# COMPARATIVE IMPACT OF RECESSION ON FUNDAMENTAL DETERMINANTS OF BSE STOCK PRICES IN INDIA

#### Dr. Arti Gaur

Assistant Professor, Deptt. of Business Administration, Ch. Devi lal University, Sirsa.

### Ms. Sunita Sukhija

Assistant Professor, JCD Institute of Business Management, JCDV, Sirsa (Haryana)-125055

#### **Abstract**

The Global Economic Slowdown had a recessionary impact on the financial market leading to decline in share prices and indices in India. A significant decline in activity across the economy, lasting longer than a few months is called recession. A global recession is a period of global slowdown in economy. The objective of this paper is to compare the impact of fundamental factors on Stock prices of BSE listed companies in normal period and recession period. The study employs panel data consisting of annual time series data over the period 1998-2013 and cross section data pertaining to BSE listed eighty companies. The panel data techniques, viz. Fixed Effects model and Random Effects model have been employed to investigate the objective. The empirical results reveal that Earning per Share has positive and significant impact on the share price at five percent level in the normal period (pre recession period). PER has positive and significant impact while Growth has a negative and significant impact on the share price at five percent level during recession period. While PER and ROCE have positive and significant impact on the share price at five and ten percent level. The variable BV, DPS, EPS, DPR and Growth have a positive relationship with share price and statistically insignificant in post recession period.

Key Words: Recession, Fundamental, Fixed Effect Model, Random Effect Model, Share Price.

JEL Classifications: C23, G30, G32.

#### Introduction

A recession is a situation in which a nation's gross domestic product or output, a negative growth of at least two consecutive quarters or maintain six months. The decline in business takes more than just a few months. This decrease extends also from eleven months to possibly up to two years. A global recession is a period of global economic slowdown. The basic cause of the crisis was largely an unregulated environment, mortgage lending to subprime borrowers. Since the borrowers did not have adequate repaying capacity and also because subprime borrowing had to pay two-to-three percentage point's higher rate of interest and they have a history of default, the situation became worse. The global recession of 2008-2009 brought a great amount of attention to the risky investment strategies used by many large financial institutions, along with the truly global nature of the financial system. As a result of such a wide-spread global recession, the economies of virtually all the world's developed and developing nations suffered extreme setbacks and numerous government policies were implemented to help prevent a similar future financial crisis. The Global Economic Slowdown had a recessionary impact on the financial market leading to

decline in share prices and indices in India. It is visible in industrial production, employment, real income and wholesale-retail trade. The technical indicator of a recession is two consecutive quarters of negative economic growth as measured by a country's Gross Domestic Product (GDP); although the National Bureau of Economic Research (NBER) does not necessarily need to see this occur to call a recession. Although at one time it was thought that this crisis would not affect the Indian economy, later it was found that the Foreign Direct Investment (FDI) started drying up and this affected investment in the Indian economy. In the recovery phase the economy has adopted expansionary fiscal policy to accelerate aggregate demand. In this respect RBI has adopted a contractionary monetary policy overcome the crisis which led to higher interest rate on bank deposits. The domestic stock markets are in a sideways movement during the recession period of last 2-3 years. The current volatility in the stock markets can be attributed to negative sentiments due to a fall in global markets, profit booking by foreign institutional investors (FII), uncertainty over the US sub-prime crisis and high crude oil prices.

