CHAPTER 4

RESULTS AND DISCUSSION

The results of the processed data are presented in this chapter to exhibit the effect of dividend policy on profitability and share price of nifty companies. In order to investigate the effect of dividend policy on profitability and share price, a total of 34 companies in NSE NIFTY 50 index were selected on the basis of companies which have been paying dividend continuously for 15 years from 2004 – 05 to 2018 – 19. The data was obtained from the secondary sources. The collected data were analysed using ratio analysis, descriptive statistics, repeated measures ANOVA, correlation analysis, regression analysis and panel data regression analysis.

The result of the current study entitled "Impact of Dividend Policy on Profitability and Share Price of NIFTY companies" is presented in the following heads:

4.1 Factors determining dividend policy of NIFTY companies

4.2 Impact of dividend policy on profitability of NIFTY companies

4.3 Impact of dividend policy on share price of NIFTY companies

4.1 FACTORS DETERMINING DIVIDEND POLICY OF NIFTY COMPANIES

Dividend policy is the vital financial decision of the management. A company distributes proportionate earnings to their investors as dividend. Dividend policy structures the dividend payout ratio towards the shareholders. The current study has identified the following determinants of dividend policy.

The select variables considered to examine the determinants of dividend policy are,

i. Independent Variables – Profitability, Liquidity, Leverage, Firm Size, Growth, Risk, Past Dividend, Earnings per share, Tangibility, Investment Opportunities and Cash flow.

ii. Dependent Variable – Dividend Payout Ratio

4.1.1 Sector Wise Analysis of Dividend Determinant Factors

Sector wise analysis registers the yearly depiction of dividend policy determinants which is interpreted by the descriptive statistics.

A. Profitability

Profitability ratios are mostly employed by the investors and management to know the performance of the company. It is measured by dividing the net profit to sales for the period. The sector wise analysis of profitability of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 3.

The **Financial sector** has showed the maximum mean value of 20.46 in the year 2004-05 revealing that there was high profitability in the financial sector and the minimum value have been found at (10.94) in the year 2008-09. There was an increasing trend followed for the period from 2008-09 to 2010-11 and from 2012-13 to 2014-15. There was a decreasing trend for the period from 2005-06 to 2008-09 and from 2015-16 to 2018-19.The maximum coefficient of variation have been found in the year 2017 -18 with the value of 10.80.

The **Automobile sector** has registered the maximum mean value of 10.43 in the year 2005-06 revealing that there was high profitability and the minimum value have been found at (5.99) in the year 2014-15. There was a fluctuating trend followed for the period in all the subsequent years. The maximum inconsistency has been found in the year 2014-15 with the value of 11.54.

The **Energy sector** has recorded the maximum mean value of 14.78 in the year 2004-05 revealing that there was high profitability and the minimum value have been found at (10.16) in the year 2014-15. There was a decreasing trend followed for the period from 2011-12 to 2014-15. There was a fluctuating trend for the period from 2015-16 to 2018-19.The maximum inconsistency have been found in the year 2011-12 with the value of 13.47.

