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- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>



**FINANCIAL LEVERAGE AND ITS IMPACT ON STOCK RETURN****DR. KUSHALAPPA. S****ASST. PROFESSOR****DEPARTMENT OF MBA****ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY****MIJAR****VIJENDRA SHENOY. H****LECTURER****VIDYODAYA COLLEGE****VENUR****DR. P. PAKKEERAPPA****PROFESSOR****DEPARTMENT OF BUSINESS ADMINISTRATION****MANGALORE UNIVERSITY****MANGALAGANGOTTHRI****ABSTRACT**

Every investment is characterized by risk and return. For a common man, the term 'risk' means a situation in which something unpleasant/unexpected may happen. In other words, risk is a situation involving exposure to uncertainty. If the actual return obtained is same as the expected return, such an investment could be considered to be risk free, if the actual return obtained is less than the expected return, such an investment could be considered to be risky. Leverage is the employment of an asset or source of finance for which firm pays fixed cost or fixed return. Financial leverage is defined as the ability of a firm to use fixed financial charges to magnify the effect of changes in EBIT on EPS. It is ratio of percentage changes in EPS to percentage changes in EBIT. It is also the ratio of EBIT to EBT. In simple it is nothing but Debt-equity ratio. The present study focuses on the impact of financial leverage on the returns of top 175 BSE companies excluding the banking companies. It helps to the companies to select the best portfolio to minimize the risk. The core objective of the study is to find out the impact of financial leverage on stock returns. Though many companies are listed under BSE we have taken only 175 companies out of top 200 BSE stocks excluding Banking companies. Since the study is to relate between stock returns and financial leverage, study is based on financial statement which is not free from bias.

**KEYWORDS**

Abnormal return, actual return, CAPM return, , systematic risk, unsystematic risk.

**INTRODUCTION**

Every investment is characterized by risk and return. For a common man, the term 'risk' means a situation in which something unpleasant/unexpected may happen. In other words, risk is a situation involving exposure to uncertainty. In the domain of investment, the term 'risk' has a definite financial meaning. As we are aware, an investor invests his funds in anticipation of a regular stream of income in the future. Since, future is always uncertain, however careful one may be in predicting the future and planning for it, there is bound to be difference between the expected return on investment and the return actually realized. When an investor deploys his funds into some securities, he/she does so after analysing the expected returns. If the actual return obtained is same as the expected return, such an investment could be considered to be risk free, if the actual return obtained is less than the expected return, such an investment could be considered to be risky. Leverage is the employment of an asset or source of finance for which firm pays fixed cost or fixed return. Financial leverage is defined as the ability of a firm to use fixed financial charges to magnify the effect of changes in EBIT on EPS. It is ratio of percentage changes in EPS to percentage changes in EBIT. It is also the ratio of EBIT to EBT. In simple it is nothing but Debt-equity ratio. The present study focuses on the impact of financial leverage on the returns of top 175 BSE companies excluding the banking companies. It helps to the companies to select the best portfolio to minimize the risk.

**OBJECTIVES OF THE STUDY**

The core objective of the study is to find out the impact of financial leverage on stock returns. In order to achieve this core objective the following specific objectives have been framed.

- To do the risk return analysis of companies under study.
- To find out the risk and return of various portfolios constructed based on leverage.

**SCOPE OF THE STUDY**

The research study was confined to top 175 BSE companies excluding the banking companies. The study is conducted to analyze the impact of financial leverage on stock return.

**METHODOLOGY**

Research methodologies used in this study are being studied under the following headings

- **Sources of the data:** The study is mainly based on secondary data.
- **Sample size:** Top 175 BSE companies excluding banking companies
- **Statistical tools used:** Standard deviation, Beta, Coefficient of correlation, Regression, Coefficient of determination.
- **Financial tools used:** Ratio analysis and Comparative Financial statements.

**TOOLS USED**

$$\text{Return of a year} = \frac{P_1 - P_0}{P_0} * 100$$

Where  $P_1$  = Opening Price  
 $P_0$  = Closing Price

$$\text{Average Return/Actual Return} = \frac{\text{Total Return of 5 years}}{5}$$

$$\text{Beta} = r_{xy} \frac{\sigma_x}{\sigma_y}$$

$$\text{CAPM return of the security} = R_f + \beta_i(R_m - R_f)$$

$$\text{CAPM return of the Portfolio} = R_f + \beta_i(R_m - R_f)$$

$$\begin{aligned} \text{Abnormal Return of security} &= \text{Actual Return Of Security} - \text{CAPM Return of Security} \\ \text{Abnormal Return of Portfolio} &= \text{Actual Return Of Portfolio} - \text{CAPM Return of portfolio} \end{aligned}$$

$$\text{Systematic Risk of Security} = \sigma_{m^2} * \beta_i^2$$

$$\text{Systematic Risk of Portfolio} = \sigma_{m^2} * \beta_p^2$$

#### LIMITATIONS OF THE STUDY

Though many companies are listed under BSE we have taken only 175 companies out of top 200 BSE stocks excluding Banking companies. Since the study is to relate between stock returns and financial leverage, study is based on financial statement which is not free from bias.

#### DATA ANALYSIS AND INTERPRETATION

In the study the attempts are made to analyse the standard deviation (security), beta, returns and risk of the portfolio.

It is clear from Table 1 that MMTC Ltd. has highest (180.95%) actual return and JSW Energy Ltd. has lowest (-10.09%) actual return and the actual return of the portfolio is (40.11%). Manappuram Finance Ltd. has highest (35.55%) CAPM return and Tata Communications Ltd. has lowest (4.31%) CAPM return and the CAPM return of the portfolio is (16.70%). MMTC Ltd. has highest (161.39%) abnormal return and the JSW Energy Ltd. has lowest (-16.87%) and the abnormal return of the portfolio is (23.41%).

It is clear from Table 1 that JSW Energy Ltd. has lowest (4.99) systematic risk and Manappuram Finance Ltd has highest (44536.84) systematic risk and the systematic risk of the portfolio is 8051.03. Hindustan Petroleum Corporation Ltd. has lowest (100.79) unsystematic risk. MMTC Ltd. has highest (145640.46) unsystematic risk and unsystematic risk the of the portfolio is 7281.28.

It is clear from Table 2 that Jindal Steel & Power Ltd. has highest(104.43%) actual return and Suzlon Energy Ltd. has lowest (-12.81%) actual return and the actual return of the portfolio is 29.01%. JSW Steel Ltd. has highest (33.12%) CAPM return and Britannia Industries Ltd. as lowest (5.96%) CAPM return and the CAPM return of the portfolio is 17.22%. Jindal Steel & Power Ltd. has highest (80.69%) Abnormal Return and the Suzlon Energy Ltd. has lowest (-27.30%) Abnormal Return. Abnormal Return of the portfolio is 11.79%.