#### Literature Review

The link between fundamental factors and share price changes has been extensively investigated in the financial literature. Sen and Ray (2003) examined the key determinants of stock price in India. The study is based upon the stocks compromising 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. Dutta (2004) had made a survey on three groups viz; individuals, brokers and financial institutions to study the impact of micro and macro factors on share price. Most of the individual and brokers considered the role of random elements in share price as very important in post reform period. Mehta and Turan (2005) identified market capitalisation, market price to book value ratio and Price-Earning Ratio as major factors influencing share prices by examining share prices of the firms listed on the Bombay Stock Exchange. 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. They revealed that Book value and Earnings are important indicators of market price of share as they are an indicator of the good financial health of the companies. Dividend per share is most significant variable of market price of share, which indicates that the companies should use a liberal dividend policy to attract the primary as well as secondary market. Price-earnings ratio also explained the investors' anticipate about the growth in the firm's earnings. Srivastava (2010) concluded that emerging economies like India in long term are more affected by domestic macro economic factors than global factors. The main domestic macroeconomic factors affecting the stock market in long run are industrial production; wholesale price index and interest rate. 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. Nisa (2011) in her research on Karachi Stock Exchange used the following variable: P/E Ratio, Net Profit after Tax, Inflation, DPS, GDP and Annual Turnover as stock price determinant. Aurangzeb (2012) presented a study from the period of 1997 to 2010 of 3 South Asian countries namely, Pakistan, India and Sri Lanka. Regression results indicate that foreign direct investment and exchange rate have significant positive impact on performance of stock market in South Asian countries while; interest rate has negative and significant impact on performance of stock market in South Asia. Results also indicate the negative but insignificant impact of inflation on stock market performance in South Asia. Malhotra and Tandon (2013) have presented a study with an attempt to determine the factors that influence stock prices in the context of National Stock Exchange (NSE) 100 companies. A sample of 95 companies was selected for the period 2007-12 and using linear regression model the results indicate that firms' book value, earning per share and price-earnings ratio are having a significant positive association with firm's stock price while dividend yield is having a significant inverse association with the market price of the firm's stock. Uddin, Rahman and Hossain (2013) have put a great stride to identify what determines the share prices of stock market focusing exclusively on financial sector of Bangladesh. Data have been collected from companies like Bank, Insurance, Leasing Companies associated with financial sector ranging from 2005 to 2011 from Dhaka Stock Exchange (DSE). Some pertinent variables like Net Profit after Tax (NPAT), Price earnings ratio (P/E), Net asset value (NAV), Earnings per share (EPS) were selected from previous literature for deciding stock price (SP) determinants. A regression model along with some descriptive statistical tools was applied using SPSS. Findings show that Earnings per share (EPS), Net asset value (NAV), Net profit after tax (NPAT) and Price earnings ratio (P/E) have strong relationship with stock prices.

### Objective of the study

- 1. To compare the impact of fundamental factors on Stock prices of BSE 200 companies in normal period and recession period.
- 2. To suggest the measures for making decision regarding investment in shares and securities for the benefit of investors.

### Hypothesis of the study:

H03 - There is no significant impact of fundamental factors on stock prices during normal and recession period.

### Research Methodology

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

# Research Design of study

### **Fundamental Factors**

Eight Key variables viz., Book Value Per Share (BV), Dividend Per Share (DPS), Earnings Per Share (EPS), Cover (C), Payout Ratio (P), Price Earning Ratio (PER), Return on Capital Employed (ROCE) and Growth (G) have been included in the study.

# Sample Profile

To examine the hypothesis, the study has used secondary data. The sample was drawn from the companies listed on the Bombay Stock exchange. The yearly data has been used on the concerning aspect, a sample of eighty companies was selected for the purpose of the study with the fact that the companies have been listed continuously during the study period.

### Time period

Time period of the study is based on fifteen financial years i.e. from 1st April 1998 to 31st March 2013. To study the impact of recession on Stock price and key variables during the recession period, the whole study period has been divided into three parts. The first part has included the normal period of nine years from 1st April 1998 to 31st March 2007. The second part comprised the

recession period of two years from 1st April 2007 to 31st March 2009 and third part consist of the normal period of four years starts from 1st April 2009 up to 31st March 2013.

### **Data Collection**

The data relating to the companies which are listed in BSE 200 will be collected on yearly basis from updated version 'PROWESS 4' database of the Centre for Monitoring Indian Economy and Bombay Stock Exchange Official Directory.