Table 3

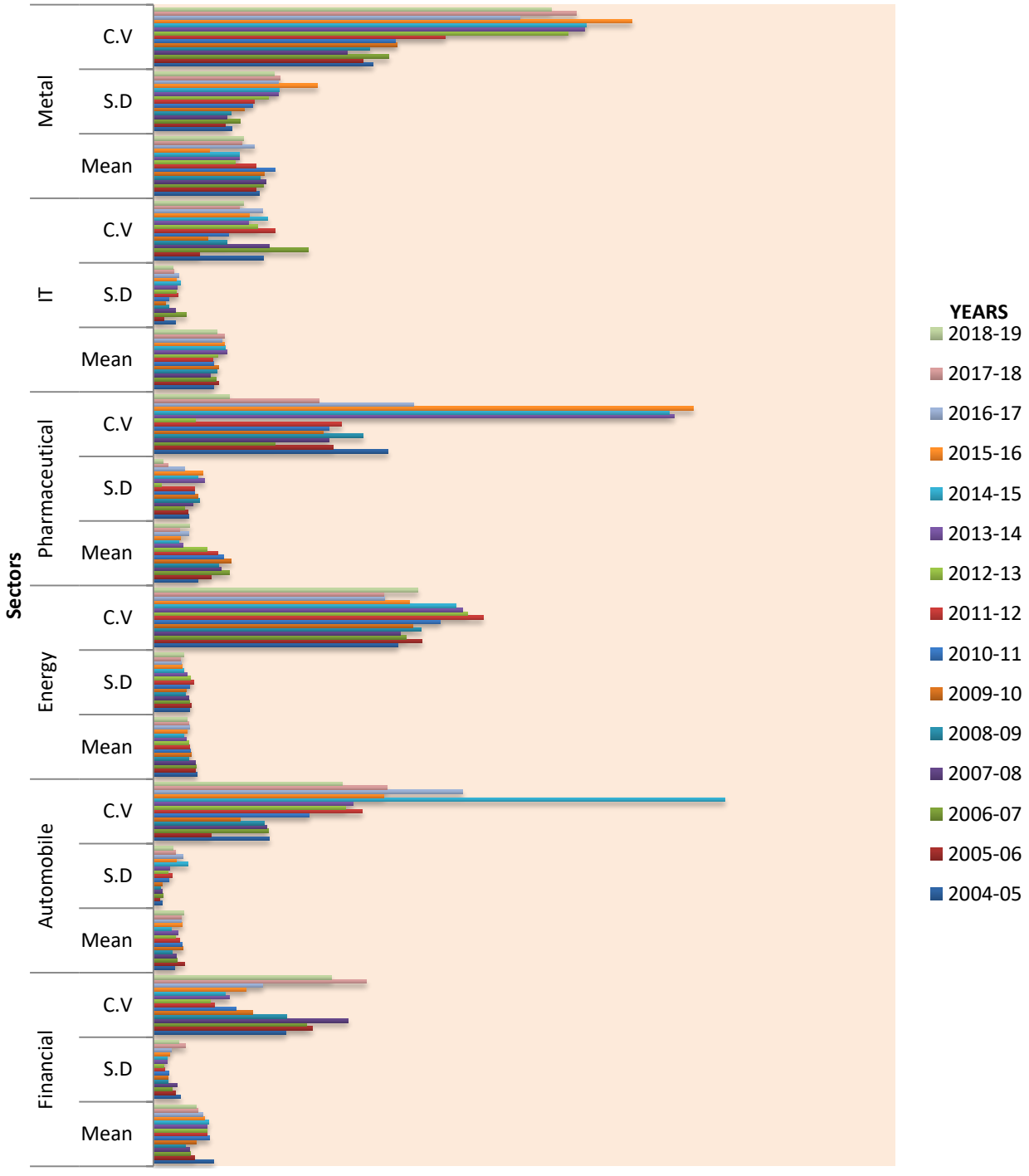
Profitability - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	20.46	9.12	44.57	7.31	2.85	38.98	14.78	12.19	82.47	15.00	11.86	79.06	20.32	7.52	37	35.64	26.37	73.98
2005-06	13.88	7.43	53.53	10.43	2.02	19.36	14.19	12.83	90.41	19.42	11.77	60.6	22.03	3.43	15.56	34.45	24.32	70.59
2006-07	12.50	6.47	51.76	8.05	3.13	38.88	14.42	12.30	85.29	25.72	10.56	41.05	21.25	11.10	52.23	37.05	29.35	79.21
2007-08	12.09	7.92	65.5	7.71	2.94	38.13	14.18	11.82	83.35	22.73	13.45	59.17	19.27	7.51	38.97	37.95	24.84	65.45
2008-09	10.94	4.91	44.88	6.43	2.40	37.32	11.87	10.73	90.39	22.14	15.64	70.64	21.49	5.30	24.66	35.92	26.21	72.96
2009-10	14.52	4.85	33.4	10.02	2.92	29.14	12.82	11.21	87.44	26.20	15.02	57.32	22.11	4.09	18.49	37.40	30.77	82.27
2010-11	18.97	5.27	27.78	9.68	5.08	52.47	12.49	12.07	96.63	23.63	13.97	59.11	20.26	5.16	25.46	40.94	33.45	81.7
2011-12	17.95	3.72	20.72	8.90	6.26	70.33	12.12	13.47	111.13	21.71	13.75	63.33	20.16	8.29	41.12	34.67	34.15	98.5
2012-13	18.12	3.46	19.09	7.43	4.82	64.87	11.82	12.52	105.92	18.07	2.56	14.16	21.73	7.64	35.15	27.72	38.74	139.75
2013-14	18.20	4.66	25.6	8.26	5.55	67.19	11.01	11.47	104.178	9.84	17.28	175.60	24.67	7.92	32.1	28.92	42.03	145.33
2014-15	18.67	4.52	24.2	5.99	11.54	192.65	10.16	10.36	101.96	8.66	15.05	173.78	24.10	9.26	38.42	29.03	42.40	146.05
2015-16	17.24	5.39	31.26	9.82	7.64	77.8	11.31	9.77	86.38	9.11	16.57	181.88	23.84	7.73	32.42	18.86	55.28	161.22
2016-17	16.76	6.19	36.93	9.52	9.92	104.2	12.14	9.46	77.92	11.97	10.49	87.63	23.05	8.50	36.87	34.09	42.10	123.49
2017-18	15.02	10.80	71.9	9.49	7.47	78.71	11.88	9.22	77.6	8.92	4.97	55.71	23.90	6.91	28.91	29.95	42.71	142.6
2018-19	14.40	8.64	60	10.32	6.57	63.66	11.47	10.23	89.18	12.19	3.14	25.75	21.58	6.54	30.3	30.46	40.83	134.04

