analysis based on value investment.

The exposure Vimal.S got in his Summer Internship Project with Sharekhan is very valuable from the angle of a management professional. His study has concentrated on midcap shares and he has been able to study the impact these have on the regular investor.

While the sample size and scope of study will not enable us to draw big conclusions, the study has its uses as an exploratory paper. Further, Vimal has been able to look at several aspects of investment analysis. For a variety of academic reasons mid-cap stocks behave collectively and individually in a way different from the corresponding behavior of principal indices. Generally, these shares fall under the category of value investing and are “buy and hold” securities.

The approach here can be used for further academic study on the Indian Capital market.

**N R Parasuraman**

# **Portfolio Management of CNX Midcap Index Companies at Sharekhan Securities Ltd.**

## **Introduction**

Sharekhan Securities LTD is one of the top retail brokerage houses in India with over 1,529 outlets serving 950,000 customers across 450 cities. Sharekhan provide services like portfolio management, distribution of mutual funds, trade execution in equities, commodities, futures and options. The company provides end-to-end solutions in investments to the customers with their research expertise, superior technology and customer commitment. During the course of my Summer Internship Project with the company, I was able to learn and observe a number of specific facets. After discussion with the research team of the company, the objectives and requirements of the project were identified and I have pleasure in showing below the gist of these.

## **Portfolio Management**

Portfolio management is the art and science of making decisions about investment mix and policy, asset allocation for individuals and institutions, and balancing risk against performance. Mainly two types of portfolio management services (PMS) namely 'PMS ProPrime' and 'PMS ProTech' are provided by Sharekhan. 'PMS ProPrime' is mainly based on fundamental analysis and it is Ideal for investors looking at steady and superior returns with low to medium risk appetite. This portfolio consists of a blend of quality blue-chip and growth stocks ensuring a balanced portfolio with relatively medium risk profile. 'PMS ProTech' uses the knowledge of technical analysis and the power of derivatives market to identify trading opportunities in the market. The Protech lines of products are designed around various risk/reward/volatility profiles for different kinds of investment needs.

## **Research Methodology**

### ***Objectives of the Study***

The main objectives of the project are

- To ascertain from a sample data as to whether the investment in CNX midcap index companies is more rewarding or not
- To prepare a draft portfolio from the CNX midcap index companies that yields maximum returns at a given level of risk
- To evaluate the risk and return of the optimum portfolio
- To find out the target price of the selected securities in the portfolio

## **Research Design**

The project is mainly based on descriptive research. Under descriptive research, calculative study was also used to find out the risk and return profile of the optimum portfolio.

### ***Sources of Data Collection***

The data are collected mainly from the secondary sources. The sources of data mainly include

- Information from websites such as [www.nseindia.com](http://www.nseindia.com), [www.indiainfoline.com](http://www.indiainfoline.com), [www.sebi.gov.in](http://www.sebi.gov.in), [www.moneycontrol.com](http://www.moneycontrol.com), [www.macroaxis.com](http://www.macroaxis.com).
- Balance sheet from the company's website
- Other published records and books

### ***Selection of Securities***

The securities for the analysis are mainly selected from CNX midcap index because the midcap segment of the stock market is perceived as an attractive investment segment with high growth potential. Nowadays some of the investor does not even know about the CNX midcap index companies, so they are not considering these companies in their portfolio which are more reward oriented. Convenient sampling method is used for the selection of securities. The following companies are selected based on the factors given below.

- Giving good returns
- Have technically break out and fundamentally strong
- Reporting good volumes in the last three months

<b>No.</b>	<b>Company name</b>	<b>Industry</b>
1	Reliance Communications Ltd	Telecommunications - Service Provider
2	Ipca Laboratories Ltd	Pharmaceuticals
3	Britannia Industries Ltd	Food And Dairy Products
4	ING Vysya Bank Ltd	Banking-private sector
5	Oil India Ltd	Oil Exploration / Allied Services
6	Havells India Ltd	Electric Equipment
7	Apollo Hospitals Enterprise Ltd	Hospitals / Medical Services
8	Glenmark Pharmaceuticals Ltd	Pharmaceuticals
9	MRF Ltd	Tyres - Large

10	Mahindra & Mahindra Financial Services Ltd	Finance - Investment / Others
11	Castrol India Ltd	Lubricants
12	Procter & Gamble Hygiene and Health Care Ltd	Personal Care - Multinational
13	Gitanjali Gems Ltd	Diamond Cutting / Jewellery - Large
14	United Phosphorus Ltd	Pesticides / Agrochemicals
15	Kansai Nerolac Paints Ltd	Paints / Varnishes

### Analysis and Findings

The selected fifteen companies are analysed to find the extent of historical returns that these gave to investors. Side by side the relative risk level and the relationship with CNX Midcap Index have been analysed. After that the selected securities are analysed using sharp optimum portfolio model to find the size of the portfolio and the percentage of investment in each stock in the portfolio.