# **Model Specification**

The panel data analysis techniques, viz. Fixed Effects Model and Random Effects Model have been employed to investigate the objective. The general specification of the parameters of the model in present case is as follows:

SPit= i+ 1BVit+ 2EPSit+ 3DPSit+ 4COVERit+ 5DPRit+ 6PERit+ 7ROCEit+ 8GROWTH+

In the above specification SP represents the stock prices. The explanatory variables, BV, DPS, EPS, COVER, DPR, PER, ROCE and GROWTH denotes Book value per share, Dividend per share, Earnings per Share, Cover, Dividend Payout Ratio, Price-earnings ratio, Return on Capital employed, and Growth (Sales) respectively. Eviews 6 software was used to analyze the data for all the above purposes.

Fixed Effect Model - This model allows for heterogeneity or individually among 80 companies by allowing to have its own intercept value. Another term fixed effect is due to the fact that although the intercept may differ across different companies but intercept does not vary over time, it is time invariant. To take into account the differing intercepts, one can use dummy variables. The FEM using dummy variables is known as the least-squares dummy variable (LSDV) model. FEM is appropriate in situations where the 'individualspeci?c' intercept may be correlated with one or more regressors. The Fixed Effects method allows us to take into consideration the 'firm-specific' effects on regression estimates. 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.

Random Effect Model - In this model, all the 80

companies have a common mean value for the intercept. In ECM it is assumed that the intercept of an individual unit is a random drawing from a much larger population with a constant mean value. The individual intercept is then expressed as a deviation from this constant mean value. One advantage of ECM over FEM is that it is economical in degrees of freedom, as we do not have to estimate N cross-sectional intercepts. We need only to estimate the mean value of the intercept and its variance.ECM is appropriate in situations where the (random) intercept of each cross-sectional unit is uncorrelated with the regressors. Hence, the Random Effects Model, which, besides incorporating the firmspecific effects, takes into consideration the time effects and is an appropriate specification if we are drawing N individuals randomly from a large population

Hausman Test - This test is used to check which model (fixed-effect or random-effect model) is suitable to use. If p value found statistically significant, then fixed effect model will be used otherwise random effect model will be suitable. If correlated (H0 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.

### **Empirical Results**

To examine the determinants of stock prices in India, the panel data techniques have been employed. Table 4.1 presents the estimate of fixed effects as well as random effects models for the normal period. To select appropriate model for our empirical analysis we conducted Hausman specification test. The results of Hausman test revealed evidence in favour of random effects model for normal period. Table 4.1 displays the results of panel data regression for the normal period from 1st April 1998 to 31st March 2007. The results of Hausman test provided evidence in favour of random effects model for normal period. The empirical results reveal that the EPS has positive and significant impact while Cover has a negative and significant impact on the share price at ten percent level. The variable BV, PER, and ROCE have a positive relationship with share price and statistically insignificant. However, the DPS, DPR and Growth have a negative impact on share price and are insignificant. The study results suggest that Earning per share and Cover are being the important determinants of share prices for the normal period.

Table 4.1 Fundamental Determinants of Equity Share Price of all sample Companies in Normal Period (1998-2007)

	Fixed Effect		Random Effect Model		
Varia	ia Model				
bles	Coeffici	t-value	Coefficien	t-value	
	ent		t		
Const		8.0016			
ant	649.585	(0.00)	667.161	6.5761(0.00)	
Book		0.7866			
Value	0.3457	(0.43)	0.2646	0.6294(0.52)	
DPS		-			
		0.6489			
	-6.1463	(0.39)	-6.0763	-0.7033(0.57)	
EPS		0.8562			
	1.679	(0.51)	1.044***	0.5541(0.08)	
Cover	-	-			
	1.817**	1.7074	-		
	*	(0.08)	1.5440***	-1.6172(0.09)	
DPR		-			
		0.7495			
	-60.967	(0.45)	-53.834	-0.6771(0.49)	
PER		0.9932			
	0.4070	(0.32)	0.3287	0.8200(0.41)	
ROC		0.9454			
Е	3.3597	(0.34)	1.5589	0.4899(0.62)	
Grow		-			
th		1.1470			
	-0.1468	(0.24)	-0.1235	-0.9784 (0.32)	
Haus					
man					
test					
(p-	6.413806				
value)	0.6010				

