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Trend and pattern of dividend determinants of Indian manufacturing companies

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Abstract

Purpose: The main objective of present paper is to review, classify, and identify the gaps in the existing literature on dividend policy.

Design/methodology/approach: Frequency Distribution was used along with Compound Annual Growth Rate (CAGR) to study the trends and pattern of select variables. Independent t-test was used to study difference between pre and post-recession phase of the economy.

Findings: Dividend per Share of sample companies indicated an increasing trend over the study period. The average DPS has increased initially, and thereafter shows decline trend. An analysis of distribution of sample companies according to amount of dividend per share shows that most of the companies through the study period paid up to Rs. 5. Approximately 15 percent companies' paid dividend in the range of Rs.5 to Rs.10 and very few companies paid dividend more than Rs.35. The decline in growth rate of average DPS during post-recession phase may be due to more favorable investment opportunities persist during pre-recession period. The financial leverage was sound during pre-recession period but it declines during post-recession period. Most of companies comes into existence after 1990s and 90 percent companies were paying on an average 42 percent of corporate tax.

Originality/value: Research papers on dividend policy applied advanced statistical and econometric for data analysis. This makes findings more intricate. To the best of the information, no other research paper has previously been published in any of academic journals using simplex statistical tools for data analysis.

Keywords: Literature review, dividend policy, India, determinants

Introduction

Dividend decision is an important and major aspect of the corporate financial management. Dividend refers to that portion of earnings which is distributed to shareholders and profit which is not distributed is known as retained earnings. Retained earnings are very important for the growth of the firm, as it provides funds for favorable investment opportunities. The objective of a dividend policy is to maximize the shareholders returns so, that the value of the investment is maximized. Dividend decision has been a subject of inquiry of financial analysts, academicians, and researchers for about a long period. Eminent scholar like Lintner (1956) [8]; Brittain (1966) [4]; Khurana (1985) [6]; Mahaptra and Sahu (1993) [9]; Bhat and Pandey (1994) [2]; Mollah and Mobarek (2007) [10]; Pal and Goyal (2007) [3]; Bodla, Pal, and Sura (2007) [11]; Saima and Sumi (2011); Jensen, Solberg, and Zorn (1992) [5]; Arif and Akbar (2013); Kuzucu (2015); and Roy (2015) lag dividend, earnings, cash flow, liquidity, depreciation, size, age, growth, investment spending, tax, market to book value, and ownership structure are major determinants of dividend policy. There has been some evidence that corporate payouts have been declining over the period of time.

An effort has been made to study holistic view of the problems relating to dividend policy by implementing a systematic approach to analysis the trends and pattern of dividend determinants. The present study undertakes to examine the trend and pattern of dividend determinants of Indian manufacturing companies. The study is based on 198 manufacturing companies listed on the S&P Bombay Stock Exchange (BSE)-500, and the data was collected from the Prowess iq database of Center for Monitoring Indian Economy (CMIE).

Scope of the Study

The universe of the study is Indian manufacturing companies, having operation in Indian.

For the purpose of study a sample of 198 companies have been taken, which are listed on National Stock Exchange/Bombay Stock Exchange. The reference period for the study is consisting eight years i.e. from 2008-2009 to 2015-2016.

Sampling and Database

The study is analytical and empirical in nature based on secondary data. The secondary data is taken from PROWESS IQ database maintained by Centre for Monitoring Indian Economy (CMIE). Sample consisting of 198 manufacturing Indian companies in various years was selected for the purpose. The sample will be confined to BSE listed companies because it is the oldest stock exchange in India and has the highest number of listed companies on the stock exchange in India. Total trading volume of this exchange is second highest after NSE. In addition to this the literature collected from published sources available in the form of books and journal articles is used to select study variables and literature review. Manufacturing companies has been selected for final study using convenience sampling for the period of eight years i.e. March 2009 to March 2016, excluding the banking and financial services companies from data set. The sample companies for the study will be selected on the basis of following criteria: -

- i) Companies are listed on Bombay Stock Exchange limited.
- ii) Only Indian manufacturing companies were considered.
- iii) Banking and financial services companies were exclude from the sample.

- iv) All selected companies were continuously trading during the study period.

Tools of Analysis

Different statistical tools have been used for the analysis of this study. The relationship between dividends and other financial variables has been examined by applying statistical tools. The study used SPSS-20 software. SPSS has been used for analysis of frequency distribution, descriptive statistics, and t-test.

Methodology to access and analysis the trend and pattern of dividend decision variables of Indian manufacturing companies.

The study make an attempt to examine the trend and pattern of dividend decision variables of Indian manufacturing companies divided into two phases of economy i.e. pre-recession era (2009-2012), and post-recession era (2012-2016), to make the findings more comparable and conclusive. Dividend decision variables have been examined by tabulating the data of Dividend per Share (DPS), Profit (PAT), Dividend payout Ratio, and Size of the companies. Descriptive statistics of all select variables were computed includes minimum, maximum, mean, standard deviation, and number of observations. Frequency Distribution also analyzed along with Compound Annual Growth Rate (CAGR) to study the trends and pattern of select variables. Independent t-test was used to study difference between pre and post-recession phase of the economy.