It is clear from Table 2 that Britannia Industries Ltd. has lowest (13.95) systematic risk and Bharat Petroleum Corp. Ltd. has highest (37407.31) Systematic Risk and the Systematic Risk of the portfolio is 7730.75. Bharat Petroleum Corp. Ltd. has lowest (86.75) unsystematic risk and the Jindal Steel & Power Ltd. has highest (15163.92) unsystematic risk and unsystematic risk of the portfolio is 1867.65.

It is clear from Table 3 that TTK Prestige Ltd. has highest (168.97%) actual return and Reliance Communications Ltd. has lowest (-21.15%) actual return and the actual return of the portfolio is 28.30%. Sesa Goa Ltd. has highest (47.19%) CAPM return and Jubilant Food Works Ltd. has lowest (4.29%) CAPM return and the CAPM return of the portfolio is 14.67%. TTK Prestige Ltd. has highest (132.02%) abnormal return and the Reliance Communications Ltd. has lowest (-30.66%) and the abnormal return of the portfolio is 13.63%.

It is clear from Table 3 that Oil India Ltd. has lowest (0.02) systematic risk and Sesa Goa Ltd. has highest (87370.17) systematic risk and the systematic risk of the portfolio is 5945.35. Coal India Ltd. has lowest (0.24) unsystematic risk and the Jindal Steel & Power Ltd. has highest (20177.07) unsystematic risk and unsystematic risk of the portfolio is 1597.01.

It is clear from Table 4 that NMDC Ltd. has highest (81.79%) actual return and Multi Commodity Exchange Of India Ltd. has lowest (0) actual return and the actual return of the portfolio is 28.35%. Engineers India Ltd. has highest (25.07%) CAPM return and Multi Commodity Exchange Of India Ltd. has lowest (6.48%) CAPM return and the CAPM return of the portfolio is 14.11%. NMDC Ltd. has highest (65.35%) abnormal return and the Bajaj Holdings & Investment Ltd. has lowest (-12.02%) abnormal return and the abnormal return of the portfolio is 14.24%.

It is clear from Table 4 that Multi Commodity Exchange Of India Ltd. has lowest (0) systematic risk and Engineers India Ltd. has highest (18226.59) systematic risk and the systematic risk of the portfolio is 4056.48. Multi Commodity Exchange Of India Ltd. has lowest (0) unsystematic risk. The NMDC Ltd. has highest (34195.04) unsystematic risk and unsystematic risk of the portfolio is 3989.12.

It is clear from Table 5 that there is low positive correlation (0.073) between the financial leverage and return on the security. The co-efficient of determination (0.005) says that only 0.5% of the variance in stock return is expressed by variance in the financial leverage

#### RESULTS AND DISCUSSION

Here an attempt is made by the researcher to analyze the data collected on the topic under study. The results are discussed under various headings based on the degree of financial leverage

##### Debt/equity ratio 2 and more than 2

MMTC Ltd. has highest (180.95%) actual return and JSW Energy Ltd. has lowest (-10.09%) actual return and the actual return of the portfolio is 40.11%. Manappuram Finance Ltd. has highest (35.55%) CAPM return and Tata Communications Ltd. has lowest (4.31%) CAPM return and the CAPM return of the portfolio is 16.70%. MMTC Ltd. has highest (161.39%) abnormal return and the JSW Energy Ltd. has lowest (-16.87%) and the abnormal return of the portfolio is 23.41%.

JSW Energy Ltd. has lowest (4.99) systematic risk and Manappuram Finance Ltd has highest (44536.84) systematic risk and the systematic risk of the portfolio is 8051.03. Hindustan Petroleum Corporation Ltd. has lowest (100.79) unsystematic risk. MMTC Ltd has highest (145640.46) unsystematic risk and unsystematic risk of the portfolio is 7281.28.

##### Debt/equity ratio more than 1 but less than 2

Jindal Steel & Power Ltd. has highest (104.43%) actual return and Suzlon Energy Ltd. has lowest (-12.81%) actual return and the actual return of the portfolio is 29.01%. JSW Steel Ltd. has highest (33.12%) CAPM return and Britannia Industries Ltd. as lowest (5.96%) CAPM return and the CAPM return of the portfolio is 17.22%. Jindal Steel & Power Ltd. has highest (80.69%) Abnormal Return and the Suzlon Energy Ltd. has lowest (-27.30%) and the Abnormal Return of the portfolio is 11.79%.

Britannia Industries Ltd. has lowest (13.95) systematic risk and Bharat Petroleum Corp. Ltd. has highest (37407.31) Systematic Risk and the Systematic Risk of the portfolio is 7730.75. Bharat Petroleum Corp. Ltd. has lowest (86.75) unsystematic risk and the Jindal Steel & Power Ltd. has highest (15163.92) unsystematic risk and unsystematic risk of the portfolio is 1867.65.

##### Debt/equity ratio more than 0 but less than 1

TTK Prestige Ltd. has highest (168.97%) actual return and Reliance Communications Ltd. has lowest (-21.15%) actual return and the actual return of the portfolio is 28.30%. Sesa Goa Ltd. has highest (47.19%) CAPM return and Jubilant Food Works Ltd. has lowest (4.29%) CAPM return and the CAPM return of the portfolio is 14.67%. TTK Prestige Ltd. has highest (132.02%) abnormal return and the Reliance Communications Ltd. has lowest (-30.66%) and the abnormal return of the portfolio is 13.63%.

Oil India Ltd. has lowest (0.02) systematic risk and Sesa Goa Ltd. has highest (87370.17) systematic risk and the systematic risk of the portfolio is 5945.35. Coal India Ltd. has lowest (0.24) unsystematic risk and the Jindal Steel & Power Ltd. has highest (20177.07) unsystematic risk and unsystematic risk of the portfolio is 1597.01.



**Zero debt/equity ratio**

NMDC Ltd. has highest (81.79%) actual return and Multi Commodity Exchange Of India Ltd. has lowest (0) actual return and the actual return of the portfolio is 28.35%. Engineers India Ltd. has highest (25.07%) CAPM return and Multi Commodity Exchange Of India Ltd. has lowest (6.48%) CAPM return and the CAPM return of the portfolio is 14.11%. NMDC Ltd. has highest (65.35%) abnormal return and the Bajaj Holdings & Investment Ltd. has lowest (-12.02%) abnormal return and the abnormal return of the portfolio is 14.24%.

Multi Commodity Exchange Of India Ltd. has lowest (0) systematic risk and Engineers India Ltd. has highest (18226.59) systematic risk and the systematic risk of the portfolio is 4056.48. Multi Commodity Exchange Of India Ltd. has lowest (0) unsystematic risk. The NMDC Ltd. has highest (34195.04) unsystematic risk and unsystematic risk of the portfolio is 3989.12.