<sup>\*</sup>significant at 1 percent level of significance,

Source : All the numerical figures of table are calculated from eviews6 version

Table 4.2 Fundamental Determinants of Share Prices of all sample Companies during the Recession Period (2007-2009)

<sup>\*\*</sup> significant at 5 percent level of significance,

<sup>\*\*\*</sup> significant at 10 percent level of significance

Variabl es		l Effect	Random Effect Model		
es	Model Coefficient		Coefficient		
	t-valu		t-value		
Constant	506		t-value		
Constant	.39	1.789470	522.03	3.068427(0.	
	89	(0.07)	92	00)	
Book	-	(0.07)	)2	00)	
Value	1.3	_	_	_	
varae	811	1.074433	0.2924	0.414447(0.	
	27	(0.28)	30	67)	
DPS		(0.20)	30	07)	
	12.	_	_	_	
	441	0.706007	9.0745	0.746753(0.	
	84	(0.35)	63	40)	
EPS	2.6				
	998	0.939573	1.6674	0.842618(0.	
	66	(0.48)	40	45)	
Cover	0.8				
	831	0.409890	0.2939	0.235601(0.	
	09	(0.68)	48	81)	
DPR	-				
	156	-			
	.67	0.52245(	225.79	0.991496(0.	
	43	0.60)	37	32)	
PER	17.				
	643	3.90455(	7.4524	2.517443(0.	
	2*	0.00)	8**	01)	
ROCE	-				
	0.0	-	-	-	
	379	0.005092	2.3401	0.530513(0.	
	96	(0.99)	72	59)	
Growth	-				
	0.4	-	-	_	
	376	2.252426	0.3611	2.070206(0.	
	8**	(0.02)	7**	04)	
Hausma					
n test					
(p-		)4454			
value)	0.0500				

<sup>\*</sup>significant at 1 percent level of significance, \*\* significant at 5 percent level of significance,

Source : All the numerical figures of table are calculated from eviews6 version

Table 4.2 exhibits the results of panel data regression for the recession period from 1stapril2007 to 31st march 2009. The results of Hausman test revealed and provided evidence in favour of fixed effects model for recession period. The empirical results reveal that the PER has positive and significant impact at 1 percent level while Growth has a negative and significant impact on the share price at five percent level. The variable EPS and COVER have a positive relationship with share price and statistically insignificant. However, the DPS, BV, DPR and ROCE have a negative impact on share price and are insignificant. The study results suggest that Price Earning ratio and Growth

are the important determinants of share prices for the recession period.

Table 4.3 Fundamental Determinants of Share Prices of all sample Companies in the Normal Period (2009-2013)

Varia	Fived Ef	fect Model	Random	Effect	
bles	Tixcu Ei	icci Modei	Model		
bics	Coefficie	nt .	Coefficient		
	t-value	711t	t-value		
Const	602.29	3.741329	704.19	3.741329	
ant	41		704.19 56		
		(0.00)		(0.00)	
Book	0.3990	0.528184	0.0230	0.528184	
Value	51	(0.59)	15	(0.97)	
DPS	4.9395	0.370476	6.2693	0.370476	
	47	(0.91)	97	(0.82)	
EPS	0.2779	0.110864	0.5167	0.110864	
	98	(0.71)	71	(0.59)	
Cover	-	-	-	-	
	0.8636	0.616216	0.6984	0.616216	
	28	(0.53)	65	(0.60)	
DPR	-	-		-	
	5.2071	0.023062	61.921	0.023062	
	40	(0.98)	35	(0.77)	
PER	3.2040	2.58046(	3.0988	2.580466	
	0**	0.01)	7**	(0.01)	
ROCE	8.7422	1.916682	5.1380	1.916682	
	6***	(0.09)	5***	(0.07)	
Grow	0.2142	0.113427	0.5714	0.113427	
th	24	(0.90)	56	(0.75)	
Haus					
man					
test					
(p-					
value	10.428459				
)	0.2362				