<p>Average</p> $\bar{X} = \frac{\sum x}{n}$	<p>Standard Deviation</p> $s = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$
<p>Independent t-test</p>	
$= \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{Sp \left[\left(\frac{1}{n_1} \right) + \left(\frac{1}{n_2} \right) \right]^{\frac{1}{2}}}$ <p style="text-align: right; margin-right: 20px;">where,</p>	$S_p^2 = \frac{n_1 S_1^2 + n_2 S_2^2}{n_1 + n_2 - 2}$

Dividend Practice in India’s Manufacturing Companies

The references period for the study of dividend practices is eight years, from March 2009 to March 2016. This period is deliberately considered as it fulfills two objectives:

1. The study make an attempt to examine dividend practices of Indian manufacturing companies under both phases i.e. pre-recession era (2009-2012), and post-recession era (2012-2016), resultantly the finding would be more comparable and conclusive.
2. A sample consisting of 198 manufacturing Indian companies in various years was selected for the purpose. Dividend practices have been examined by tabulation and analysis of Dividend per Share (DPS), Profitability (PAT), Dividend payout Ratio, and Size of the companies, Average, Standard Deviation, Minimum, Maximum, and Frequency Distribution of study variables, Compound Annual Growth Rate (CAGR) and t-test are used to study difference between average value for data of pre and post-recession.

sample companies during March-2009 to march 2016.

Dividend per Share and Profitability

Table - 1 presents the amount of dividend per share (DPS) and profitability of sample companies during 2009 to 2016. The results present that dividend per share of Indian manufacturing companies also indicated an increasing trend. The average DPS increased from Rs. 4.93 in 2009 to Rs. 13.46 in 2014 and thereafter decline to Rs. 8.28 in 2015. The table 4.2 presents positive growth of 12.24 percent in DPS during pre-recession period (2009-2016), and registered negative growth during post- recession period (2012-2016) as CAGR is-5.11 percent. The overall growth rate of average DPS stands to be 10.52 percent. The decline in the compound annual growth rate of DPS during second phase may be due to more favorable investment opportunities persist pre-recession period.

The table-1 also presents the profitability of the sample companies and provides approximately the same trend as the DPS.

Trend in Dividend Payments

This section presents the dividend trend and pattern among

Table 1: Trend of Dividend per Share and Profitability during 2009-2016

Years	DPS - x	Minimum DPS	Maximum DPS	S.D	Profitability - x	Minimum Profitability	Maximum Profitability	S.D				
March 2009	4.93	0.00	40	6.87	4325.44	-3972.8	153093	13272.54				
March 2010	6.69	0.00	110	10.10	5569.63	-7942.1	162357	15799.72				
March 2011	8.17	0.00	125	14.80	6791.05	-1320.7	202860	19863.35				
March 2012	6.96	0.00	65	10.06	5813.21	-1059.2	200400	17322.15				
March 2013	11.61	0.00	502	45.88	5927.58	-17668	210030	18229.95				
March 2014	13.46	0.00	955	68.89	6446.39	-28285	219840	19629.06				
March 2015	8.28	0.00	85	12.53	6649.98	-46456	227360	20465.5				
March 2016	9.92	0.00	100	16.15	7310.85	-41373	274170	24560.37				
March 2009 - March 2012 = x	6.69	0.00	125	10.88	5624.83	-1320.7	202860	16727.54				
March 2012 - March 2016 = x	10.82	0.00	955	42.62	6583.70	-17668	274170	20821.05				
March 2009 - March 2016 = x	8.75	0.00	955	31.13	6104.27	-1320.7	274170	18885.66				
t-value					-2.659*				0.998**			
p-value					0.008				-.002			

Source: CMIE Prowessiq Database

Note: * and ** significant (p-value) at .01 and .05 level

Average profitability has increased from Rs. 4325.44 million in 2009 to Rs. 6791.05 million in 2010 and thereafter it decreased to Rs. 5927.58 million in 2013 after were it increased to Rs.7310.85 million in 2016. The average profitability during the pre-recession phase was 5624.83 million and post-recession phase was 6583.70 million, whereas, the overall profitability average of the study period was 6104.27 million.

Average dividend per share has decreased significantly in post-recession period. As endorsed by t-test results which is significant at one percent rejects the null hypothesis that there is no significant difference in the average dividend per share of pre-recession and post-recession period. Hence we

may conclude that dividend payments by Indian manufacturing companies during both the phase was different. But there were no significant difference in the average profitability of both the phases as t-value is insignificant at five-percent. Hence recession has not much impact on the profitability of Indian manufacturing companies.

Table-2 presents the distribution of the companies in various classes for dividend per share during 2009-2016. These classes are Rs. (i) Rs.0 to Rs.5 (ii) Rs.5 to Rs.10 (iii) Rs.10 to Rs.15 (iv) Rs.15 to Rs.20 (v) Rs.20 to Rs.25 (vi) Rs.25 to Rs.30 (vii) Rs.30 to Rs.35 (viii) and > Rs.35.value in bracket is percentage of total frequency.

Table 2: Distribution of Sample Companies in term of Dividend per share during March 2009- March 2016 (Percentage of Companies)