Source: Computed data

Chart 2
Profitability - Sector Wise Analysis



The **Pharmaceutical sector** has the maximum mean value of 26.20 in the year 2009-10 revealing that there was high profitability and the minimum value have been found at (8.66) in the year 2014-15. There was an increasing trend followed for the period from 2004-05 to 2006-07. There was a decreasing trend for the period from 2011-12 to 2014-15.The maximum coefficient of variation has been found in the year 2015 -16 with the value of 181.88.

The **IT sector** has showed with the maximum mean value of 24.67 in the year 2013-14 revealing that there was high profitability and the minimum value have been found at (19.27) in the year 2007-08. There was a fluctuating trend followed for the period from 2004-05 to 2018-19. The maximum coefficient of variation has been found in the year 2006-07 with the value of 52.23.

The **Metal sector** has revealed the maximum mean value of 40.94 in the year 2010-11 and the minimum value have been found at (18.86) in the year 2015-16. There was a fluctuating trend followed for the period from 2004-05 to 2018-19. The maximum inconsistency has been found in the year 2015-16 with the value of 55.28.

As far as the net profit margin is concerned among all the selected sectors, the metal sector has highest value of profitability in the year 2010-11 as it registered remarkably high performance in the year 2010-11. The automobile sector has shown the least value of (5.99) in the year 2014-15. Mostly all the sectors fluctuated during the study period.

B. Liquidity

Liquidity is an index of the company's short term financial level. The sector wise analysis of liquidity of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 4.