**FINDINGS AND CONCLUSIONS**

Among the companies whose debt equity ratio is 2 and more than 2, MMTC Ltd. has highest (161.39%) abnormal return. JSW Energy Ltd. has lowest (4.99) systematic risk and Hindustan Petroleum Corporation Ltd. has lowest (100.79) unsystematic risk. Among the companies whose debt equity ratio is more than 1 but less than 2, Jindal Steel & Power Ltd. has highest (80.69%) abnormal return. Britannia Industries Ltd. has lowest (13.95) systematic risk and Bharat Petroleum Corpn. Ltd. has lowest (86.75) unsystematic risk. Among the companies whose debt equity ratio is more than 0 but less than 1, TTK Prestige Ltd. has highest (132.02%) abnormal return. Oil India Ltd. has lowest (0.02) systematic risk and Coal India Ltd. has lowest (0.24) unsystematic risk. Among the companies whose debt equity ratio is zero, NMDC Ltd. has highest (65.35%) abnormal return. Multi Commodity Exchange Of India Ltd. has lowest (0) systematic risk and Multi Commodity Exchange Of India Ltd. has lowest (0) unsystematic risk. The correlation coefficient between financial leverage and average return of sample stocks is 0.073. Hence we can conclude that the role of financial leverage has no impact on stock returns..

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**TABLE****TABLE 1: RETURN OF PORTFOLIO CONSISTING OF STOCKS WITH MORE THAN 2 DEBT EQUITY RATIO**

| Sl. No.          | Company Name                                 | Actual Return (%) | CAPM Return (%) | Abnormal Return (%) | Systematic Risk | Unsystematic Risk |
|------------------|--|-------------------|-----------------|---------------------|-----------------|-------------------|
| 1                | Adani Enterprises Ltd.                       | 73.73             | 24.00           | 49.74               | 16177.40        | 3384.65           |
| 2                | Adani Power Ltd.                             | -8.43             | 7.19            | -15.63              | 26.88           | 275.14            |
| 3                | Bhushan Steel Ltd.                           | 67.22             | 25.37           | 41.85               | 18821.81        | 2250.30           |
| 4                | Dish T V India Ltd.                          | 15.94             | 11.31           | 4.63                | 1229.07         | 1558.87           |
| 5                | Essar Oil Ltd.                               | 50.71             | 16.53           | 34.18               | 5321.33         | 17048.99          |
| 6                | GMR Infrastructure Ltd.                      | 8.75              | 10.69           | -1.94               | 934.96          | 2860.12           |
| 7                | Hindustan Petroleum Corporation Ltd.         | 4.85              | 7.52            | -2.67               | 57.32           | 100.79            |
| 8                | Housing Development Finance Corporation Ltd. | 26.68             | 13.34           | 13.34               | 2481.14         | 188.96            |
| 9                | IDFC Ltd.                                    | 39.47             | 20.19           | 19.28               | 9904.96         | 586.47            |
| 10               | IFCI Ltd.                                    | 23.66             | 17.65           | 6.01                | 6577.20         | 131.02            |
| 11               | Indiabulls Financial Services Ltd.           | 3.90              | 9.77            | -5.87               | 570.04          | 1866.04           |
| 12               | Jain Irrigation Systems Ltd.                 | 25.64             | 18.77           | 6.87                | 7962.99         | 720.29            |
| 13               | Jaiprakash Associates Ltd.                   | 32.82             | 18.69           | 14.13               | 7865.39         | 2157.08           |
| 14               | Jet Airways (India) Ltd.                     | 13.45             | 19.35           | -5.91               | 8739.38         | 801.74            |
| 15               | JSW Energy Ltd.                              | -10.09            | 6.79            | -16.87              | 4.99            | 242.52            |
| 16               | Lancolnfratech Ltd.                          | 52.72             | 24.53           | 28.19               | 17180.15        | 3254.80           |
| 17               | LIC Housing Finance Ltd.                     | 83.53             | 22.82           | 60.71               | 14084.57        | 1014.59           |
| 18               | Mahindra & Mahindra Financial Services Ltd.  | 33.67             | 11.89           | 21.78               | 1545.36         | 1871.18           |
| 19               | Manappuram Finance Ltd                       | 152.12            | 35.55           | 116.57              | 44536.84        | 6429.15           |
| 20               | MMTC Ltd.                                    | 180.96            | 19.56           | 161.39              | 9024.10         | 145640.46         |
| 21               | Power Finance Corpn. Ltd.                    | 18.75             | 11.86           | 6.90                | 1525.55         | 551.04            |
| 22               | Rural Electrification Corpn Ltd              | 26.60             | 15.68           | 10.92               | 4467.07         | 1143.85           |
| 23               | Shree Renuka Sugars Ltd.                     | 20.04             | 11.27           | 8.78                | 1208.62         | 2672.71           |
| 24               | Shriram Transport Finance Company Ltd.       | 69.79             | 19.55           | 50.24               | 9011.20         | 3102.58           |
| 25               | Strides Arcolab Ltd.                         | 56.01             | 23.82           | 32.19               | 15850.33        | 7022.61           |
| 26               | Tata Communications Ltd                      | -7.56             | 4.31            | -11.87              | 247.86          | 461.39            |
| 27               | Tata Motors Ltd.                             | 62.26             | 25.82           | 36.44               | 19723.92        | 3221.87           |
| 28               | Tata Steel Ltd.                              | 37.03             | 21.12           | 15.91               | 11297.78        | 479.17            |
| 29               | United Spirits Ltd.                          | 13.17             | 15.47           | -2.30               | 4262.52         | 1244.45           |
| 30               | Wockhardt Ltd.                               | 35.96             | 10.59           | 25.37               | 890.12          | 6155.70           |
| <b>Portfolio</b> |  | <b>40.11%</b>     | <b>16.70%</b>   | <b>23.41%</b>       | <b>8051.03</b>  | <b>7281.28</b>    |