Years	2009	2010	2011	2012	2013	2014	2015	2016
Frequency	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)
0-5	144 (72.7)	122 (61.6)	122 (61.6)	126 (63.6)	124 (62.6)	120 (60.6)	118 (59.6)	117 (59.1)
5-10	27 (13.6)	39 (19.7)	36 (18.2)	37 (18.7)	41 (20.7)	33 (16.7)	38 (19.2)	35 (17.7)
10-15	11 (5.6)	16 (8.1)	17 (8.6)	13 (6.6)	10 (5.1)	16 (8.1)	11 (5.6)	13 (6.6)
15-20	8 (4.0)	7 (3.5)	7 (3.5)	8 (4.0)	8 (4.0)	8 (4.0)	10 (5.1)	10 (5.1)
20-25	4 (2.0)	8 (4.0)	3 (1.5)	3 (1.5)	4 (2.0)	4 (2.0)	4 (2.0)	2 (1.0)
25-30	2 (1.0)	5 (2.5)	2 (1.0)	2 (1.0)	0 (0)	3 (1.5)	4 (2.0)	3 (1.5)
30-35	0 (0)	0 (0)	3 (1.5)	2 (1.0)	0 (0)	2 (1.0)	5 (2.5)	6 (3.0)
Above 35	2 (1.0)	1 (0.5)	8 (4.0)	7 (3.5)	11 (5.6)	11 (5.6)	7 (3.5)	12 (6.1)
March 2009-March 2012CAGR	12.24%							
March 2012-March 2016CAGR	-5.11%							
March 2009-March 2016CAGR	10.52%							

Source: CMIE Prowess iq Database

An analysis of distribution of sample companies according to amount of dividend per share shows that most of the companies through the study period paid dividend up to Rs.5. Approximately 15 percent companies paid dividend in the range of Rs.5 to Rs.10 through the study period and very few companies paid dividend more than Rs.35.

Table-3 presents the distribution of companies in various classes for profitability during 2009-2016. These classes are (i) Rs.-1000 to Rs.12000 (ii) Rs.12000 to 25000 (iii) Rs.25000 to Rs.38000

Table 3: Distribution of Sample Companies in term of Profitability during March 2009- March 2016 (Percentage of Companies)

Years	2009	2010	2011	2012	2013	2014	2015	2016
Frequency	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)
-1000-12000	176 (88.9)	178 (89.9)	173 (87.4)	177 (89.4)	177 (89.4)	170 (85.9)	170 (85.9)	167 (84.3)
12000-25000	11 (5.6)	12 (6.1)	12 (6.1)	11 (5.6)	10 (5.1)	9 (4.5)	12 (6.1)	11 (5.6)
25000-38000	4 (2.0)	0 0	2 (1.0)	3 (1.5)	3 (1.5)	5 (2.5)	4 (2.0)	3 (1.5)
38000-51000	0 (0)	4 (2.0)	3 (1.5)	1 (0.5)	2 (1.0)	2 (1.0)	2 (1.0)	4 (2.0)
51000-64000	2 (1.0)	0 0	1 (0.5)	2 (1.0)	0 0	0 0	1 (0.5)	1 (0.5)
64000-77000	0 0	1 (0.5)	2 (1.0)	2 (1.0)	3 (1.5)	3 (1.5)	1 (0.5)	1 (0.5)
77000-90000	0 (0)	0 0	0 0	0 0	0 0	1 (0.5)	1 (0.5)	1 (0.5)
Above 90000	1 (0.5)	2 (1.0)	2 (1.0)	1 (0.5)	1 (0.5)	1 (0.5)	2 (1.0)	3 (1.5)
March 2009-March 2012 CAGR	10.36%							
March 2012-March 2016 CAGR	7.24%							
March 2009-March 2016 CAGR	7.79%							

Source: CMIE Prowessiq Database

- (iv) Rs. 38000 to Rs.51000
- (v) Rs.51000 to Rs.64000
- (vi) Rs. 64000 to Rs.77000
- (vii) Rs.77000 to Rs.90000
- (viii) > Rs.90000.

Value in bracket is percentage of total frequency of profitability. An analysis of distribution of sample companies according to amount of profitability shows that all companies are earn more profit through the study period. Table also indicate that compound annual growth rate of profitability is more in pre-recession period (March 2009-March 2012) is 10.36 percent and CAGR of post-recession period (March 2012- March 2016) is 7.24 percent. The

overall growth rate of average profitability stands to be 7.79 percent.

Dividend Payout and Size

Table-4 presents the dividend payout ratio and size of firms of sample companies during 2009-2016. The table present that dividend payout ratio of Indian manufacturing companies indicated an increasing trend. Average payout ratio is negative in initially in 2009 and 2010, thereafter, it increased to 0.51 in 2013 and then declines up to 0.23 at the end of the study period. As indicated by the average of post-recession and pre-recession period, there is a significant increase in the payout after pre-recession period.

Table 4: Trend of Dividend Pay-out and Size during 2009-2016

Years	Pay-out \bar{x}	Minimum Pay-out	Maximum Pay-out	S.D	Size \bar{x}	Minimum Size	Maximum Size	S.D
March 2009	-0.06	-49.11	4.37	3.7	4.25	2.79	6.39	0.62
March 2010	-0.01	-49.11	10	3.92	4.31	2.78	6.4	0.62
March 2011	0.1	-33.29	10	2.74	4.39	2.85	6.45	0.61
March 2012	0.22	-15.18	10	1.47	4.45	3.01	6.47	0.6
March 2013	0.51	-8.93	39.37	3.15	4.5	3.11	6.5	0.59
March 2014	0.38	-5.36	10	1.22	4.54	3.16	6.57	0.59
March 2015	0.23	-10.71	4.53	1	4.58	3.35	6.6	0.58
March 2016	0.23	-11.24	2.56	0.96	4.62	3.42	6.6	0.58
March 2009-March 2012 = \bar{x}	0.063	-15.18	10	3.10	4.35	2.78	6.47	0.59
March 2012-March 2016 = \bar{x}	0.34	-5.36	39.37	1.82	4.56	3.11	6.6	0.63
March 2009-March 2016 = \bar{x}	0.20	-5.36	39.37	2.55	4.45	2.78	6.6	0.61
t-value					-6.990			
p-value					.032**			

Source: CMIE Prowessiq Database

Note: * and ** significant (p-value) at .01 and .05 level

The table-5 indicates an annual growth rate 186.78 percent during pre-recession period, and registered negative compound annual growth rate-24.68 percent during post-recession period. The overall growth rate of dividend payout stands to be 55.59 percent. The decline in the CAGR of dividend payout during second phase may be due to more favorable investment opportunities persist in pre-recession

period. The table present that size of Indian manufacturing companies has indicated an increasing trend. Average size of the companies' trend increased continuously from Rs.4.25 in 2009, Rs. 4.45 in 2012, and 4.62 in 2016. The average of size of firm during pre-recession phase was 4.35 million and growth rate increased in post-recession phase was 4.56 million. The overall average size of the sample companies was 4.45 million.