Table 4

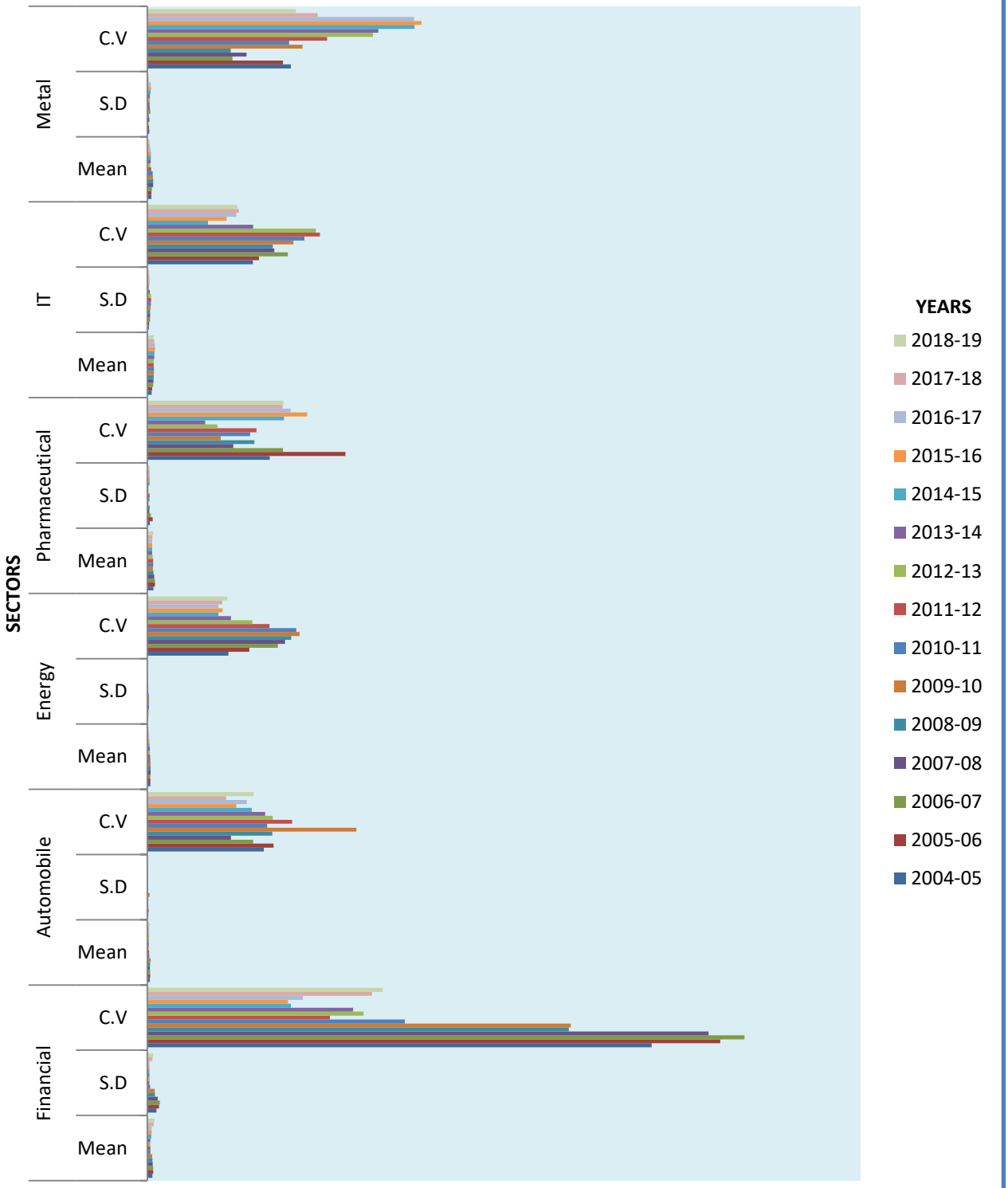
Liquidity - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	1.86	3.29	176.88	0.93	0.38	40.86	1.09	0.31	28.44	2.21	0.95	42.98	1.54	0.57	37.01	1.49	0.75	50.33
2005-06	2.08	4.18	200.96	1.06	0.47	44.33	1.09	0.39	35.77	2.69	1.87	69.51	1.76	0.69	39.2	1.47	0.7	47.61
2006-07	2.13	4.46	209.38	1.05	0.39	37.14	1.07	0.49	45.79	2.73	1.3	47.61	2.05	1.01	49.26	1.64	0.49	29.87
2007-08	1.88	3.7	196.8	0.92	0.27	29.34	1.16	0.56	48.27	2.45	0.74	30.2	2.22	0.99	44.59	2.07	0.72	34.78
2008-09	1.86	2.75	147.84	0.98	0.43	43.87	1.19	0.6	50.42	2.21	0.83	37.55	2.27	1	44.05	2.05	0.6	29.26
2009-10	1.75	2.6	148.57	1.2	0.88	73.33	1.16	0.62	53.44	2.02	0.52	25.74	2.34	1.2	51.28	2	1.09	54.5
2010-11	1.14	1.03	90.35	0.76	0.32	42.1	1.09	0.57	52.29	2.05	0.74	36.09	2.34	1.29	55.12	1.87	0.93	49.73
2011-12	1.14	0.73	64.03	0.63	0.32	50.79	0.98	0.42	42.85	2.09	0.8	38.27	2.28	1.38	60.52	1.35	0.86	63.07
2012-13	1.12	0.85	75.89	0.59	0.26	44.06	0.95	0.35	36.84	1.95	0.48	24.61	2.25	1.33	59.11	1.15	0.91	79.13
2013-14	1.08	0.78	72.22	0.58	0.24	41.37	0.92	0.27	29.34	1.77	0.36	20.33	2.45	0.91	37.14	1.16	0.94	81.03
2014-15	1.47	0.74	50.34	0.6	0.22	36.66	0.84	0.21	25	1.69	0.81	47.92	2.53	0.54	21.34	1.28	1.2	93.75
2015-16	1.6	0.79	49.37	0.64	0.2	31.25	0.72	0.19	26.38	1.73	0.97	56.06	2.73	0.76	27.83	1.3	1.25	96.15
2016-17	1.52	0.83	54.6	0.63	0.22	34.92	0.64	0.16	25	1.77	0.89	50.28	2.72	0.85	31.25	1.24	1.16	93.54
2017-18	2.31	1.82	78.78	0.65	0.18	27.69	0.57	0.15	26.31	1.83	0.87	47.54	2.43	0.78	32.09	0.97	0.58	59.79
2018-19	2.53	2.09	82.6	0.83	0.31	37.34	0.57	0.16	28.07	2.07	0.99	47.82	2.31	0.73	31.6	0.94	0.49	52.12