TABLE 2: RETURN OF PORTFOLIO CONSISTING OF STOCKS WITH MORE THAN 1 AND LESS THAN 1.99 DEBT EQUITY RATIO

| Sl. No.   | Company Name                               | Actual Return (%) | CAPM Return (%) | Abnormal Return (%) | Systematic Risk | Unsystematic Risk |
|-----------|--|-------------------|-----------------|---------------------|-----------------|-------------------|
| 1         | Adani Ports and Special Economic Zone Ltd. | 16.24             | 16.02           | 0.22                | 4801.71         | 632.41            |
| 2         | Aditya Birla Nuvo Ltd.                     | 14.42             | 14.65           | -0.23               | 3521.10         | 441.40            |
| 3         | AurobindoPharma Ltd.                       | 55.17             | 29.77           | 25.40               | 28591.55        | 10095.47          |
| 4         | Bharat Forge Ltd.                          | 21.91             | 17.42           | 4.49                | 6310.37         | 796.12            |
| 5         | Bharat Petroleum Corpn. Ltd.               | 19.51             | 8.71            | 10.80               | 261.61          | 86.75             |
| 6         | Britannia Industries Ltd.                  | 20.30             | 5.96            | 14.34               | 13.95           | 496.24            |
| 7         | Century Textiles & Industries. Ltd.        | 13.89             | 16.36           | -2.47               | 5144.93         | 690.16            |
| 8         | CESC Ltd.                                  | 2.16              | 13.07           | -10.91              | 2288.87         | 130.33            |
| 9         | Chambal Fertilisers& Chemicals Ltd.        | 23.24             | 9.92            | 13.32               | 623.41          | 385.19            |
| 10        | Coromandel International Ltd.              | 76.85             | 20.84           | 56.02               | 10866.94        | 340.36            |
| 11        | Gitanjali Gems Ltd.                        | 50.67             | 18.67           | 32.00               | 7832.85         | 2117.31           |
| 12        | Glenmark Pharmaceuticals Ltd.              | 15.36             | 12.99           | 2.37                | 2234.88         | 758.47            |
| 13        | Havells India Ltd.                         | 66.39             | 25.06           | 41.33               | 18199.18        | 3381.06           |
| 14        | Hindalco Industries Ltd.                   | 37.62             | 23.17           | 14.45               | 14680.19        | 843.72            |
| 15        | Idea Cellular Ltd.                         | 7.51              | 9.33            | -1.82               | 428.39          | 949.44            |
| 16        | Indian Hotels Company Ltd.                 | 7.39              | 17.92           | -10.53              | 6904.56         | 792.61            |
| 17        | Indian Oil Corpn. Ltd.                     | 8.57              | 10.26           | -1.69               | 753.18          | 93.61             |
| 18        | IRB Infrastructure Developers Ltd          | 27.51             | 20.50           | 7.01                | 10365.04        | 1597.06           |
| 19        | IVRCL Ltd.                                 | 14.06             | 18.99           | -4.94               | 8254.68         | 1198.10           |
| 20        | Jaiprakash Power Ventures Ltd              | 26.94             | 15.92           | 11.02               | 4701.17         | 1652.95           |
| 21        | Jindal Steel & Power Ltd.                  | 104.43            | 23.74           | 80.69               | 15699.71        | 15163.92          |
| 22        | JSW Steel Ltd.                             | 76.05             | 33.12           | 42.93               | 37407.31        | 4902.29           |
| 23        | Larsen & Toubro Ltd.                       | 30.75             | 17.07           | 13.69               | 5911.75         | 696.81            |
| 24        | Mahindra & Mahindra Ltd.                   | 31.34             | 17.97           | 13.37               | 6964.28         | 1054.41           |
| 25        | MotherSumi Systems Ltd.                    | 31.13             | 12.85           | 18.28               | 2136.63         | 731.27            |
| 26        | Pantaloon Retail (India) Ltd.              | 2.50              | 17.26           | -14.76              | 6126.23         | 519.14            |
| 27        | Petronet LNG Ltd.                          | 43.35             | 12.94           | 30.41               | 2197.71         | 644.26            |
| 28        | Punj Lloyd Ltd.                            | 7.48              | 15.16           | -7.67               | 3969.70         | 2612.79           |
| 29        | Rajesh Exports Ltd.                        | 68.01             | 28.71           | 39.30               | 26058.63        | 4198.52           |
| 30        | Ranbaxy Laboratories Ltd.                  | 29.61             | 18.91           | 10.70               | 8146.51         | 615.10            |
| 31        | Reliance Capital Ltd.                      | 14.14             | 16.41           | -2.27               | 5197.16         | 1202.92           |
| 32        | Shree Cement Ltd.                          | 50.27             | 18.90           | 31.37               | 8128.50         | 2412.78           |
| 33        | Sintex Industries Ltd.                     | 31.23             | 21.11           | 10.12               | 11281.41        | 428.36            |
| 34        | Suzlon Energy Ltd.                         | -12.81            | 14.49           | -27.30              | 3387.36         | 455.62            |
| 35        | Tata Chemicals Ltd.                        | 24.61             | 15.58           | 9.02                | 4369.53         | 130.04            |
| 36        | Tata Power Company Ltd.                    | 29.48             | 13.23           | 16.25               | 2404.53         | 2758.75           |
| 37        | Unitech Ltd.                               | -1.71             | 16.59           | -18.30              | 5390.47         | 705.12            |
| 38        | United Breweries Ltd.                      | 39.14             | 14.04           | 25.10               | 3014.00         | 4937.96           |
| 39        | Videocon Industries Ltd.                   | 6.54              | 17.94           | -11.40              | 6929.08         | 1189.61           |
| Portfolio |  | 29.01%            | 17.22%          | 11.79%              | 7730.75         | 1867.65           |

TABLE 3: RETURN OF PORTFOLIO CONSISTING OF STOCKS WITH MORE THAN 0 AND LESS THAN 1 DEBT EQUITY RATIO

| Sl. No. | Company Name                     | Actual Return (%) | CAPM Return (%) | Abnormal Return (%) | Systematic Risk | Unsystematic Risk |
|---------|----------------------------------|-------------------|-----------------|---------------------|-----------------|-------------------|
| 1       | ACC Ltd.                         | 17.27             | 10.70           | 6.57                | 938.96          | 219.43            |
| 2       | Ambuja Cements Ltd.              | 15.90             | 11.46           | 4.45                | 1306.14         | 193.62            |
| 3       | Apollo Hospitals Enterprise Ltd. | 25.23             | 10.78           | 14.45               | 974.37          | 408.10            |
| 4       | Apollo Tyres Ltd.                | 58.74             | 24.13           | 34.61               | 16422.59        | 1715.57           |
| 5       | Ashok Leyland Ltd.               | 32.01             | 19.33           | 12.68               | 8704.47         | 1517.16           |
| 6       | Asian Paints Ltd.                | 46.82             | 16.12           | 30.70               | 4901.68         | 192.90            |
| 7       | Bajaj Auto Ltd.                  | 57.06             | 18.13           | 38.93               | 7150.28         | 2022.45           |
| 8       | Bajaj Finserv Ltd.               | 34.50             | 11.38           | 23.12               | 1266.46         | 578.64            |
| 9       | Bata India Ltd.                  | 52.82             | 12.12           | 40.70               | 1676.17         | 2240.86           |
| 10      | Bharat Heavy Electricals Ltd.    | 12.48             | 11.81           | 0.67                | 1495.67         | 1426.63           |
| 11      | BhartiAirtel Ltd.                | -1.50             | 7.55            | -9.05               | 60.62           | 162.40            |
| 12      | Biocon Ltd.                      | 8.55              | 13.39           | -4.83               | 2516.79         | 382.61            |
| 13      | Bosch Ltd.                       | 23.11             | 9.75            | 13.35               | 565.82          | 202.70            |
| 14      | Cadila Healthcare Ltd.           | 45.17             | 16.89           | 28.28               | 5717.84         | 2695.33           |
| 15      | Cairn India Ltd.                 | 25.81             | 11.16           | 14.66               | 1153.61         | 504.79            |
| 16      | Castrol India Ltd.               | 41.98             | 10.78           | 31.20               | 974.68          | 636.11            |
| 17      | Cipla Ltd.                       | 7.35              | 9.38            | -2.03               | 443.35          | 225.83            |
| 18      | Coal India Ltd.                  | -0.23             | 6.50            | -6.73               | 0.02            | 0.24              |
| 19      | Colgate-Palmolive (India) Ltd.   | 27.84             | 7.27            | 20.58               | 32.81           | 108.34            |
| 20      | Container Corpn. Of India Ltd.   | 5.21              | 11.85           | -6.64               | 1518.79         | 340.17            |
| 21      | Crompton Greaves Ltd.            | 41.81             | 24.18           | 17.63               | 16508.30        | 1432.29           |
| 22      | Cummins India Ltd.               | 37.99             | 17.55           | 20.43               | 6464.61         | 342.25            |
| 23      | Dabur India Ltd.                 | 19.63             | 9.97            | 9.65                | 644.34          | 23.39             |
| 24      | DiviS Laboratories Ltd.          | 27.33             | 10.07           | 17.26               | 678.27          | 1852.08           |
| 25      | DLF Ltd.                         | -5.50             | 14.37           | -19.87              | 3283.72         | 44.92             |

