

Determinants of Equity Share Prices in India: A Panel Data Approach

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The present study examines the fundamental determinants of share price in India. The study employs panel data consisting of annual time series data over the period 2006-2011 and cross-section data pertaining to 6 major sectors of the Indian economy, namely, Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure and Banking. The panel data techniques, viz. Fixed Effects model and Random Effects model have been employed to investigate the objective. The empirical results reveal that the dividend per share has a negative and significant impact on the share price of manufacturing, pharmaceutical, energy and infrastructure sectors. These results are consistent with findings of Zahir and Khanna (1982), Malhotra (1987) and Sharma (2011), that dividend has influenced market price of share significantly in negative direction. The evidences show that earning per share and price-earnings ratio are being the crucial determinants of share prices of manufacturing, pharmaceutical sector, energy, infrastructure and commercial banking sectors. The findings indicate that size is being a significant factor in determining the share prices of all sectors under consideration except manufacturing. Moreover, the book value per share positively influences the share prices of pharmaceutical, energy, IT & ITES and

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Infrastructure. The present study confirms that performance of the fundamental ratios of the industry will be essential and immense helpful to investors and analysts in assessing the better stocks that belong to different industry groups.

Keywords: Fixed Effects Model, Random Effects Model, Fundamental Determinants, Equity Share Prices.

JEL Classifications: C23, G30, G32

I. Introduction

The determinants of stock prices are often a matter of debate. Economists and financial market participants hold different views as far as the pricing of an asset is concerned. In an efficient market, stock prices would be determined primarily by fundamental factors such as earning per share, dividend per share, payout ratio, size of the firm and dividend yield, management, diversification, etc. To forecast future stock prices, fundamental analysts use stock valuation ratios to derive a stock's current fair value and forecast future value. If fair value is not equal to the current stock price, fundamental analysts believe that the stock is either over or under valued and the market price will ultimately gravitate towards fair value. Fundamentalists do not heed the advice of the random walkers and believe that markets are weak-form efficient. By believing that prices do not accurately reflect all available information, fundamental analysts look to capitalize on perceived price discrepancies.

Various researchers have found important internal factors that determine the share prices for different markets, viz., dividend, retained earnings, size, earnings per share, dividend yield, leverage, payout ratio, and book value per share. Understanding the impact of various fundamental variables on share price is very much helpful to investors as it will help them in taking profitable investment decisions.

In the present study, the attempt has been made to study the impact of selected accounting variables on the equity prices of Indian companies. Further, the study has been divided into five sections. Section II presents the review of literature. Section III explains methodology used in the study. Section IV provides empirical results and discussion. Finally, Section VI represents conclusion of the study.

II. Review of Literature

The link between fundamental factors and share price changes has been extensively investigated in the financial literature. Zahir and Khanna (1982) investigated the determinants of stock prices of 101 industries in India for the year 1976-77 and 1977-78 by employing multiple linear regression models. They found dividend per share and yield emerged as a significant determinant of share price. The coefficient of book value was positive throughout and highly significant except 1977-78. The influence of earning-price multiplier on share prices appeared to be very weak. Balakrishnan (1984) analyzed the impact of dividend per share, earning per share, book value and yield on share price of general engineering and cotton textile industries in India. They found book value per share and dividend per share turned out to be the most significant determinants of market price in both the industries. Yield also emerged as significant determinant in cotton textile industry along with a negative sign. Srivastava (1984) examined cross-section study of 327 companies and concluded that high dividend rates are associated with higher market prices of securities in India.

Tsoukalas and Sil (1999) investigated the impact of dividend/price ratio and dividend growth on the share prices movements of UK stock market from January 1995 to December 1996. They found that dividend/price ratio predicts real stock returns for the UK stock market, and that there was a strong relationship between real stock returns and dividend yields. Malhotra and Prakash (2001) examined

the market price determinants of 'A' group and 'B' group shares of Indian stock market during 1989-90 to 1998-99, using correlation analysis and regression analysis. The study concluded that the price behavior of 'B' group share is determined mainly by book value per share, earning per share, dividend per share, P/E ratio and market price to book value ratio.

Irfan and Nishat (2002) attempted to explain the price changes due to the six fundamental variables (dividend yield, payout ratio, size of the firm, leverage, earnings volatility and asset growth) during the period 1981-2000 in Pakistan. They have used simple regression model to observe the price changes. The empirical findings revealed that that prime key fundamental factors had no significant influence on the share price deviation in Pakistan.