Average dividend payout has decreased significantly in post-recession period. As endorsed by t-test results which are significant at Five percent reject the null hypothesis that there is no significant difference in the average dividend payout of pre-recession and post-recession period. Hence we may conclude that dividend payment by Indian manufacturing companies during both the phase was different that is higher dividend was paid during pre-

recession period and comparatively less dividend was paid in post-recession period. But there were no significant difference in the average of size of sample companies during both phases as t-value is significant difference at one percent reject the null hypothesis is that there is no significant difference in the average size of pre-recession and post-recession period.

Table 5: Distribution of Sample Companies in term of Payout during March 2009- March 2016 (Percentage of Companies)

Years	2009	2010	2011	2012	2013	2014	2015	2016
Frequency	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)
-60-(-48)	1 (0.5)	1 (0.5)	0 0	0 0	0 0	0 0	0 0	0 0
-48-(-36)	0 (0)	0 0	0 0	0 0	0 0	0 0	0 0	0 0
-36-(-24)	0 (0)	0 0	1 (0.5)	0 0	0 0	0 0	0 0	0 0
-24-(-12)	1 (0.5)	1 (0.5)	1 (0.5)	1 (0.5)	0 0	0 0	0 0	0 0
-12-0	40 (20.2)	17 (8.6)	16 (8.1)	14 (7.1)	14 (7.1)	17 (8.6)	17 (8.6)	18 (9.1)
0-12	156 (78.8)	179 (90.4)	180 (90.9)	183 (92.4)	182 (91.9)	181 (91.4)	181 (91.4)	180 (90.9)
12-24	0 (0)	0 0	0 0	0 0	1 (0.5)	0 0	0 0	0 0
Above 24	0 (0)	0 0	0 0	0 0	1 (0.5)	0 0	0 0	0 0
March 2009-March 2012 CAGR	18.68%							
March 2012-March 2016 CAGR	-24.68%							
March 2009-March 2016 CAGR	55.59%							

Source: CMIE Prowessiq Database

Table - 5 presents the distribution of companies in various classes for dividend payout during 2009-2016. These classes are

- i) Rs.-60 to Rs.-48
- ii) Rs.-48 to -36
- iii) Rs.-38 to Rs.-24
- iv) Rs.-24 to Rs.-12
- v) (v)Rs.-12 to Rs.0
- vi) Rs.0 to Rs.12
- vii) Rs.12 to Rs.-24
- viii) > Rs.24.

Value in bracket is percentage of total frequency. An analysis of the distribution of sample companies according to amount of dividend payout ratio shows 90 percent companies having payout ratio in the range of 0 to 12 percent through study period. The table also presents positive growth of 18.68 percent in dividend payout ratio during pre-recession period, and registered negative growth during post-recession period as CAGR is -24.68 percent. The overall annual growth rate of average dividend payout ratio stands to be 55.59 percent.

Table-6 presents the distribution of companies in various classes for size of the firm during 2009-2016. These classes are

- i) Rs.2.5to Rs.3
- ii) Rs.3 to 3.5
- iii) Rs.3.5to Rs.4
- iv) Rs.4 to Rs.4.5
- v) Rs.4.5to Rs.5
- vi) Rs.5 to Rs.5.5
- vii) Rs.5.5 to Rs.6
- viii) > Rs.6.

Value in bracket is percentage of total frequency. An analysis of the distribution of sample companies size 60 percent through study period. The table also presents that compound annual growth rate of size of firm 1.48 percent during pre-recession period (March 2009-March 2012), and thereafter decrease the growth rate 0.94 percent during post-recession period (March 2012 to march 2016). The overall annual growth rate of size of sample companies stands to be 1.20 percent.

Table 6: Distribution of Sample Companies in term of Size during March 2009- March 2016 (Percentage of Companies)

Years	2009	2010	2011	2012	2013	2014	2015	2016
Frequency	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)	Frequency (Percentage)
2.5 -3	3 (1.5)	2 (1.0)	2 (1.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
3-3.5	15 (7.6)	12 (6.1)	9 (4.5)	10 (5.1)	5 (2.5)	2 (1.0)	2 (1.0)	2 (1.0)
3.5 -4	52 (26.3)	45 (22.7)	42 (21.2)	36 (18.2)	33 (16.7)	37 (18.7)	31 (15.7)	27 (13.6)
4 -4.5	68 (34.3)	76 (38.4)	72 (36.4)	72 (36.4)	65 (32.8)	53 (26.8)	58 (29.3)	59 (29.8)
4.5 -5	41 (20.7)	40 (20.2)	43 (21.7)	48 (24.2)	60 (30.3)	70 (35.4)	68 (34.3)	69 (34.8)
5 -5.5	10 (5.1)	14 (7.1)	20 (10.1)	21 (10.6)	20 (10.1)	20 (10.1)	21 (10.6)	23 (11.6)
5.5 -6	7 (3.5)	7 (3.5)	8 (4.0)	9 (4.5)	12 (6.1)	13 (6.6)	14 (7.1)	14 (7.1)
Above 6	2 (1.0)	2 (1.0)	2 (1.0)	2 (1.0)	3 (1.5)	3 (1.5)	4 (2.0)	4 (2.0)
March 2009-March 2012 CAGR	1.48%							
March 2012-March 2016 CAGR	0.94%							
March 2009-March 2016 CAGR	1.20%							