Company	Ri	Standard deviation	$\alpha$	$\beta$	Variance	Unsys.risk	Corr.to market	Cov.to market
Rcom	0.41	2.020	0.82	2.091	4.08	1.989	0.25	3.3456
Ipca	0.38	2.387	0.78	0.247	5.7	5.453	0.16	4.446
Britannia	0.36	2.524	0.65	0.313	6.37	6.057	0.37	4.1405
ING vysya	0.27	2.472	0.12	0.675	6.11	5.435	0.21	0.7332
Oil India	0.24	2.551	0.16	0.52	6.51	5.99	0.42	1.0416
Havells	0.22	2.337	0.45	0.621	5.46	4.839	0.24	2.457
apollo	0.20	2.717	0.09	0.641	7.38	6.739	0.17	0.6642
Glenmark	0.20	2.379	0.2	0.261	5.66	5.399	0.17	1.132
MRF	0.18	5.745	0.51	0.898	33.01	32.112	0.27	16.8351
Mah&Mah	0.17	2.074	0.19	0.842	4.3	3.458	0.37	0.817
Castrol	0.17	1.949	0.22	0.329	3.8	3.471	0.37	0.836
P&G	0.16	2.864	0.46	0.124	8.2	8.076	0.32	3.772
Gitanjali	0.14	2.542	0.32	0.561	6.46	5.899	0.42	2.0672
United ph.	0.12	1.841	0.21	0.897	3.39	2.493	0.33	0.7119
Nerolac	0.11	2.715	0.31	0.259	7.37	7.111	0.7	2.2847
CNX midcap		1.091		1	1.19		1	

## Disclosure

Above all data are calculated based on the price of each security from 29/11/2012 to 29/5/2013

## Sharpe Portfolio Optimisation

In the Sharpe portfolio optimisation method, the desirability of each stock in the portfolio is directly related to its excess return to beta ratio.

excess return to beta ratio =  $(R_i - R_f) / \beta$

$R_i$  = Expected return on stock  $i$

$R_f$  = Return on risk free asset

$\beta$  = Expected change in the rate of return of stock with a 1% change in the market return

To determine which stocks are included in the portfolio, the following steps are followed

1. Calculation of the excess return to beta ratio for each stock under review and ranking from highest to lowest.
2. The optimum portfolio consist of investing in all stocks for which excess return to beta ratio is greater than the particular cut off point  $C^*$ .

## Ranking of Securities

Company	Ri-Rf	Excess Return to Beta Ratio	Rank
Ipca	0.29	1.174089069	1
Britannia	0.27	0.862619808	2
P&G	0.07	0.564516129	3
Glenmark	0.11	0.421455939	4
Oil India	0.15	0.288461538	5
ING vysya	0.18	0.266666667	6
Castrol	0.08	0.243161094	7
Havells	0.13	0.209339775	8
apollo	0.11	0.171606864	9
Rcom	0.32	0.153036824	10
MRF	0.09	0.100222717	11
Mah&Mah	0.08	0.095011876	12
Gitanjali	0.05	0.08912656	13
Nerolac	0.02	0.077220077	14
United ph.	0.03	0.033444816	15

### Establishing the Cut-off Rate

After ranking the securities, the cut-off rate is calculated. The cut-off rate is calculated using the formula given below.