Besides, Sen and Ray (2003) examined the key determinants of stock price in India. The study is based upon the stocks comprising the BSE index over a period 1988-2000. The empirical study revealed dividend payout was an important factor affecting stock prices. Further, they found earning per share has a very weak impact on the share prices. The study explored one of the crucial factor dividend payout ratios having impact on Indian stock price.

Hartono (2004) examined the impact of dividend and earnings on stock prices and found significant positive impact on equity prices if positive earnings information occurs after negative dividend information. Also, a significantly negative impact occurs in equity pricing if positive dividend information is followed by negative earning information. Al-Deehani (2005) examined the determinants of share price for companies listed on the Kuwait stock exchange. The empirical findings showed that variables previous earnings per share, cash dividends per share, previous cash dividends per share, return on equity, price to book value ratio, previous cash flow per share and cash flow per share are all highly correlated with the share price.

Docking and Koch (2005) found direct relationship between dividend announcement and equity price behavior. Sharma and Singh (2006) used data from 160 Indian firms between 2001 and 2005 and found that earnings per share, price-earnings ratio, dividend per share, dividend coverage, dividend payout, book value per share, and firm size are the determinants of share prices.

Somoye et al. (2009) examined the factors influencing equity prices in the Nigerian stock market for the period 2005-2007. They employed simple linear regression model to examine the impact of earning per share, GDP, interest rate, dividend per share and oil price on equity price. The empirical results showed the variable dividend per share, earning per share and GDP exerts a positive correlation to stock prices but are not significant determinants of share price.

Al-Shubiri (2010) investigated the determinants of market stock price movements of Jordanian commercial bank. The study includes the commercial bank of Amman stock exchange for the period 2005-2008. The study used simple and multiple regression analysis to investigate the determinants of market stock price. The empirical findings show highly positive significant relationship between market price of stock and net asset value per share, market price of stock dividend percentage, GDP and negative significant relationship on inflation and lending interest.

Nirmala and Sanju (2011) identified the determinants of share prices in the Indian stock market. The study focuses on three sectors viz., auto, health care & public sector undertakings over the period 2000-2009. They employed panel co-integration test and fully modified least squares to examine the effect of dividend, profitability, price earnings ratio and leverage on share prices. The empirical findings showed that dividend per share and price earnings ratio are influenced positively to share price of all three sectors. The results further indicated that debt equity ratio is a significant factor influencing share prices for all the three sectors and that it exerts a negative relation with share price.

Sharma (2011) examined the empirical relationship between equity share prices of different industry groups and explanatory variables such as book value per share, dividend per share, earning per share, price earnings ratio, dividend yield, dividend payout, size in terms of sale and net worth for the period 1993-2008. The results revealed that earning per share, dividend per share and book value per share has significant impact on the equity price of different industry groups in India.

From the related literature, it was clear that stock valuation ratios play important role in assessing the value of the stocks and to choose the best stock to buy at the right price. In the methodological front, majority of the earlier literature used linear models such as ordinary least squares (OLS), fixed effects and random effects models to estimate the impact of various fundamental factors that determine stock prices. Each method has its own advantages and disadvantages over other. If the industries included in sample are widely dispersed in terms of performance, then the OLS method is not suitable since it does not consider the firm specific effect (Awdeh Ali, 2005). The Fixed Effects method, also known as Least Squares Dummy Variable (LSDV), solves this problem and allows us to take into consideration the firm-specific effects on regression estimates. This method is also an appropriate specification when we are focusing on a specific set of N firms and our inference is restricted to the behavior of these set of firms (Baltagi, 2003). However, this model does not take into consideration the time effect and often results in a loss in a large number of degrees of freedom if N is large. It would be robust only under the omission of any relevant time-varying factors. Hence, the Random Effects Model, which, besides incorporating the firm-specific effects, takes into consideration the time effects and is an appropriate specification if we are drawing N individuals randomly from a large population (Maddala, 2005; Baltagi, 2003). Since the stock prices of different industry groups are subject to radical changes with structural,

technological and regulatory, in addition to the performances, it is worthwhile to look at whether fixed or random effects model is appropriate in examining the impact of fundamental determinants of share prices of different industry groups in India. The present study will be immense helpful to fundamental analysts in assessing the performance of the stocks that belong to different industry groups and hence enable them to achieve the best stock pick to trade.