Source: Computed data

Chart 3
Liquidity - Sector Wise Analysis



The **Financial sector** has showed the maximum mean value of 2.53 in the year 2018-19 revealing that there was high liquidity and the minimum value have been found at (1.08) in the year 2013-14. There was an increasing trend followed for the period from 2004-05 to 2006-07. There was a decreasing trend for the period from 2007-08 to 2013-14.The maximum coefficient of variation have been found in the year 2006 -07 with the value of 209.38.

The **Automobile sector** has registered the maximum mean value of 1.2 in the year 2009-10 revealing that there was high liquidity and the minimum value have been found at (0.58) in the year 2013-14. There was an increasing trend followed for the period from 2014-15 to 2018-19. There was a decreasing trend for the period from 2010-11 to 2013-14. The maximum coefficient of variation has been found in the year 2009-10 with the value of 73.33.

The **Energy sector** has recorded the maximum mean value of 1.19 in the year 2008-09 revealing that there was high liquidity and the minimum value have been found at (0.57) in the year 2017-18 and 2018-19. There was a decreasing trend followed for the period from 2009-10 to 2017-18. The maximum inconsistency has been found in the year 2009-10 with the value of 53.44.

The **Pharmaceutical sector** has the maximum mean value of 2.73 in the year 2006-07 revealing that there was high liquidity and the minimum value have been found at (1.69) in the year 2014-15. There was an increasing trend followed for the period from 2007-08 to 2009-10 and 2012-13 to 2014-15. There was an decreasing trend for the period from 2005-06 to 2008-09, 2015-16 to 2018-19.The maximum inconsistency has been found in the year 2005-06 with the value of 69.51.

The **IT sector** has revealed the maximum mean value of 2.73 in the year 2015-16 and the minimum value have been found at (1.54) in the year 2004-05. There was an increasing trend followed for the period from 2004-05 to 2008-09. It stood constant during the years 2009-2011. There was a decreasing trend for the period from 2016-17 to 2018-19.The maximum inconsistency have been found in the year 2011-12 with the value of 60.52.

The **metal sector** has showed with the maximum mean value of 2.07 in the year 2007-08 revealing that there was high liquidity and the minimum value have been found at (0.94) in the year 2018-19. There was an increasing trend followed for the period from 2006-07 to 2008-09 and 2013-14 to 2015-16. There was a decreasing trend followed for the period from 2008-09 to 2012-13 and 2016-17 to 2018 -19. The maximum inconsistency has been found in the year 2015-16 with the value of 96.15.

Among all the six sectors, the IT and pharmaceutical sector has highest value of liquidity. It indicates that the two sectors have more ability to meet the short term obligation of the business enterprise and recorded the sound short term financial strength of the firm. The energy sector registered least value of (0.57) in the year 2017-18 and 2018-19.