Market variance = 1.19

Company	Excess Return to Beta Ratio	Cut off Rate
Ipca	1.17	0.14
Britannia	0.86	0.17
P&G	0.56	0.19
Glenmark	0.42	0.21
Oil India	0.29	0.23
ING vysya	0.27	0.25
Castrol	0.24	0.27
Havells	0.21	0.29
Apollo	0.17	0.30
Rcom	0.15	0.31
MRF	0.10	0.32
Mah&Mah	0.10	0.32
Gitanjali	0.09	0.32
Nerolac	0.08	0.32
United ph.	0.03	0.33

All the stocks whose excess return to beta ratio is greater than the cut-off rate are selected and those below the cut-off rate are removed from the portfolio. Now to determine the cut-off rate, the last security which is proving the condition i.e. excess return to beta ratio greater than the cut-off rate. So the cut-off rate is **0.25**

### Determining the Weightage of Investments

In this step the relative investment each securities is determined. The formula for calculating the weightage is given below.

$$X_i = \frac{Z_i}{\sum_{i=1}^N Z_j}$$

Where

$$Z_i = \frac{\beta_i}{\sigma_{e_i}^2} \left[ \frac{R_i - R_f}{\beta_i} - C^* \right]$$

The second expression determines the relative investment in each securities and the first expression scales the weights on each securities.

Company	Zi	Weight of Investment
Ipca	3.80	44.37%
Britannia	3.01	35.15%
P&G	0.48	5.55%
Glenmark	0.79	9.20%
Oil India	0.31	3.59%
ING vysya	0.18	2.13%
	8.56	

Dividing each Zi by the sum of Zi will give the percentage of investment in each security.so we would invest 44.37% of our funds in IPCA laboratories , 35.15% in Britannia industries , 5.55% in P&G hygiene, 9.20% in Glenmark Pharmaceuticals, 3.59% in Oil India and 2.13% in ING Vysya Bank Ltd.

### The Sharp Single Index Model and Risk and Return

The Sharp single index model is simplified version of Markowitz model that reduces substantially its data and computational requirements. The return for each security is represented by the following equation.



$$R_i = \alpha_i + \beta_i I$$

$R_i$  = Expected Return on securities i.

$\alpha_i$  = Expected Return on securities –  $\beta_i$  X Expected Return on market.

$I$  = Expected Return on Midcap Index (Market)

$$\text{Return on Portfolio } (R_p) = \sum_{i=1}^N X_i (\alpha_i + \beta_i I)$$

$$\text{Variance on Portfolio } (\sigma_p^2) = \left[ \left( \sum_{i=1}^N X_i \beta_i \right)^2 \sigma_I^2 \right] + \left[ \sum_{i=1}^N X_i^2 e_i^2 \right]$$

$e_i^2$  = Unsystematic risk on each securities

Expected return on market = .22

Expected variance of market = 1.19

Company	$\alpha_i$	$\beta_i$	$e^2$	$X_i$	$X_i \beta_i$	$X_i^2$	$X_i^2 e_i^2$
Ipca	0.78	0.25	5.45	0.44	0.109606	0.196913	1.073176501
Britannia	0.65	0.31	6.05	0.35	0.108971	0.123566	0.747574905
P&G	0.46	0.12	8.07	0.06	0.006665	0.003085	0.024893302
Glenmark	0.2	0.26	5.4	0.09	0.023913	0.008459	0.045679371
Oil India	0.16	0.52	5.99	0.04	0.018655	0.001287	0.007709608
ING vysya	0.12	0.67	5.44	0.02	0.014299	0.000455	0.002477827
				$\sum X_i \beta_i$ $(\sum X_i \beta_i)^2$	<b>0.28211</b> <b>0.079586</b>	$\sum X_i^2 e_i^2$	<b>1.901511514</b>

The risk and return profile of the selected portfolio is given below.

Portfolio return	34.2%
Portfolio variance	1.99
Portfolio risk	1.41

### Equity Analysis and Target Price Evaluation

Fundamental analysis of the selected securities is carried out to envisage the movement of stock prices. The fundamental data that is analysed include company's financial reports and non-financial information such as estimates of its growth, demand for products sold by the company, economy wide changes etc.

### ***IPCA Laboratories Ltd***

Industry: Pharmaceuticals - Indian - Bulk Drugs & Formalin Lrg

IPCA laboratories Ltd is one of the largest pharmaceutical company in India. IPCA is one of the biggest manufacturers in the world of APIs Atenolol (Antihypertensive), Chloroquine Phosphate (Antimalarial), Furosemide (Diuretic) and Pyrantel Salts (Anthelmintic) right from the basic stage. The Company Standalone Net sales grew 19% YoY in Q4'FY13 to Rs 658.64 crore. The company is showing a good growth rate of 20% YoY and the company's operating profit grew by 27%. Due to higher tax rate, profit after tax was decreased by 2%.