In this background, the present study examines the impact of fundamental factors (book value per share, dividend per share, earning per share, price earnings ratio, and size) on stock prices in the context of Indian stock market. The study focuses on six major sectors of the Indian economy namely, Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure and Banking.

III. Methodology and Data

The fixed effects model as well as the random effects model has been used to explore the fundamental determinants of share price of different industry groups in India due to the fact that former takes into the firm specific effect and the later consider the time effect.

The fixed effects model is defined as:

$$\Pi_{it} = \alpha_i + \beta X_{it} + u_{it} \quad i = 1, \dots, N; t = 1, \dots, T, \quad (1)$$

where, Π_{it} is closing price of i th stock of particular industry group in t th period; X_{it} is vector of k explanatory variables for i th stock of particular industry group in t th period, β is parameter to be estimated and u_{it} is error term and assumed $IN(0, \sigma^2)$. $\alpha_i, 1 \dots N$ are constant coefficients specific to each stock of respective industry groups. Their presence assumes that differences across the considered stocks of respective industry groups appear by means of differences in the

constant term. These individual coefficients are estimated together with vector of parameters β .

In the model α_i , fixed effects term, that control all omitted variables that differ between cases but are constant over time. The α_i are estimated as coefficients dummy variables. This is also referred to as the least squares with dummy variables (LSDV). In order to validate the fixed effects specification, one could test the joint significance of these dummies, i.e. $H_0: \alpha_1 = \alpha_2 = \dots = \alpha_{n-1} = 0$, by performing F-test (Baltagi, 2003).

In the random effects case, the model is defined as:

$$\Pi_{it} = \alpha_i + \beta'X_{it} + u_{it} \quad i = 1, \dots, N; t = 1, \dots, T, \quad (2)$$

In the random effects model, the α_i are treated as random variables rather than fixed constants. The α_i are assumed to be independent of the errors u_{it} , i.e. $\alpha_i \sim \text{IID}(0, \sigma^2\alpha)$ and $u_{it} \sim \text{IID}(0, \sigma^2u)$. The Π_{it} , β , X_{it} are defined as earlier. Since α_i are random, the errors now are $u_{it} = \alpha_i + u_{it}$ and the presence of α_i produces a correlation among the errors of the same cross-section unit though the errors from the different cross-section units are independent. Therefore, the above model is to be estimated by the generalised least squares method (Maddala, 2005).

Finally, a Hausman specification test is conducted in order to compare the two categories of specifications.² A fixed effect model assumes differences in intercepts across groups or time periods, whereas a random effect model explores differences in error variances. The Hausman specification test compares the fixed versus random effects under the null hypothesis that the individual effects are uncorrelated

² $H = (\beta_{GLS} - \beta_F)' (V(\beta_F) - V(\beta_{GLS}))^{-1} (\beta_{GLS} - \beta_F)$, where β_{GLS} and β_F are the estimates of the random effects and fixed effects models, respectively. $V(\cdot)$ are the corresponding variance-covariance matrices of these estimated coefficients (Maddala, 2005).

with the other regressors in the model (Hausman 1978). If correlated (H_0 is rejected), a random effect model produces biased estimators, violating one of the Gauss-Markov assumptions; so a fixed effect model is preferred. Hausman's essential result is that the covariance of an efficient estimator with its difference from an inefficient estimator is zero (Greene 2003). It is proven that under the null hypothesis two estimates the fixed and random effects models could not differ significantly since they are both consistent. So the test is based on the difference. Under the null hypothesis, the Hausman statistic is asymptotically distributed as chi-square with k degrees of freedom. The general specification of the parameters of the model in present case is as follows:

$$SP_{it} = \alpha_i + \beta_1 DPS_{it} + \beta_2 EPS_{it} + \beta_3 P/E_{it} + \beta_4 SIZE_{it} + \beta_5 BV_{it} + \beta_6 TREND_{it} + u_{it} \quad (3)$$

In the above specification SP represents the stock prices. The explanatory variables, DPS , EPS , P/E , $SIZE$, BV and $TREND$ denotes Dividend per share, Earnings per Share, Price-earnings ratio, Firm size (total net sales), Book value per share and time trend, respectively. The brief description of the variables that considered for the study as follows:

Dividend per share (DPS)

This relates to the amount of dividend declared per share. The net profit after taxes belong to shareholders but the income that they really receive is the amount of earnings distributed and paid as cash dividend. The dividend generally influences the share price in positive direction.