|                  |  |               |               |               |                |                |
|------------------|--|---------------|---------------|---------------|----------------|----------------|
| 26               | DrReddys Laboratories Ltd.                       | 32.17         | 15.47         | 16.71         | 4257.23        | 1329.60        |
| 27               | Elh Ltd.   | 4.32          | 10.26         | -5.94         | 752.23         | 775.28         |
| 28               | Exide Industries Ltd.                            | 48.77         | 18.85         | 29.92         | 8062.97        | 333.15         |
| 29               | Financial Technologies (India) Ltd.              | 2.76          | 17.41         | -14.65        | 6302.90        | 1147.19        |
| 30               | GAIL (India) Ltd.                                | 21.74         | 11.30         | 10.45         | 1223.14        | 438.68         |
| 31               | Godrej Consumer Products Ltd.                    | 32.07         | 10.65         | 21.42         | 915.89         | 847.61         |
| 32               | Godrej Industries Ltd.                           | 43.82         | 18.03         | 25.79         | 7031.17        | 680.60         |
| 33               | Grasim Industries Ltd.                           | 11.42         | 12.20         | -0.78         | 1726.27        | 209.18         |
| 34               | Great Eastern Shipping Company Ltd.              | 14.75         | 12.07         | 2.68          | 1648.66        | 1351.46        |
| 35               | Gujarat Fluorochemicals Ltd.                     | 42.63         | 13.91         | 28.73         | 2909.74        | 5927.46        |
| 36               | Gujarat Mineral Devp. Corpn. Ltd.                | 84.35         | 23.59         | 60.76         | 15433.39       | 4598.27        |
| 37               | Gujarat State Petronet Ltd.                      | 21.42         | 15.07         | 6.35          | 3893.93        | 188.30         |
| 38               | HCL Technologies Ltd.                            | 42.63         | 22.08         | 20.55         | 12833.17       | 1938.29        |
| 39               | Hero MotoCorp Ltd.                               | 29.70         | 8.13          | 21.56         | 144.65         | 1473.71        |
| 40               | Hexaware Technologies Ltd.                       | 42.32         | 15.49         | 26.83         | 4283.34        | 5546.50        |
| 41               | Hindustan Copper Ltd.                            | 91.80         | 30.08         | 61.72         | 29365.02       | 6181.33        |
| 42               | Hindustan Unilever Ltd.                          | 15.81         | 5.57          | 10.24         | 43.31          | 258.28         |
| 43               | Housing Development & Infrastructure Ltd.        | 15.09         | 24.03         | -8.94         | 16241.81       | 1826.74        |
| 44               | India Cements Ltd.                               | -2.92         | 9.31          | -12.23        | 422.13         | 498.93         |
| 45               | Indiabulls Real Estate Ltd.                      | -6.07         | 13.68         | -19.76        | 2734.14        | 1183.10        |
| 46               | Indraprastha Gas Ltd.                            | 35.74         | 12.15         | 23.59         | 1695.56        | 78.20          |
| 47               | Ipcal Laboratories Ltd.                          | 57.58         | 24.57         | 33.01         | 17254.78       | 3233.97        |
| 48               | ITC Ltd.   | 26.42         | 8.85          | 17.56         | 297.64         | 168.57         |
| 49               | JaypeeInfratech Ltd.                             | -2.68         | 6.72          | -9.40         | 3.08           | 32.91          |
| 50               | Jubilant FoodWorks Ltd.                          | 37.71         | 4.29          | 33.42         | 252.89         | 2661.69        |
| 51               | Lupin Ltd.                                       | 42.43         | 11.50         | 30.93         | 1329.02        | 1884.07        |
| 52               | Mahindra Satyam Ltd                              | 5.62          | 17.11         | -11.50        | 5963.24        | 1433.19        |
| 53               | Mangalore Refinery & Petrochemicals Ltd.         | 31.64         | 13.53         | 18.11         | 2620.70        | 2800.80        |
| 54               | Marico Ltd.                                      | 26.67         | 10.75         | 15.92         | 961.99         | 191.33         |
| 55               | Maruti Suzuki India Ltd.                         | 14.67         | 11.03         | 3.63          | 1093.56        | 399.18         |
| 56               | Max India Ltd.                                   | 6.74          | 13.69         | -6.94         | 2738.03        | 1131.05        |
| 57               | McLeodRussel India Ltd.                          | 65.46         | 23.45         | 42.01         | 15177.64       | 5024.47        |
| 58               | Mphasis Ltd.                                     | 29.23         | 17.67         | 11.56         | 6596.51        | 3996.39        |
| 59               | MRF Ltd.   | 59.69         | 22.86         | 36.83         | 14138.35       | 3365.72        |
| 60               | Nestle India Ltd.                                | 39.74         | 9.98          | 29.76         | 646.67         | 92.25          |
| 61               | Neyveli Lignite Corpn. Ltd.                      | 26.99         | 12.67         | 14.32         | 2019.31        | 3657.73        |
| 62               | NHPC Ltd.  | -7.87         | 6.90          | -14.78        | 9.58           | 110.59         |
| 63               | NTPC Ltd.  | 3.09          | 8.07          | -4.99         | 134.06         | 249.45         |
| 64               | Oil & Natural Gas Corpn. Ltd.                    | 5.97          | 9.66          | -3.69         | 534.77         | 2.00           |
| 65               | Oil India Ltd                                    | 2.43          | 6.50          | -4.06         | 0.02           | 43.27          |
| 66               | Opto Circuits (India) Ltd.                       | 31.43         | 14.93         | 16.50         | 3764.62        | 221.72         |
| 67               | Pidilite Industries Ltd.                         | 40.28         | 16.71         | 23.57         | 5522.80        | 471.89         |
| 68               | Pipavav Defence and Offshore Engineering Co Ltd. | 2.66          | 6.44          | -3.79         | 0.06           | 28.70          |
| 69               | Piramal Enterprises Ltd.                         | 23.31         | 14.09         | 9.22          | 3053.23        | 260.01         |
| 70               | Power Grid Corpn. Of India Ltd.                  | 2.13          | 7.11          | -4.97         | 20.94          | 26.09          |
| 71               | PTC India Ltd.                                   | 8.57          | 11.70         | -3.14         | 1437.63        | 892.63         |
| 72               | Reliance Communications Ltd.                     | -21.15        | 9.51          | -30.66        | 484.63         | 606.78         |
| 73               | Reliance Industries Ltd.                         | 8.55          | 10.84         | -2.29         | 1002.65        | 874.29         |
| 74               | Reliance Infrastructure Ltd                      | 28.36         | 14.94         | 13.43         | 3772.62        | 4405.98        |
| 75               | Reliance Power Ltd                               | -8.61         | 11.71         | -20.31        | 1441.14        | 141.46         |
| 76               | Sesa Goa Ltd.                                    | 139.06        | 47.19         | 91.86         | 87370.17       | 20177.07       |
| 77               | Siemens Ltd.                                     | 27.33         | 18.30         | 9.03          | 7364.65        | 316.35         |
| 78               | Steel Authority Of India Ltd.                    | 19.60         | 18.12         | 1.48          | 7142.46        | 1155.14        |
| 79               | Sterlite Industries (India) Ltd.                 | 17.30         | 16.78         | 0.52          | 5588.99        | 541.23         |
| 80               | Sun Pharmaceutical Inds. Ltd.                    | 24.08         | 9.64          | 14.44         | 527.23         | 115.20         |
| 81               | Sun TV Network Ltd.                              | 13.27         | 16.99         | -3.72         | 5824.50        | 965.63         |
| 82               | Tata Consultancy Services Ltd.                   | 34.37         | 17.62         | 16.75         | 6547.49        | 2156.11        |
| 83               | Tata Global Beverages Ltd                        | 17.67         | 11.13         | 6.53          | 1141.85        | 179.00         |
| 84               | Tech Mahindra Ltd.                               | 18.91         | 20.37         | -1.46         | 10173.51       | 3420.94        |
| 85               | Thermax Ltd.                                     | 45.79         | 24.69         | 21.10         | 17480.97       | 1217.07        |
| 86               | Titan Industries Ltd.                            | 52.53         | 14.41         | 38.12         | 3318.18        | 1168.80        |
| 87               | Torrent Power Ltd.                               | 62.92         | 24.13         | 38.78         | 16430.61       | 2192.38        |
| 88               | TTK Prestige Ltd.                                | 168.97        | 36.95         | 132.02        | 48938.06       | 15975.21       |
| 89               | Ultratech Cement Ltd.                            | 22.54         | 12.89         | 9.64          | 2169.71        | 699.70         |
| 90               | United Phosphorus Ltd.                           | -0.94         | 10.43         | -11.37        | 824.13         | 174.34         |
| 91               | Voltas Ltd.                                      | 56.82         | 25.81         | 31.01         | 19703.46       | 1207.26        |
| 92               | Wipro Ltd.                                       | 25.29         | 18.14         | 7.15          | 7173.69        | 1511.56        |
| 93               | Zee Entertainment Enterprises Ltd.               | 17.65         | 16.79         | 0.86          | 5604.45        | 659.83         |
| <b>Portfolio</b> |  | <b>28.30%</b> | <b>14.67%</b> | <b>13.63%</b> | <b>5945.35</b> | <b>1597.01</b> |