Source: CMIE Prowess iq Database

Table-7 presents the frequency and percentage liquidity of sample companies during 2009-2016. The table shows that distribution of companies in various classes for liquidity of firm during 2009-2016. These classes are

- i) Rs.-0.50 to Rs.1.5
- ii) Rs.1.5 to 3.5
- iii) Rs.3.5to Rs.5.5
- iv) Rs.5.5 to Rs.7.5
- v) Rs.7.5to Rs.9.5
- vi) Rs.9.5 to Rs.11.5
- vii) Rs.11.5 to Rs.13.5
- viii) > Rs.13.5.

Value in bracket is percentage of total frequency. An analysis of the liquidity distribution of sample companies having 62 percent liquidity up to Range Rs. 1.5, and around of 34 percent sample companies followed in the range of Rs.1.5 to Rs. 3.5. It is clear from the table average of liquidity of sample companies varied between Rs.1.56 in 2012 to Rs.1.76 in 2009 and 2010. The minimum liquidity of sample companies varied between 0.24 in 2014 to 0.38 in 2010. The maximum liquidity of sample companies varied between 11.1 in 2015 to 55.77 in 2009. It is a positively skewed and more than the average of liquidity.

Table 7: Frequencies and Percentage Liquidity of Sample Companies during 2009-2016.

	Liquidity	2009		2010		2011		2012		2013		2014		2015		2016			
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage		
Frequency Distribution	-50-.5	133	67.2	132	66.7	125	63.1	126	63.6	124	62.6	124	62.6	114	57.6	108	54.5		
	1.5-3.5	57	28.8	56	28.3	61	30.8	62	31.3	66	33.3	67	33.8	73	36.9	79	39.9		
	3.5-5.5	5	2.5	6	3.0	9	4.5	8	4.0	6	3.0	4	2.0	8	4.0	9	4.5		
	5.5-7.5	1	0.5	2	1.0	2	1.0	0	0	0	0	1	0.5	0	0	1	0.5		
	7.5-9.5	0	0.	1	0.5	0	0	0	0	0	0	0	0	2	1.0	0	0		
	9.5-11.5	1	0.5	0	0	0	0	1	0.5	0	0	1	0.5	1	0.5	0	0		
	11.5-13.5	0	0	0	0	0	0	1	0.5	2	1.0	0	0	0	0	0	0		
Above 13.5	1	0.5	1	0.5	1	0.5	0	0	0	0	1	0.5	0	0	1	0.5			
Descriptive Statistics	Minimum	0.31		0.38		0.37		0.36		0.26		0.24		0.32		0.33			
	Maximum	55.77		42.35		18.73		13.24		12.59		17.31		11.1		25.48			
	Mean	1.76		1.76		1.67		1.56		1.59		1.59		1.67		1.75			
	Median	1.215		1.3		1.33		1.295		1.31		1.305		1.365		1.375			
	S.D.	4.00		3.08		1.59		1.27		1.35		1.52		1.25		1.93			
	Skewness	12.65		11.81		7.01		5.70		5.71		7.20		4.19		9.63			
	Variance	2.00		1.76		1.26		1.13		1.16		1.23		1.12		1.39			
		2009-2012 CAGR						-4.06%											
		2012-2016 CAGR						3.27%											
		2009-2016 CAGR						-0.14%											
	t-value						.362												
	p-value						.717**												

Source: CMIE Prowessiq Database

Table also presents negative growth of -4.06 percent in liquidity during pre-recession period (March 2009-March 2012), and registered positive growth during post-recession period (March 2012- March 2016) is 3.27 percent. The overall annual growth rate of average liquidity is also registered negative -0.14 percent. Average liquidity increased significantly in post-recession period, as significant (five percent) t-test value is accept the null hypothesis that there is a significant difference in liquidity

of the pre-recession and post-recession period. Hence we may conclude that liquidity of manufacturing companies during both phases was different pre-recession period in negative liquidity and post-recession period liquidity is high and overall liquidity is also a negative. But there were significant difference in the average of liquidity of firm during both phases as significant t-value provided by the analysis

Table 8: Frequencies and Percentage of Price to Book Ratio of Companies in Various Classes during 2009-2016.