Dividend per share = Total amount (dividend) paid to equity shareholder / Number of equity shares outstanding

Earnings per share (EPS)

The equity shareholders are the sole claimants of the net earnings of the corporation after making payments of dividend to the preference shareholder. The significance of this ratio flows from the fact that higher the earnings per share, the more is the scope for a higher rate of dividend and also of retained earnings, to built up the inner strength of the company, therefore higher EPS would increase the market price and vice versa.

Price / earnings ratio (P/E)

It expresses the relationship between the market price of company share and its earnings per share. It indicates the extent to which the earnings of each share are covered by its price. The ratio helps an investor to make an approximate estimation of the time required to recover his investment in a company's share. The price-earnings ratio has positive relationship with market price.

$P/E = \text{market price per share} / \text{earnings per share.}$

Size of the Firm (SIZE)

Size of the firm plays an important role in an investment criterion. Generally, the large companies offer better investment opportunities to investors than the smaller ones. The shares of large companies are actively traded and they provide more liquidity and marketability to the investors. Thus the temptation to buy shares of large companies leads to increase its market price of share. The size of the firm can be measured in several ways, e.g. through turnover, paid-up-capital, capital employed, total assets, net sales, market capitalization etc. In the present study, size is measured with the help of total sales. The measure of net sales is used to calculate the size of the firm because net sales reflect the volume (or the total revenue) of business on which the profit and loss accrues. Firm size, measured by net sales, was

calculated by taking the difference between gross sales and sales returns of the firm.

Book Value per share (BV)

It is also known as net asset value per share. It measures the amount of assets, which the corporate has on behalf of each equity share. Book value show the investment per share made in the business by the shareholders. A high book value usually indicates that the company has a good record of past performance. i.e., high reserves therefore high market price.

Book value per share = equity share capital + shareholders reserves / Total no. of equity shares outstanding.

The study uses panel data consisting of annual time series data over the period 2006-2011 and cross-section data pertaining to 6 major sectors of the Indian economy, namely, Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure and Banking. The companies that belong to respective industry groups are listed in the National Stock Exchange (NSE) and are considered for the study (See Appendix 1). The necessary information for empirical analysis has been obtained from the PROWESS online data base provided by the Center for Monitoring Indian Economy (CMIE).

IV. Empirical Results and Discussion

In an attempt to examine the determinants of stock prices in India, the panel data techniques have been employed. Table 1 presents the estimate of fixed effects as well as random effects models for the heavy manufacturing industries. Our first concern here is that the choice between fixed effects and random effects models. To select appropriate model for our empirical analysis we conducted Hausman specification test. The results of Hausman test revealed that the

difference in coefficients between fixed effects and random effects is systematic and provided evidence in favour of random effects model for heavy manufacturing industries. Besides, the Wald chi-square test rejects the presence of heteroscedasticity in the estimated regression model.

Table 1

Fundamental Determinants of Share Prices of Heavy Manufacturing Industries in India

Variables	Fixed Effects Model	Random Effects Model
Constant	25.026* (2.96)	0.0826** [-2.09]
DPS	-0.0326* (-2.66)	-0.0140** [-2.12]
EPS	0.9624* (52.02)	0.9981* [96.66]
P/E	0.9458* (52.25)	0.9855* [100.43]
SIZE	0.0110 (0.93)	-0.0028 [-0.75]
BV	0.0482** (2.22)	-0.0001 [-0.01]
TREND	-0.0124* (-2.95)	--
Hausman test (p-value)	8.10 (0.15)	
Wald- χ^2	--	71029.68*
R-sq-within	0.9916	0.9908
R-sq-between	0.9994	0.9998
R-sq-overall	0.9981	0.9983
F-test	0.94	--
* (**) - denotes significance at one and ten percent levels, respectively. Source: Authors own computation.		

The empirical results reveal that the dividend has a negative and significant impact on the share price at five percent level. The variables earning per share and price-earnings ratio has a positive relationship with share price and significant at one percent level. However, the size and book value per share has a negative impact on share price and are insignificant. The study results suggest that earning per share, dividend per share and price-earnings ratio are being the important determinants of share prices of heavy manufacturing sector.