<sup>\*\*\*</sup>significant at 1 percent level of significance,

Source: All the numerical figures of table are calculated from eviews 6 version

Table 4.3 reveals the results of panel data regression for the recession period from 1stapril 2009 to 31st march 2013. The results of Hausman test provided evidence in favour of random effects model for normal period. The empirical results reveal that the PER and ROCE have positive and significant impact on the share price at five and ten percent level respectively. The variable BV, DPS, EPS, DPR and Growth have a positive relationship with share price and statistically insignificant. However, the Cover has a negative impact on share price and insignificant. The study results suggest that Price Earning ratio and ROCE are being the important determinants of share prices for the Normal period.

<sup>\*\*\*</sup> significant at 10 percent level of significance

<sup>\*\*</sup> significant at 5 percent level of significance,

<sup>\*</sup> significant at 10 percent level of significance

Table: 4.4 CompiledPanel Data Regression Analysis of the Determinants of Market Share Price for Normal and Recession Period (1998-2013)

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Normal perio	Recession				
	Period				
Time	01-04-	01-04-2009	01-04-2007		
duration	1998 to	to 31-03-	to 31-03-		
	31-03-	2013	2009		
	2007				
Model	Random	Random	Fixed		
Specificati	Effect	Effect	Effect		
on	Model	Model	Model		
R-Square	61%	88%	56%		
F-Value	F-Value 5.148(0.0		8.0073(0.0		
	0)	0)	0)		
Book	0.2646	0.023015	-1.381127		
Value					
DPS	-6.0763	6.269397	-12.44184		
EPS	1.044**	0.516771	2.699866		
Cover	-1.544***	-0.698465	0.883109		
DPR	-53.834	61.92135	-156.6743		
PER	0.3287	3.09887**	17.6432**		
			*		
ROCE	ROCE 1.5589		-0.037996		
		*			
Growth	-0.1235	0.571456	-0.43768**		
Hausman	6.413	10.428	15.204**		
Test	(.601)	(0.236)	(.0500)		

<sup>\*</sup>significant at 1 percent level of significance,

Source : All the numerical figures of table are calculated from eviews 6 version

Table 4.4 exhibits the results for the normal as well as recession period. The normal period has been divided in to two parts, the first part consist the period from 1stapril 1998 to 31st march 2007. In this period, the results of Hausman test provided evidence in favour of random effects model. The relationship between dependent and independent is more than 60 percent, it means 61% of the variation in share price can be explained by the determinants taken under study in normal period. Earning per Share has positive and significant impact on the share price at five percent level. The variable Cover has a negative impact on share price and significant at ten percent level. However, the variables book value, PER and ROCE have a positive relationship with share price and are insignificant. The variable DPS, DPR and Growth have a negative impact on share price and insignificant. The second part of normal period contains the period from 01-04-2009 to 31-03-2013. The results of Hausman test provided evidence in favour of random effects model for normal period. The relationship between dependent and independent is more than 60 percent and very high, it means 88% of the variation in share price can be explained by the determinants taken under study in normal

Table: 4.5 Compiled Regression Analysis of the Determinants of Market Share Price for the whole period (1998-2013)