TABLE 4: RETURN OF PORTFOLIO CONSISTING OF STOCKS WITH 0 DEBT EQUITY RATIO

| Sl.No.           | Company Name                             | Actual Return (%) | CAPM Return (%) | Abnormal Return (%) | Systematic Risk | Unsystematic Risk |
|------------------|--|-------------------|-----------------|---------------------|-----------------|-------------------|
| 1                | ABB Ltd.                                 | 19.51             | 14.27           | 5.24                | 3199.33         | 634.36            |
| 2                | Bajaj Holdings & Investment Ltd.         | 1.76              | 13.78           | -12.02              | 2813.17         | 2220.53           |
| 3                | Bharat Electronics Ltd.                  | 13.88             | 15.03           | -1.15               | 3858.53         | 1828.17           |
| 4                | CRISIL Ltd.                              | 34.52             | 11.08           | 23.44               | 1115.13         | 578.13            |
| 5                | Engineers India Ltd.                     | 62.89             | 25.07           | 37.81               | 18226.59        | 3665.53           |
| 6                | Glaxosmithkline Consumer Healthcare Ltd. | 43.41             | 11.52           | 31.89               | 1338.74         | 373.12            |
| 7                | Glaxosmithkline Pharmaceuticals Ltd.     | 17.65             | 9.46            | 8.19                | 468.91          | 262.21            |
| 8                | Hindustan Zinc Ltd.                      | 31.57             | 16.07           | 15.50               | 4847.85         | 1163.31           |
| 9                | Infosys Ltd.                             | 14.69             | 11.97           | 2.71                | 1590.17         | 914.20            |
| 10               | Multi Commodity Exchange Of India Ltd.   | 0.00              | 6.48            | -6.48               | 0.00            | 0.00              |
| 11               | National Aluminium Company Ltd.          | 16.41             | 14.61           | 1.80                | 3487.39         | 1531.78           |
| 12               | NMDC Ltd                                 | 81.79             | 16.44           | 65.35               | 5226.43         | 34195.04          |
| 13               | Oracle Financial Services Software Ltd   | 30.49             | 17.64           | 12.85               | 6562.01         | 4492.22           |
| <b>Portfolio</b> |  | <b>28.35%</b>     | <b>14.11%</b>   | <b>14.24%</b>       | <b>4056.48</b>  | <b>3989.12</b>    |