Table 2
Fundamental Determinants of Share Prices of Pharmaceutical Industries in India

Variables	Fixed Effects Model	Random Effects Model
Constant	213.50* (10.08)	-0.1973 [-0.68]
DPS	-0.0489*** (-1.72)	-0.1761* [-5.04]
EPS	0.3763* (8.88)	0.5776* [10.60]
P/E	0.3539* (9.48)	0.5363* [11.33]
SIZE	0.5515* (11.75)	0.1404* [4.50]
BV	0.5564* (9.88)	0.2792* [5.01]
TREND	-0.1084* (-10.08)	--
Hausman test (p-value)	125.17* (0.00)	
Wald- χ^2	--	1068.79*
R-sq-within	0.9206	0.8295
R-sq-between	0.9202	0.9644
R-sq-overall	0.8931	0.9336
F-test	10.72*	--
* (***) - denotes significance at one and ten percent levels, respectively. Source: Authors own computation.		

Table 2 presents the estimate of fixed effects and random effects models for the Pharmaceutical industries. Since, Hausman specification test supports fixed effects model for this sector, our analysis is purely based on supported model. The table results for the pharmaceutical sector reveals that dividend has a negative relationship with share price and is significant at ten percent level. Besides, the findings reveal that the variables earning per share, price-earnings ratio, size and book value per share has a positive relationship with share price and are significant at one percent level. The study results suggest that earning per share, price-earnings ratio, size, book value per share and dividend per share are being the imperative determinants of share prices of Pharmaceutical sector.

Table 3

Fundamental Determinants of Share Prices of Energy Industries in India

Variables	Fixed Effects Model	Random Effects Model
Constant	61.209 (1.40)	0.7548** [2.25]
DPS	-0.1866* (-2.60)	-0.2249** [-3.50]
EPS	0.1705* (4.99)	0.1667* [5.15]
P/E	0.2263* (5.40)	0.2454* [6.62]
SIZE	0.1598* (4.18)	0.1461* [5.06]
BV	0.4688* (4.54)	0.4555* [7.65]
TREND	-0.0301 (-1.39)	--
Hausman test (p-value)	33.79* (0.00)	
Wald- χ^2	--	336.25*
R-sq-within	0.6368	0.6273

R-sq-between	0.8913	0.8999
R-sq-overall	0.8534	0.8586
F-test	7.21*	--
* (**) - denotes significance at one and ten percent levels, respectively.		
Source: Authors own computation.		

Table 3 provides the estimate of fixed effects and random effects models for the Energy sector. Hausman specification test supports fixed effects model for this sector. The empirical result reveals that dividend per share has a negative impact on share price and is significant at one percent level. Besides, the variables earning per share, price-earnings ratio, size and book value of a share are positively related to share price and are significant at one percent level. This shows that earning per share, price-earnings ratio, size, book value per share and dividend per share are being the significant determinants of share prices of Energy sector.

Table 4

Fundamental Determinants of Share Prices of IT & ITES Industries in India

Variables	Fixed Model	Effects	Random Model	Effects
Constant	368.88*		-1.2952**	
	(8.36)		[-2.04]	
DPS	-0.0920		-0.3289*	
	(-1.31)		[-3.97]	
EPS	0.0659		0.0971	
	(1.26)		[1.35]	
P/E	0.0647		0.1419***	
	(1.10)		[1.88]	
SIZE	0.7159*		0.4241*	
	(12.38)		[7.65]	
BV	0.5513*		0.4104*	
	(7.07)		[4.17]	

TREND	-0.1860* (-8.46)	--
Hausman test (p-value)	46.07* (0.00)	
Wald- χ^2	--	234.49*
R-sq-within	0.8212	0.6670
R-sq-between	0.6657	0.7260
R-sq-overall	0.6724	0.6749
F-test	12.10*	--
*, ** and *** denotes significance at one, five and ten percent levels, respectively. Source: Authors own computation.		

For the IT and ITES sector, the Hausman specification test recommended the fixed effects model. Table 4 results for the IT and ITES sector shows that size and book value per share has a positive and significant influences on the share price and thus, considered as the crucial determinants of share prices of IT and ITES sector.