C. Leverage

Leverage determines the relationship between debt and equity. The sector wise analysis of leverage of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 5.

The **Financial sector** has showed the maximum mean value of 12.08 in the year 2006-07 revealing that there was high leverage in the financial sector and the minimum value have been found at (7.87) in the year 2016-17. There was a fluctuating trend followed for the period in all the subsequent years. The maximum coefficient of variation has been found in the year 2017 -18 with the value of 10.80.

The **Automobile sector** has registered the maximum mean value of 0.4 in the year 2008-09 revealing that there was high leverage and the minimum value have been found at (0.19) in the year 2016-17. It stood constant during the years 2005-07. The maximum coefficient of variation has been found in the year 2017 -18 with the value of 190.47.

The **Energy sector** has recorded the maximum mean value of 1.13 in the year 2012-13 revealing that there was high leverage and the minimum value have been found at (0.54) in the year 2004-05. There was an increasing trend followed for the period from 2005-06 to 2009-10. The maximum coefficient of variation has been found in the year 2017-18 with the value of 96.2.

Table 5

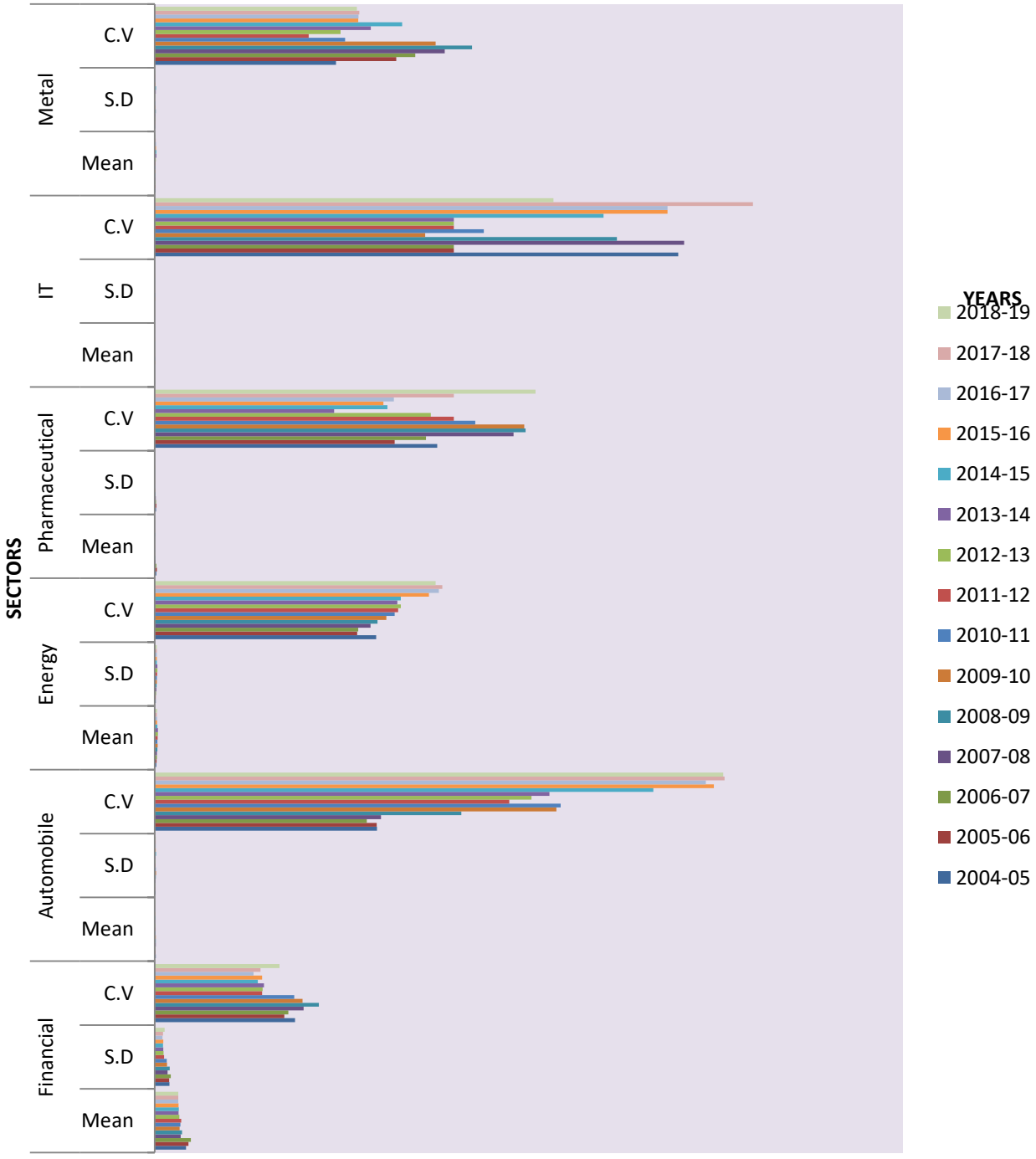
Leverage - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	10.5	4.93	46.95	0.39	0.29	74.35	0.54	0.4	74.07	0.54	0.51	94.44	0.04	0.07	175	0.33	0.2	60.6
2005-06	11.29	4.89	43.31	0.31	0.23	74.19	0.62	0.42	67.74	0.76	0.61	80.26	0.01	0.01	100	0.26	0.21	80.76
2006-07	12.08	5.4	44.7	0.31	0.22	70.96	0.72	0.49	68.05	0.54	0.49	90.74	0.02	0.02	100	0.31	0.27	87.09