TABLE 5: CORRELATION AND COEFFICIENT OF DETERMINATION

| Sl.No. | COMPANY NAME                               | AVERAGE RETURN | DEBT /EQUITY RATIO |
|--------|--|----------------|--------------------|
| 1      | ABB Ltd.                                   | 19.51          | 0.00               |
| 2      | ACC Ltd.                                   | 17.27          | 0.09               |
| 3      | Adani Enterprises Ltd.                     | 73.73          | 2.94               |
| 4      | Adani Ports and Special Economic Zone Ltd. | 16.24          | 1.55               |
| 5      | Adani Power Ltd.                           | -8.43          | 2.86               |
| 6      | Aditya Birla Nuvo Ltd.                     | 14.42          | 1.55               |
| 7      | Ambuja Cements Ltd.                        | 15.90          | 0.03               |
| 8      | Apollo Hospitals Enterprise Ltd.           | 25.23          | 0.38               |
| 9      | Apollo Tyres Ltd.                          | 58.74          | 0.80               |
| 10     | Ashok Leyland Ltd.                         | 32.01          | 0.83               |
| 11     | Asian Paints Ltd.                          | 46.82          | 0.17               |
| 12     | AurobindoPharma Ltd.                       | 55.17          | 1.36               |
| 13     | Bajaj Auto Ltd.                            | 57.06          | 0.46               |
| 14     | Bajaj Finserv Ltd.                         | 34.50          | 0.80               |
| 15     | Bajaj Holdings & Investment Ltd.           | 1.76           | 0.00               |
| 16     | Bata India Ltd.                            | 52.82          | 0.15               |
| 17     | Bharat Electronics Ltd.                    | 13.88          | 0.00               |
| 18     | Bharat Forge Ltd.                          | 21.91          | 1.19               |
| 19     | Bharat Heavy Electricals Ltd.              | 12.48          | 0.01               |
| 20     | Bharat Petroleum Corpn. Ltd.               | 19.51          | 1.53               |
| 21     | BhartiAirtel Ltd.                          | -1.50          | 0.74               |
| 22     | Bhushan Steel Ltd.                         | 67.22          | 3.18               |
| 23     | Biocon Ltd.                                | 8.55           | 0.22               |
| 24     | Bosch Ltd.                                 | 23.11          | 0.08               |
| 25     | Britannia Industries Ltd.                  | 20.30          | 1.08               |
| 26     | Cadila Healthcare Ltd.                     | 45.17          | 0.76               |
| 27     | Cairn India Ltd.                           | 25.81          | 0.06               |
| 28     | Castrol India Ltd.                         | 41.98          | 0.00               |
| 29     | Century Textiles & Industries. Ltd.        | 13.89          | 1.40               |
| 30     | CESC Ltd.                                  | 2.16           | 1.15               |
| 31     | Chambal Fertilisers& Chemicals Ltd.        | 23.24          | 1.85               |
| 32     | Cipla Ltd.                                 | 7.35           | 0.09               |
| 33     | Coal India Ltd.                            | -0.23          | 0.07               |
| 34     | Colgate-Palmolive (India) Ltd.             | 27.84          | 0.02               |
| 35     | Container Corpn. Of India Ltd.             | 5.21           | 0.01               |
| 36     | Coromandel International Ltd.              | 76.85          | 1.19               |
| 37     | CRISIL Ltd.                                | 34.52          | 0.00               |
| 38     | Crompton Greaves Ltd.                      | 41.81          | 0.33               |
| 39     | Cummins India Ltd.                         | 37.99          | 0.04               |
| 40     | Dabur India Ltd.                           | 19.63          | 0.40               |
| 41     | Dish T V India Ltd.                        | 15.94          | 6.31               |
| 42     | DiviS Laboratories Ltd.                    | 27.33          | 0.04               |
| 43     | DLF Ltd.                                   | -5.50          | 0.91               |
| 44     | DrReddys Laboratories Ltd.                 | 32.17          | 0.53               |
| 45     | EIH Ltd.                                   | 4.32           | 0.74               |
| 46     | Engineers India Ltd.                       | 62.89          | 0.00               |
| 47     | Essar Oil Ltd.                             | 50.71          | 2.91               |
| 48     | Exide Industries Ltd.                      | 48.77          | 0.20               |
| 49     | Financial Technologies (India) Ltd.        | 2.76           | 0.46               |
| 50     | GAIL (India) Ltd.                          | 21.74          | 0.32               |
| 51     | Gitanjali Gems Ltd.                        | 50.67          | 1.11               |
| 52     | Glaxosmithkline Consumer Healthcare Ltd.   | 43.41          | 0.00               |
| 53     | Glaxosmithkline Pharmaceuticals Ltd.       | 17.65          | 0.00               |

|     |  |        |       |
|-----|--|--------|-------|
| 54  | Glenmark Pharmaceuticals Ltd.                | 15.36  | 1.04  |
| 55  | GMR Infrastructure Ltd.                      | 8.75   | 2.87  |
| 56  | Godrej Consumer Products Ltd.                | 32.07  | 0.67  |
| 57  | Godrej Industries Ltd.                       | 43.82  | 0.92  |
| 58  | Grasim Industries Ltd.                       | 11.42  | 0.49  |
| 59  | Great Eastern Shipping Company Ltd.          | 14.75  | 0.87  |
| 60  | Gujarat Fluorochemicals Ltd.                 | 42.63  | 0.46  |
| 61  | Gujarat Mineral Devp. Corp. Ltd.             | 84.35  | 0.05  |
| 62  | Gujarat State Petronet Ltd.                  | 21.42  | 0.20  |
| 63  | Havells India Ltd.                           | 66.39  | 1.84  |
| 64  | HCL Technologies Ltd.                        | 42.63  | 0.31  |
| 65  | Hero MotoCorp Ltd.                           | 29.70  | 0.16  |
| 66  | Hexaware Technologies Ltd.                   | 42.32  | 0.01  |
| 67  | Hindalco Industries Ltd.                     | 37.62  | 1.41  |
| 68  | Hindustan Copper Ltd.                        | 91.80  | 0.03  |
| 69  | Hindustan Petroleum Corporation Ltd.         | 4.85   | 2.20  |
| 70  | Hindustan Unilever Ltd.                      | 15.81  | 0.05  |
| 71  | Hindustan Zinc Ltd.                          | 31.57  | 0.00  |
| 72  | Housing Development & Infrastructure Ltd.    | 15.09  | 0.62  |
| 73  | Housing Development Finance Corporation Ltd. | 26.68  | 5.37  |
| 74  | Idea Cellular Ltd.                           | 7.51   | 1.01  |
| 75  | IDFC Ltd.                                    | 39.47  | 3.64  |
| 76  | IFCI Ltd.                                    | 23.66  | 4.10  |
| 77  | India Cements Ltd.                           | -2.92  | 0.68  |
| 78  | Indiabulls Financial Services Ltd.           | 3.90   | 3.12  |
| 79  | Indiabulls Real Estate Ltd.                  | -6.07  | 0.27  |
| 80  | Indian Hotels Company Ltd.                   | 7.39   | 1.54  |
| 81  | Indian Oil Corp. Ltd.                        | 8.57   | 1.02  |
| 82  | Indraprastha Gas Ltd.                        | 35.74  | 0.13  |
| 83  | Infosys Ltd.                                 | 14.69  | 0.00  |
| 84  | Ipca Laboratories Ltd.                       | 57.58  | 0.55  |
| 85  | IRB Infrastructure Developers Ltd            | 27.51  | 1.68  |
| 86  | ITC Ltd.                                     | 26.42  | 0.01  |
| 87  | IVRCL Ltd.                                   | 14.06  | 1.31  |
| 88  | Jain Irrigation Systems Ltd.                 | 25.64  | 2.01  |
| 89  | Jaiprakash Associates Ltd.                   | 32.82  | 3.55  |
| 90  | Jaiprakash Power Ventures Ltd                | 26.94  | 1.93  |
| 91  | JaypeeInfratech Ltd.                         | -2.68  | 0.54  |
| 92  | Jet Airways (India) Ltd.                     | 13.45  | 22.38 |
| 93  | Jindal Steel & Power Ltd.                    | 104.43 | 1.14  |
| 94  | JSW Energy Ltd.                              | -10.09 | 2.25  |
| 95  | JSW Steel Ltd.                               | 76.05  | 1.53  |
| 96  | Jubilant FoodWorks Ltd.                      | 37.71  | 0.01  |
| 97  | LancoInfratech Ltd.                          | 52.72  | 3.31  |
| 98  | Larsen & Toubro Ltd.                         | 30.75  | 1.42  |
| 99  | LIC Housing Finance Ltd.                     | 83.53  | 10.29 |
| 100 | Lupin Ltd.                                   | 42.43  | 0.59  |
| 101 | Mahindra & Mahindra Financial Services Ltd.  | 33.67  | 3.73  |
| 102 | Mahindra & Mahindra Ltd.                     | 31.34  | 1.46  |
| 103 | Mahindra Satyam Ltd                          | 5.62   | 0.02  |
| 104 | Manappuram Finance Ltd                       | 152.12 | 4.62  |
| 105 | Mangalore Refinery & Petrochemicals Ltd.     | 31.64  | 0.46  |
| 106 | Marico Ltd.                                  | 26.67  | 0.83  |
| 107 | Maruti Suzuki India Ltd.                     | 14.67  | 0.07  |
| 108 | Max India Ltd.                               | 6.74   | 0.60  |
| 109 | McLeodRussel India Ltd.                      | 65.46  | 0.48  |
| 110 | MMTC Ltd.                                    | 180.96 | 3.03  |
| 111 | MothersonSumi Systems Ltd.                   | 31.13  | 1.15  |
| 112 | Mphasis Ltd.                                 | 29.23  | 0.03  |
| 113 | MRF Ltd.                                     | 59.69  | 0.57  |
| 114 | Multi Commodity Exchange Of India Ltd.       | 0.00   | 0.00  |
| 115 | National Aluminium Company Ltd.              | 16.41  | 0.00  |
| 116 | Nestle India Ltd.                            | 39.74  | 0.15  |
| 117 | Neyveli Lignite Corp. Ltd.                   | 26.99  | 0.35  |
| 118 | NHPC Ltd.                                    | -7.87  | 0.71  |
| 119 | NMDC Ltd                                     | 81.79  | 0.00  |
| 120 | NTPC Ltd.                                    | 3.09   | 0.71  |
| 121 | Oil & Natural Gas Corp. Ltd.                 | 5.97   | 0.09  |
| 122 | Oil India Ltd                                | 2.43   | 0.02  |
| 123 | Opto Circuits (India) Ltd.                   | 31.43  | 0.57  |
| 124 | Oracle Financial Services Software Ltd       | 30.49  | 0.00  |
| 125 | Pantaloon Retail (India) Ltd.                | 2.50   | 1.78  |