Table 5

Fundamental Determinants of Share Prices of Infrastructure Industries in India

Variables	Fixed Effects Model	Random Effects Model
Constant	140.98* (2.83)	-0.0090** [-0.02]
DPS	-0.1706** (-1.98)	-0.1592*** [-1.87]
EPS	0.5454* (7.85)	0.6335* [9.85]
P/E	0.6655* (7.78)	0.7677* [11.85]
SIZE	0.1967* (3.11)	0.1422* [3.71]
BV	0.2465* (2.60)	0.0755 [0.98]
TREND	-0.0705* (-2.84)	--
Hausman test (p-value)	11.70** (0.03)	
Wald- χ^2	--	548.32*
R-sq-within	0.8842	0.8647
R-sq-between	0.9170	0.9271
R-sq-overall	0.8990	0.9003
F-test	4.88*	--
*, ** and *** denotes significance at one, five and ten percent levels, respectively. Source: Authors own computation.		

Concerning the determinants of share prices of infrastructure industries, the Hausman test suggests the fixed effects model in the Table 5. The empirical result shows that the variable dividend exerts a negative and significant relationship with share price at five per cent

level. The explanatory variables such as earnings per share, price-earnings ratio, size and book value per share are positively associated with the share price and are significant at one percent level. This suggests that earning per share, price-earnings ratio, size, book value per share and dividend per share are being the significant determinants of share prices of Infrastructure sector.

Table 6

Fundamental Determinants of Share Prices of Commercial Banks in India

Variables	Fixed Effects Model	Random Effects Model
Constant	121.55* (4.74)	-0.2393 [-0.99]
DPS	0.0538 (1.25)	0.0228 [0.53]
EPS	0.8655* (14.02)	0.9684* [16.48]
P/E	0.8925* (14.26)	0.9882* [16.04]
SIZE	0.1499* (4.90)	0.0610 [2.51]
BV	0.1324 (1.55)	-0.0723 [-1.11]
TREND	-0.0613* (-4.76)	--
Hausman test (p-value)	26.18* (0.00)	
Wald- χ^2	--	2108.97*
R-sq-within	0.9292	0.9114
R-sq-between	0.9702	0.9838
R-sq-overall	0.9553	0.9634
F-test	3.62*	--
* Significant at one per cent. Source: Authors own computation.		

From the table 6 result, it was clear that Hausman specification test suggest the estimates of fixed effects model for the commercial banks. The empirical results reveal that earning per share, price-earnings ratio and size has a positive and significant impact on the share price of commercial banks.

V. Conclusion

The present study examines the fundamental determinants of share price in India. The study employs panel data consisting of annual time series data over the period 2006-2011 and cross-section data pertaining to 6 major sectors of the Indian economy, namely, Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure and Banking. The panel data techniques, viz. Fixed Effects model and Random Effects model has been employed to investigate the objective. The empirical results reveal that the dividend per share has a negative and significant impact on the share price of manufacturing, pharmaceutical, energy and infrastructure sectors. These results are consistent with findings of Zahir and Khanna (1982), Malhotra (1987) and Sharma (2011), that dividend has influenced market price of share significantly in negative direction. The evidences show that earning per share and price-earnings ratio are being the crucial determinants of share prices of manufacturing, pharmaceutical sector, energy, infrastructure and commercial banking sectors. The findings indicate that size is being a significant factor in determining the share prices of all sectors under consideration except manufacturing. Moreover, the book value per share positively influences the share prices of pharmaceutical, energy, IT and ITES and Infrastructure. The present study confirms that performance of the fundamental ratios of the industry will be essential and immense helpful to investors and analysts in assessing the better stocks that belong to different industry groups.

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Appendix 1**List of Companies that belongs to different industry groups under study**