Year	R-SQUARE	F-VALUE	T-TEST		
			1%	5%	10%
1998-99	61%	2.33(0.027)		PER &GROWTH (DPR)	(EPS)
1999-00	70%	0.63(0.044)		DPS &COVER	BV & ROCE (EPS)
2000-01	59%	0.55(0.081)	-	(DPS)	EPS (COVER& GROWTH)
2001-02	76%	0.73(0.063)		BV & ROCE (DPS)	(COVER)
2002-03	68%	0.64(0.038)		GROWTH (COVER)	EPS (DPS)
2003-04	49%	0.37(0.031)		EPS(DPS&COVER)	GROWTH
2004-05	52%	1.15(0.039)		EPS & GROWTH (BV,COVER,DPS)	(ROCE)
2005-06	49%	0.26(0.076)		EPS (ROCE)	(DPS & COVER)
2006-07	65%	0.82(0.081)		GROWTH (DPS, COVER ,ROCE)	EPS
2007-08	48%	0.36(0.035)		(DPS,DPR&PER)	BV
2008-09	41%	0.058(0.099)			EPS &ROCE(COVER)
2009-10	58%	0.55(0.018)		PER(DPR&ROCE)	DPS(BV)
2010-11	62%	0.79(0.010)		GROWTH (PER)	DPR(BV&ROCE)
2011-12	69%	0.79(0.010)		DPR(BV)	EPS &DPS (ROCE)
2012-13	61%	1.05(0.031)		ROCE(COVER,PER,GROWTH)	DPR(BV)

Source: All the numerical figures of table are calculated from eviews6 version

<sup>\*\*</sup> significant at 5 percent level of significance,

<sup>\*\*\*</sup> significant at 10 percent level of significance

period. The empirical results reveal that the PER and ROCE have positive and significant impact on the share price at five and ten percent level. The variable BV, DPS, EPS, DPR and Growth have a positive relationship with share price and statistically insignificant. However, the Cover has a negative impact on share price and insignificant. In the recession period from 1stapril 2007 to 31st march 2009. The results of Hausman provided evidence in favour of fixed effects model for recession period. The relationship between dependent and independent is less than 60 percent, it means 56% of the variation in share price can be explained by the determinants taken under study in recession period. The empirical results reveal that the PER has positive and significant impact while Growth has a negative and significant impact on the share price at five percent level. The variable EPS and COVER have a positive relationship with share price and statistically insignificant. However, the DPS, BV, DPR and ROCE have a negative impact on share price and are insignificant. In the nutshell, recession has impact on relationship of independent and dependent variables, model specification and variables also.

It is evident from Table 4.5 that the results of multiple regression models support the panel data results. The relationship between dependent and independent is more than 60 percent, it means the variation in share price can be explained by the determinants taken under study in normal period. But in Recession period the relationship is less than 60 percent i.e. 48% and 41% in the year 2007-08 and 2008-09 respectively. It means recession has impact on relationship of independent and dependent variables, but up to some extent and not very high. Again in normal period from 01-04-2009 to 31-03-2013, R square starts increasing and more than 60 percent.

# Acceptance/Rejection of Null Hypothesis

On the basis of findings of the study the Null Hypothesis (Ho) i.e. there is no significant impact of fundamental factors on stock prices during normal and recession period. And Alternative Hypothesis (Ha) i.e. there is no significant impact of fundamental factors on stock prices during normal and recession period. On the basis of Findings of the study the null hypothesis is rejected and Alternative hypothesis is accepted.

#### **Conclusions**

In the normal period from 01-04-1998 to 31-03-2007, Earning per Share has positive and significant impact on the share price at 10 percent level. The variable Cover has a negative impact on share price and significant at ten percent level. However, the variables book value, PER and ROCE have a positive relationship with share price and are insignificant. The variable DPS, DPR and Growth have a negative impact on share price and is insignificant. The second part of normal period contains the period from 01-04-2009 to 31-03-2013. PER and ROCE have positive and significant impact on the share price at five and ten percent level. The variable BV, DPS, EPS, DPR and Growth have a positive relationship with share price and statistically insignificant. However, the Cover has a negative impact on share price and are insignificant. In the recession period from 1stApril 2007 to 31st march 2009. PER has positive and significant impact while Growth has a negative and significant impact on the share price at five percent level. The variable EPS and COVER have a positive relationship with share price and statistically insignificant. However, the DPS, BV, DPR and ROCE have a negative impact on share price and are insignificant.