|     |   |        |       |
|-----|---|--------|-------|
| 126 | Petronet LNG Ltd.                               | 43.35  | 1.06  |
| 127 | Pidilite Industries Ltd.                        | 40.28  | 0.54  |
| 128 | PipavavDefence and Offshore Engineering Co Ltd. | 2.66   | 0.86  |
| 129 | Piramal Enterprises Ltd.                        | 23.31  | 0.53  |
| 130 | Power Finance Corpn. Ltd.                       | 18.75  | 4.76  |
| 131 | Power Grid Corpn. Of India Ltd.                 | 2.13   | 0.84  |
| 132 | PTC India Ltd.                                  | 8.57   | 0.14  |
| 133 | Punj Lloyd Ltd.                                 | 7.48   | 1.34  |
| 134 | Rajesh Exports Ltd.                             | 68.01  | 1.68  |
| 135 | Ranbaxy Laboratories Ltd.                       | 29.61  | 1.15  |
| 136 | Reliance Capital Ltd.                           | 14.14  | 1.83  |
| 137 | Reliance Communications Ltd.                    | -21.15 | 0.89  |
| 138 | Reliance Industries Ltd.                        | 8.55   | 0.57  |
| 139 | Reliance Infrastructure Ltd                     | 28.36  | 0.46  |
| 140 | Reliance Power Ltd                              | -8.61  | 0.31  |
| 141 | Rural Electrification Corpn Ltd                 | 26.60  | 5.90  |
| 142 | Sesa Goa Ltd.                                   | 139.06 | 0.12  |
| 143 | Shree Cement Ltd.                               | 50.27  | 1.41  |
| 144 | Shree Renuka Sugars Ltd.                        | 20.04  | 2.17  |
| 145 | Shriram Transport Finance Company Ltd.          | 69.79  | 2.41  |
| 146 | Siemens Ltd.                                    | 27.33  | 0.00  |
| 147 | Sintex Industries Ltd.                          | 31.23  | 1.25  |
| 148 | Steel Authority Of India Ltd.                   | 19.60  | 0.40  |
| 149 | Sterlite Industries (India) Ltd.                | 17.30  | 0.27  |
| 150 | Strides Arcolab Ltd.                            | 56.01  | 3.10  |
| 151 | Sun Pharmaceutical Inds. Ltd.                   | 24.08  | 0.03  |
| 152 | Sun TV Network Ltd.                             | 13.27  | 0.02  |
| 153 | Suzlon Energy Ltd.                              | -12.81 | 1.80  |
| 154 | Tata Chemicals Ltd.                             | 24.61  | 1.15  |
| 155 | Tata Communications Ltd                         | -7.56  | 2.11  |
| 156 | Tata Consultancy Services Ltd.                  | 34.37  | 0.02  |
| 157 | Tata Global Beverages Ltd                       | 17.67  | 0.48  |
| 158 | Tata Motors Ltd.                                | 62.26  | 3.05  |
| 159 | Tata Power Company Ltd.                         | 29.48  | 1.74  |
| 160 | Tata Steel Ltd.                                 | 37.03  | 2.05  |
| 161 | Tech Mahindra Ltd.                              | 18.91  | 0.32  |
| 162 | Thermax Ltd.                                    | 45.79  | 0.06  |
| 163 | Titan Industries Ltd.                           | 52.53  | 0.19  |
| 164 | Torrent Power Ltd.                              | 62.92  | 0.91  |
| 165 | TTK Prestige Ltd.                               | 168.97 | 0.21  |
| 166 | Ultratech Cement Ltd.                           | 22.54  | 0.51  |
| 167 | Unitech Ltd.                                    | -1.71  | 1.30  |
| 168 | United Breweries Ltd.                           | 39.14  | 1.39  |
| 169 | United Phosphorus Ltd.                          | -0.94  | 0.77  |
| 170 | United Spirits Ltd.                             | 13.17  | 2.46  |
| 171 | Videocon Industries Ltd.                        | 6.54   | 1.97  |
| 172 | Voltas Ltd.                                     | 56.82  | 0.13  |
| 173 | Wipro Ltd.                                      | 25.29  | 0.32  |
| 174 | Wockhardt Ltd.                                  | 35.96  | 3.57  |
| 175 | Zee Entertainment Enterprises Ltd.              | 17.65  | 0.07  |
|     | <b>Correlation</b>                              |        | 0.073 |
|     | <b>Coefficient of determination</b>             |        | 0.005 |

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