Industry Groups	Name of the Companies Covered (NSE Code)
Heavy & Manufacturing	ABB Ltd, Aarti Industries Ltd., Ambuja Cements Ltd., Apollo Tyres Ltd., Bajaj Auto Ltd., Bharat Heavy Electricals Ltd., Commercial Engineers & Body Builders Co. Ltd., Elecon Engineering Co. Ltd., Gallantt Metal Ltd. Patel Engineering Ltd., Steel Authority Of India Ltd., Titan Industries Ltd., ACC Ltd., AIA Engineering Ltd., Ador Welding Ltd., Amtek Auto Ltd., Ashok Leyland Ltd., Bata India Ltd., Bhushan Steel Ltd., Eicher Motors Ltd., FAG Bearings India Ltd., Kalindee Rail Nirman (Engineers) Ltd., Rajesh Exports Ltd., Sunflag Iron & Steel Co. Ltd.
Pharmaceuticals	Aarti Drugs Ltd., Ajanta Pharma Ltd., Amrutanjan Health Care Ltd., Aurobindo Pharma Ltd., Cipla Ltd., Divi's Laboratories Ltd., Elder Pharmaceuticals Ltd., Glenmark Pharmaceuticals Ltd., Natco Pharma Ltd., Plethico Pharmaceuticals Ltd., Sun Pharma Advanced Research Co. Ltd., Torrent Pharmaceuticals Ltd., Orchid Chemicals & Pharmaceuticals Ltd., Aditya Birla Chemicals (India) Ltd., Alchemist Ltd., Apollo Hospitals Enterprise Ltd., Biocon Ltd., Dishman Pharmaceuticals & Chemicals Ltd., Dr. Reddy's Laboratories Ltd., Empee Sugars & Chemicals Ltd., JB Chemicals & Pharmaceuticals Ltd., Orchid Chemicals & Pharmaceuticals Ltd., Shasun Pharmaceuticals Ltd., Sun Pharmaceutical Inds. Ltd., Unichem Laboratories Ltd.

IT & ITES	3IInfotech Ltd., BPL Ltd., Edserv Softsystems Ltd., Firstsource Solutions Ltd., Firstsource Solutions Ltd., HCL Infosystems Ltd., Infosys Ltd., Polaris Financial Technology Ltd., Sasken Communication Technologies Ltd., Siemens Ltd., Sterlite Technologies Ltd., Tech Mahindra Ltd., UTV Software Communications Ltd., Wipro, Aditya Birla Nuvo Ltd., Core Education & Technologies Ltd., Financial Technologies (India) Ltd., GSS Infotech Ltd., HCL Technologies Ltd., Nucleus Software Exports Ltd., Redington (India) Ltd., Satyam Computer Services Ltd., Sonata Software Ltd., Tata Consultancy Services Ltd., Sasken Communication Technologies Ltd., UNITECH Ltd.
Energy	Adani Power Ltd., Cairn India Ltd., BGR Energy Systems Ltd., Birla Power Solutions Ltd., Coal India Ltd., Gulf Oil Corpn. Ltd., Hindustan Petroleum Corpn. Ltd., K S Oils Ltd., Oil & Natural Gas Corpn. Ltd., Suzlon Energy Ltd., Reliance Industries Ltd., Sanwaria Agro Oils Ltd., Shiv Vani Oil & Gas Exploration Services Ltd., Tamilnadu Petroproducts Ltd., Ucal Fuel Systems Ltd., Bharat Petroleum Corpn. Ltd., Chennai Petroleum Corpn. Ltd., Essar Oil Ltd., Hindustan Oil Exploration Co. Ltd., Indraprastha Gas Ltd., Mangalore Refinery & Petrochemicals Ltd., Oil Country Tubular Ltd., Petronet LNG Ltd., Reliance Power Ltd., Savita Oil Technologies Ltd., Southern Petrochemical Inds. Corpn. Ltd., Tide Water Oil Co. (India) Ltd., Tata Power Co. Ltd.
Infrastr ucture	ARSS Infrastructure Projects Ltd., Ajmera Realty & Infra India Ltd. Consolidated Construction Consortium Ltd., GMR Infrastructure Ltd., GVK Power & Infrastructure Ltd., Housing Development & Infrastructure Ltd., Supreme Infrastructure India Ltd., Action Construction Equipment Ltd., Ansal Properties & Infrastructure Ltd. DS Kulkarni Developers Ltd., GTL Infrastructure Ltd., Genus Power Infrastructures Ltd., IRB Infrastructure Developers Ltd. Petron Engineering Construction Ltd., Reliance Industrial Infrastructure Ltd., Simplex Infrastructures Ltd.

Commercial Banks	Allahabad Bank, Canara Bank, Corporation Bank, Federal Bank Ltd., ICICI Bank Ltd., State Bank Of India, Syndicate Bank, Yes Bank Ltd., Uco Bank, Vijaya Bank, Karnataka Bank Ltd., Axis Bank Ltd., Bank Of Baroda, Central Bank Of India, Dena Bank, HDFC Bank Ltd., Indian Bank, State Bank Of Travancore, Union Bank Of India, State Bank Of Bikaner & Jaipur, United Bank Of India, Punjab National Bank
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