	Price-to-book Ratio	2009		2010		2011		2012		2013		2014		2015		2016	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	0-4	88	44.4	89	44.9	88	44.4	88	44.4	88	44.4	87	43.9	88	44.4	85	42.9
	4-8	66	33.3	64	32.3	64	32.3	65	32.8	64	32.3	66	33.3	65	32.8	66	33.3
	8-12	27	13.6	28	14.1	29	14.6	31	15.7	32	16.2	30	15.2	30	15.2	32	16.2
	12-16	8	4.0	8	4.0	8	4.0	5	2.5	5	2.5	6	3.0	6	3.0	6	3.0
	16-20	3	1.5	3	1.5	3	1.5	4	2.0	3	1.5	3	1.5	3	1.5	3	1.5

	20-24	2	1.0	2	1.0	2	1.0	1	0.5	2	1.0	2	1.0	2	1.0	2	1.0
	24-28	3	1.5	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0
	Above 28	1	0.5	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0
Descriptive Statistics	Minimum	0.25		0.25		0.25		0.25		0.24		0.24		0.24		0.26	
	Maximum	35.73		35.62		35.54		35.45		35.65		36.03		36.31		35.94	
	Mean	5.77		5.81		5.82		5.82		5.85		5.88		5.93		5.97	
	Median	4.49		4.50		4.51		4.55		4.61		4.55		4.61		4.68	
	S.D	5.05		5.08		5.10		5.09		5.12		5.14		5.18		5.19	
	Skewness	2.51		2.51		2.53		2.55		2.54		2.52		2.52		2.47	
	Variance	2.25		2.25		2.26		2.26		2.26		2.27		2.27		2.28	
	March 2009-March 2012 CAGR	0.28%															
	March 2012-March 2016 CAGR	0.68%															
	March 2009-March 2016 CAGR	0.49%															
	t-value	-0.399															
p-value	.690**																

Source: CMIE Prowess iq Database

Table - 8 presents that the frequency and percentage of price to book ratio of companies in various classes during 2009-2016. These classes are

- i) Rs.0 to Rs.4
- ii) Rs.4 to 8
- iii) Rs.8 to Rs.12
- iv) Rs.12 to Rs.16
- v) Rs.16 to Rs.20
- vi) Rs.20 to Rs.24
- vii) Rs.24 to Rs.28
- viii) > Rs.28.

Value in bracket is percentage of total frequency. An analysis of the distribution of sample companies' 44 percent companies' price to book ratio is very high in the range up to Rs.4, and 33 percent companies followed in the Range of Rs.8.

The minimum price to book ratio of sample companies varied between 0.24 in 2013, 2014, 2015 0.26 in 2016. The

maximum price to book ratio of sample companies varied between 35.45 in 2012 to 36.31 in 2015 the average of the price to book ratio is also varied between 5.77 in 2009 to 5.97 in 2016. It is a positively skewed and more than the average of price to book ratio. There are very less variation of price to book ratio varied between 5.05 in 2009 to 5.19 in 2016.

The table - 8 also present the compound annual growth rate of price to book ratio of pre-recession period (March 2009-March 2016) is 0.28 percent, and thereafter increase growth rate in post-recession period (March 2012-March 2016) is 0.68 percent. The overall annual growth rate is stands to be 0.49 percent. Average price to book ratio increase significantly in post-recession period, as significant (Five percent) t-test value is accept the null hypothesis that there is a significant difference in the average price to book ratio of pre-recession and post-recession period of selected sample companies.

Table 9: Frequencies and percentage of leverage of companies in various classes during 2009-2016.

	Leverage	2009		2010		2011		2012		2013		2014		2015		2016	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Frequency Distribution	1-1000	179	90.4	179	90.4	174	87.9	168	84.8	164	82.8	161	81.3	157	79.3	155	78.3
	1000-2000	5	2.5	3	1.5	7	3.5	13	6.6	17	8.6	18	9.1	20	10.1	20	10.1
	2000-3000	6	3.0	7	3.5	6	3.0	2	1.0	0	0	1	0.5	2	1.0	4	2.0
	3000-4000	3	1.5	3	1.5	3	1.5	6	3.0	8	4.0	4	2.0	3	1.5	3	1.5
	4000-5000	1	0.5	1	0.5	2	1.0	2	1.0	2	1.0	4	2.0	6	3.0	4	2.0
	5000 -6000	2	1.0	1	0.5	2	1.0	2	1.0	1	0.5	2	1.0	2	1.0	4	2.0
	6000-7000	1	0.5	0	0	0	0	1	0.5	1	0.5	2	1.0	2	1.0	0	0
Above 7000	1	0.5	4	2.0	4	2.0	4	2.0	5	2.5	6	3.0	6	3.0	8	4.0	
Descriptive Statistics	Minimum	2.77		3.96		5.28		6.49		8.49		11.93		11.34		13.58	
	Maximum	8157.66		9280.82		11255.46		13106.10		14189.26		15736.03		13936.95		15062.44	
	Mean	493.12		563.23		656.22		744.05		817.25		924.04		984.01		1059.26	
	Median	129.98		146.61		177.47		186.48		207.81		234.86		259.67		261.65	
	S.D.	1096.63		1290.67		1491.99		1661.32		1801.83		2038.47		2084.53		2221.17	
	Skewness	4.21		4.37		4.33		4.32		4.36		4.20		3.89		3.90	
	Variance	33.12		35.93		38.63		40.76		42.45		45.15		45.66		47.13	
	March 2009-March 2012 CAGR	14.70%															
	March 2012-March 2016 CAGR	9.03%															
	March 2009-March 2016 CAGR	11.54%															
	t-value	-3.77															
p-value	4.000*																

Source: CMIE Prowess iq Database

Table-9 presents that the frequency and percentage of leverage of companies in various classes during 2009-2016. These classes are

- i) Rs.1 to Rs.1000
- ii) Rs.1000 to Rs.2000
- iii) Rs.2000 to Rs.3000
- iv) Rs.3000 to Rs.4000
- v) Rs.4000 to Rs.5000
- vi) Rs.5000 to Rs.6000
- vii) Rs.6000 to Rs.7000
- viii) > Rs.7000.