### ***Britannia Industries Ltd***

Industry: Food and Dairy Products – Multinational

Britannia Industries Limited (BIL) is a major player in the Indian Foods market with leadership position in Bakery category. Its brand portfolio includes Tiger, Marie Gold, Good Day, 50:50 and Treat. The company's net sales were increased by 13% for the Year ended march 2013 and the operating margin was increased by 8.8% due to the decrease in raw material cost. The net profit of the company was increased by 25% to Rs.233.87 crore.

### ***Procter & Gamble Hygiene and Health Care Ltd***

Industry: Personal Care - Multinational

Procter & Gamble Hygiene and Health Care Limited (P&G) is one of India's fastest growing Fast Moving Consumer Goods (FMCG) Companies that has in its portfolio P&G's billion dollar brands such as Vicks & Whisper. The constant innovation of existing products and developing new products has helped P&G win over consumers globally and across price tiers and preferences. The company's net sales for the quarter ended march 2013 grew by 21% and the company continued to maintain its growth momentum. The OPM of the company was increased by 35.3% due to the fall in other expenses. As a result, the company's net profit has grown by 58% to Rs 74.52 crore. The results are above expectations.

### ***Glenmark Pharmaceuticals Ltd***

Industry: Pharmaceuticals - Indian - Bulk Drugs & Formalin Lrg

Glenmark Pharmaceuticals Ltd is a research-driven, global, integrated pharmaceutical company. The company is a leading player in the discovery of new molecules both NCEs (new chemical entity) and NBEs (new biological entity) with five molecules in various stages of clinical development. The Company Consolidated Net sales grew by robust 25% YoY. The company's OPM decreased by 19.1% due to the increase in other expenses but the net profit was up by 11%.

### ***Oil India Ltd***

Industry: Oil Exploration / Allied Services

Oil India Ltd is the second largest national oil and gas company in India as measured by total proved plus probable oil and natural gas reserves and production. The company is engaged in the business of Exploration, Development and Production of Crude Oil and Natural Gas,

Transportation of Crude oil and Production of LPG. The OPM was increased by 39.5% as employees cost as a percentage of net sales fell to 15% from 20% and other expenses decreased to 17% from 25% while royalty and cess payments remained flat at 29% leading a 107% increase in operating profits. For year ended March 2013 Oil India total revenues rose 1%.

### **ING Vysya Bank Ltd**

Industry: Banks - Private Sector

ING Vysya Bank Ltd is the prominent Bank in India, formed with the Vysya Bank Ltd, a premier bank in the Indian Private Sector and ING Group, a global financial powerhouse of Dutch origin, in the year 2002. ING Vysya Bank has reported robust performance in the quarter ended March 2013 posting strong 34% growth in Net Profit along with healthy improvement in margins and asset quality. The bank has added new 10 branches and 47 ATMs in the quarter ended March 2013 so the employee cost grew 16% to Rs 200.47 crore in the same quarter.

### **Target Price Evaluation**

Target price is calculated using the price to earnings ratio. This is a fundamental relative valuation method which doesn't provide the intrinsic value but gives the company's value relative to its peers. It consist of two steps

- Forecasting Future EPS Using Linear Regression
- Calculating Target Price

Target Price = Forecasted EPS \* Twelve Month Trailing P/E

From the target price evaluation, we can understand which securities are overpriced and which securities are correctly priced. The target prices of the selected securities are shown in the table below

	Market Price	P/E (TTM)	Forward P/E	Target Price
Ipca	676.15	20.05	62.06	218.44
Britannia	662.6	26.8	25.44	697.87
P&G	2979.65	43.98	49.98	2621.43
Glenmark	542.85	32.45	28.69	613.88
Oil India	568.65	8.56	11.83	411.35
ING Vysya	613.8	14.09	14.7	585.5

## **Conclusion**

Indian stock market is volatile so active investment management entails planning and execution based on risk –return profiles. But many of the investors in the Indian stock market invest in securities based on their intuition. They usually do not know the methodology involved in professional stock selection and how much to invest in each security. A short term investor sometimes can make profit out of his/her intuition but it is not the case with a long term investor. For a long term investor, portfolio management is required to diversify his risk and his return. But sometimes financial planning also fails because the market is totally based on sentiments

This sample project gives first-level guidance to investors who want to invest in CNX midcap index companies balancing the risk and return parameters.

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### ***Books***

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