### **Suggestions**

It is suggested that Earning per share has been emerged significant with the positive sign in eight years out of fifteen years period under study while Dividend per share is significantly negative in nine years, it means Earnings should not be distributed. It is supported by Walter and Gordon model that growth firms will prefer retained earnings and not to distribute the dividend. So, it is advisable to investors to consider EPS rather than DPS. As in the present analysis the Dividend Payout Ratio and Price Earning ratio are not significant variables to be considered while making investment decision.

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# List of Companies taken for study:-

- 1. ABBLtd.
- 2. ACCLtd.
- 3. Aditya Birla Nuvo Ltd.
- 4. Ambuja Cements Ltd.

- 5. Apollo Tyres Ltd.
- 6. Ashok Leyland Ltd.
- 7. Asian Paints Ltd.
- 8. AurobindoPharma Ltd.
- 9. Axis Bank Ltd.
- 10. Bank Of Baroda
- 11. Bank Of India
- 12. Bata India Ltd.
- 13. Bharat Electronics Ltd.
- 14. Bharat Forge Ltd.
- 15. Bharat Heavy Electricals Ltd.
- 16. Bharat Petroleum Corpn. Ltd.
- 17. Britannia Industries Ltd.
- 18. Chambal Fertilisers & Chemicals Ltd.
- 19. Cipla Ltd.
- 20. Container Corpn. Of India Ltd.
- 21. Coromandel International Ltd.
- 22. Crisil Ltd.
- 23. Crompton Greaves Ltd.
- 24. Cummins India Ltd.
- 25. EIHLtd.
- 26. Engineers India Ltd.
- 27. Essar Oil Ltd.
- 28. Exide Industries Ltd.
- 29. Federal Bank Ltd.
- 30. Financial Technologies (India) Ltd.
- 31. Future Retail Ltd.
- 32. GAIL (India) Ltd.
- 33. Glaxosmithkline Pharmaceuticals Ltd.
- 34. Grasim Industries Ltd.
- 35. Great Eastern Shipping Co. Ltd.
- 36. Gujarat Fluorochemicals Ltd.
- 37. Gujarat Minerl Devp. Corpn. Ltd.
- 38. Havells India Ltd.
- 39. Hero Motocorp Ltd.
- 40. Hexaware Technologies Ltd.
- 41. Hindalco Industries Ltd.
- 42. Hindustan Petroleum Corpn. Ltd.
- 43. Hindustan Unilever Ltd.
- 44. Hindustan Zinc Ltd.

45.	Housing Development Finance Corpn. Ltd.	63.	Reliance Capital Ltd.
46.	ICICIBank Ltd.	64.	Reliance Infrastructure Ltd.
47.	IDBIBank Ltd.	65.	Sesa Goa Ltd.
48.	ING Vysya Bank Ltd.	66.	Siemens Ltd.
49.	IVRCLLtd.	67.	Sintex Industries Ltd.
50.	Indian Oil Corpn. Ltd.	68.	State Bank Of India
51.	Infosys Ltd.	69.	Steel Authority Of India Ltd.
52.	Ipca Laboratories Ltd.	70.	Sterlite Industries (India) Ltd. [Merged]
53.	Larsen & Toubro Ltd.	71.	Sun Pharmaceutical Inds. Ltd.
54.	Lupin Ltd.	72.	Tata Chemicals Ltd.
55.	Mahindra & Mahindra Financial Services Ltd.	73.	Tata Communications Ltd.
56.	Manappuram Finance Ltd.	74.	Tata Motors Ltd.
57.	Mangalore Refinery & Petrochemicals Ltd.	75.	Tata Power Co. Ltd.
58.	Marico Ltd.	76.	Tata Steel Ltd.
59.	Nestle India Ltd.	77.	Titan Industries Ltd.
60.	Neyveli Lignite Corpn. Ltd.	78.	Wipro Ltd.
61.	Oil & Natural Gas Corpn. Ltd.	79.	Wockhardt Ltd.
62.	Ranbaxy Laboratories Ltd.	80.	Zee Entertainment Enterprises Ltd.