Value in bracket is percentage of total frequency. An analysis of leverage of sample companies' 85 percent companies leverage is very high up to Rs.1000. The minimum leverage of sample companies varied between 2.77 in 2009 to 13.58 in 2016. The maximum leverage of sample companies varied between 8157.66 in 2009 to 15736.03 in 2014. The average of the leverage is also varied between 493.12 in 2009 to 261.65 in 2016. It is a positively skewed and more than the average of leverage. The variation in average leverage varied between 1096.63 in 2009 to 222.17 2016.

The table also presents that compound annual growth rate of leverage in pre-recession period (March 2009- March 2016) is 14.70 percent, and thereafter decrease growth in post-recession period (March 2012-March 2016) is 9.03 percent. The overall annual growth rate is 11.54 percent. Average leverage of the firm decrease significantly in post-recession period, as significant (one percent) t-test value is reject the null hypothesis that there is no significant difference in the average leverage pre-recession and post-recession period.

Table-10 presents that the frequency and percentage of age of the firm in various classes during 2009-2016. These classes are

- i) Rs.0 to Rs.18
- ii) Rs.18 to Rs.36
- iii) Rs.36 to Rs.54
- iv) Rs.54 to Rs.72
- v) Rs.72 to Rs.90
- vi) Rs.90 to Rs.108
- vii) Rs.108 to Rs.126
- viii) > Rs.126. Value in bracket is percentage of total frequency.

Table 10: Frequencies and Percentage of Age of the Firm in Various Classes during 2009-2016.

	Age	2009		2010		2011		2012		2013		2014		2015		2016	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	0-18	19	9.6	16	8.1	10	5.1	8	4.0	6	3.0	2	1.0	2	1.0	2	1.0
	18-36	82	41.4	82	41.4	86	43.4	85	42.9	85	42.9	88	44.4	85	42.9	78	39.4
	36-54	38	19.2	40	20.2	39	19.7	41	20.7	38	19.2	38	19.2	40	20.2	42	21.2
	54-72	35	17.7	36	18.2	36	18.2	37	18.7	41	20.7	42	21.2	42	21.2	45	22.7
	72-90	18	9.1	17	8.6	18	9.1	18	9.1	19	9.6	18	9.1	17	8.6	18	9.1
	90-108	3	1.5	4	2.0	5	2.5	6	3.0	6	3.0	7	3.5	9	4.5	9	4.5
	108-126	1	0.5	1	0.5	2	1.0	1	0.5	1	0.5	1	0.5	1	0.5	2	1.0
	Above 126	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0	2	1.0
Descriptive Statistics	Minimum	9		10		11		12		13		14		15		16	
	Maximum	146		147		148		149		150		151		152		153	
	Mean	42.93		43.94		45.44		45.94		46.94		47.95		48.95		49.95	
	Median	36		37		38		39		40		41		42		43	
	S.D.	23.72		23.73		24.17		23.73		23.73		23.72		23.72		23.72	
	Skewness	1.15		1.15		1.16		1.15		1.15		1.15		1.15		1.15	
	Variance	4.87		4.87		4.92		4.87		4.87		4.87		4.87		4.87	
		2009 – 2012 CAGR								2.28%							
		2012 – 2016 CAGR												2.09%			
		2009 – 2016 CAGR												2.19%			
		t-value												-3.365			
		p-value												.001**			

Source: CMIE Prowess iq Database

An analysis of age of the firm very few companies are 50 year old and most of companies come into existence after 1990s. The minimum age of the firm of sample companies varied between 9 in 2009 to 16 in 2016. The maximum age of the firm of sample companies between 146 in 2009 to 153 in 2016. The average of age of the firm is also varied between 42.93 in 2009 to 49.95 in 2016. It is positively skewed and more than the average of age of the firm.

The table also shows that the compound annual growth rate of age of the firm of pre-recession period (March 2009- March 2016) is 2.28 percent, and thereafter decrease in

annual growth rate of post-recession period (March 2012- March 2016) is 2.09 percent. The overall annual growth rate stands to be 2.19 percent. Average leverage of the firm decrease significantly in post-recession period, as significant (one percent) t-test value is reject the null hypothesis that there is a no significant difference in the average leverage of pre-recession and post-recession period of sample companies.

Table.-11 presents that the frequency and percentage of sample companies tax in various classes during 2009-2016. These classes are (i) < 0 (ii) Rs.0.14 to Rs.0.28 (iii)

Rs.0.28 to Rs.0.42 (iv) Rs.0.42 to Rs.0.56 (v) Rs.0.56 to Rs.0.70 (vi) Rs.0.70 to Rs.0.84 (vii) Rs.0.84 to Rs.0.98 (viii) > Rs.0.98. Value in bracket is percentage of total frequency.90 percent sample companies are tax payers The maximum return of the sample companies varied between 0.41 in 2010 to 3.53 in 2014.The average return of the

sample companies varied between 0.21 in 2013 to 0.24 in 210,2016. There were a minimum variation in tax of the sample manufacturing companies that is varied between 0.10 in 2010 and 2011 to 0.34 in 2014 and variance is same as standard deviation. Return of the sample companies is negatively skewed and less than the average.

Table 11: Frequencies and Percentage of Sample Companies Tax in Various Classes during 2009-2016

	Tax	2009		2010		2011		2012		2013		2014		2015		2016	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	Less than 0	73	36.9	22	11.1	22	11.1	24	12.1	22	11.1	25	12.6	20	10.1	29	14.6
	0.14-0.28	57	28.8	108	54.5	111	56.1	106	53.5	124	62.6	107	54.0	107	54.0	85	42.9
	0.28-0.42	61	30.8	63	31.8	64	32.3	62	31.3	49	24.7	61	30.8	63	31.8	74	37.4
	0.42 - 0.56	4	2.0	5	2.5	0	0	1	0.5	1	0.5	2	1.0	3	1.5	6	3.0
	0.56 - 0.70	0	0	0	0	0	0	1	0.5	0	0	0	0	1	0.5	1	0.5
	0.70 - 0.84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.5
	0.84 - 0.98	1	0.5	0	0	0	0	1	0.5	0	0	0	0	0	0	0	0
	More than 0.98	1	0.5	0	0	0	0	0	0	0	0	1	0.5	0	0	0	0
Descriptive Statistics	Minimum	-0.02		0.00		-0.30		-0.27		-1.31		-2.81		-0.67		-0.24	
	Maximum	1.09		0.49		0.41		0.89		0.48		3.53		0.63		0.77	
	Mean	0.22		0.24		0.23		0.23		0.21		0.23		0.23		0.24	
	Median	0.22		0.24		0.23		0.23		0.23		0.24		0.25		0.25	
	S.d.	0.14		0.10		0.10		0.12		0.15		0.34		0.13		0.13	
	Skewness	1.65		-0.07		-1.41		0.05		-6.16		1.00		-2.21		-0.28	
	Variance	0.38		0.31		0.31		0.34		0.38		0.58		0.35		0.36	
		2009-2012 CAGR								2.63%							
		2012-2016 CAGR								3.95%							
		2009-2016 CAGR								1.60%							
		t-value								-0.023							
	p-value								.982**								

Source: CMIE Prowess iq Database

The table also shows that the compound annual growth rate of corporate tax pre-recession period (March 2009- March 2016) is 2.63 percent, and thereafter increase annual growth rate in post-recession period (March 2012- March 2016) is 3.95 percent.

The overall annual growth rate tax is 1.60 percent. Average leverage of the firm increase significantly in post-recession period, as significant (five percent) t-test value is accept the null hypothesis that there is a significant difference in the average corporate tax of pre-recession and post-recession period of sample companies.

Conclusion

In present paper analysis the dividend trend and pattern of the Indian manufacturing companies during March 2009 to March 2016. While analyzing the dividend trend and pattern of Indian manufacturing companies dividend per share, profitability, dividend payout ratio, size of the firm, liquidity, price to book ratio, leverage, age of the firm, and tax were considered. Dividend per Share of sample companies indicated an increasing trend over the study period. The average DPS has increased initially, and thereafter shows decline trend. An analysis of distribution of sample companies according to amount of dividend per

share shows that most of the companies through the study period paid up to Rs. 5. Approximately 15 percent companies' paid dividend in the range of Rs.5 to Rs.10 and very few companies paid dividend more than Rs.35. The decline in growth rate of average DPS during post-recession phase may be due to more favorable investment opportunities persist during pre-recession period. The profitability of the selected sample companies provided approximately same trend as of DPS, and as per data recession has not much impact on the profitability of Indian manufacturing companies. The dividend payout ratio of Indian manufacturing companies also indicated increasing trend during the study period. The average payout ratio has increased in starting and thereafter starts declining. The size of the sample companies also increased during study period but, liquidity position of companies' registered negative trend thus, recession has negative impact on liquidity of the firms. Price to book ratio of sample companies was very high in initial study period and thereafter decreases. The financial leverage was sound during pre-recession period but it declines during post-recession period. Most of companies comes into existence after 1990s and 90 percent companies were paying on an average 42 percent of corporate tax.

References

1. Arif A, Akbar F. "Determinants of Dividend Policy : A Sectoral Analysis from Pakistan", *International Journal of Business and Behavioral Sciences*. 2013; 3(9):16-33.
2. Bhat R, Pandey IM. "Dividend Decision: A Study of Managers' Perceptions", *Decision*. 1994; 21(1&2):67-86.
3. Bodla BS, Pal Karam, Sura, Jasvir S. "Examining Application of Lintner's Dividend Model in Indian Banking Industry", *ICFAI Journal of Bank Management*. 2007; 6(4):40-59.
4. Brittain JA. "Corporate Dividend Policy", Washington DC, The brooking Institution, 1966.
5. Jensen G, Solbery D, Zoun T. "Simultaneous determination of insider ownership, debt and dividend policies" *Journal of Financial and Quantitative Analysis*. 1992; 27(2):247-263.
6. Khurana PK. "Corporate Dividend Policy in India", New Delhi Panchsheel Publishers, 1985, 269
7. Kuzucu N. "Determinants of Dividend Policy: A Panel Data Analysis for Turkish Listed Firms", *International Journal of Business and Management*. 2015; 10(11):149-161.
<https://doi.org/10.5539/ijbm.v10n11p149>
8. Lintner J. "Distribution of incomes of corporation among dividends, retained earnings and taxes", *American Economic Review*. 1956; 46:97-113.
9. Mahapatra RP, Sahu PK. "A Note on Determinants of Corporate Dividend Behavior in India-An Econometric Analysis", *Managerial Decision*, 1993; 20:1-22.
10. Mollah A, Sabur, Mobarek, Asma. "Dividend Policy and Behavior in an Emerging Market: An Empirical Investigation on the Partial Adjustment Dividend Behavior Models", *Finance India*. 2007; XXI(2):477-495.
11. Pal, Karam, Goyal, Puja. "Leading Determinants of Dividend Policy : A Case Study of Indian Banking Industry", *Managerial Decision*. 2007; 34(2):61-78.