2007-08	8.73	4.35	49.82	0.37	0.28	75.67	0.79	0.57	72.15	0.3	0.36	120	0.09	0.16	177	0.33	0.32	96.96
2008-09	9.14	5.02	54.92	0.4	0.41	102.5	0.94	0.7	74.46	0.25	0.31	124	0.11	0.17	154.54	0.33	0.35	106.06
2009-10	8.4	4.15	49.4	0.35	0.47	134.28	1.02	0.79	77.45	0.17	0.21	123.52	0.21	0.19	90.47	0.33	0.31	93.93
2010-11	8.66	4.04	46.65	0.28	0.38	135.71	0.96	0.77	80.2	0.14	0.15	107.14	0.2	0.22	110	0.33	0.21	63.63
2011-12	8.9	3.2	35.95	0.27	0.32	118.51	1.02	0.83	81.37	0.15	0.15	100	0.14	0.14	100	0.33	0.17	51.51
2012-13	8.28	2.99	36.11	0.27	0.34	125.92	1.13	0.93	82.32	0.13	0.12	92.3	0.12	0.12	100	0.37	0.23	62.16
2013-14	7.97	2.91	36.51	0.25	0.33	132	1.11	0.9	81.08	0.15	0.09	60	0.07	0.07	100	0.54	0.39	72.22
2014-15	8.11	2.8	34.52	0.27	0.45	166.66	0.96	0.79	82.29	0.18	0.14	77.77	0.06	0.09	150	0.58	0.48	82.75
2015-16	7.99	2.87	35.91	0.23	0.43	186.95	0.84	0.77	91.66	0.17	0.13	76.47	0.07	0.12	171.42	0.47	0.32	68.08
2016-17	7.87	2.6	33.03	0.19	0.35	184.21	0.8	0.76	95	0.15	0.12	80	0.07	0.12	171.42	0.44	0.3	68.18
2017-18	7.89	2.79	35.36	0.21	0.4	190.47	0.79	0.76	96.2	0.14	0.14	100	0.03	0.06	200	0.38	0.26	68.42
2018-19	7.93	3.31	41.74	0.2	0.38	190	0.82	0.77	93.9	0.11	0.14	127.27	0.06	0.08	133.33	0.34	0.23	67.64

Source: Computed data

Chart 4
Leverage - Sector Wise Analysis



The **Pharmaceutical sector** has the maximum mean value of 0.76 in the year 2005-06 revealing that there was high leverage and the minimum value have been found at (0.11) in the year 2018-19. There was an increasing trend followed for the period from 2004-05 to 2005-06 and from 2013-14 to 2014-15. There was a decreasing trend for the period from 2006-07 to 2010-11and 2015-16 to 2018-19.The maximum coefficient of variation has been found in the year 2018 -19 with the value of 127.27.

The **IT sector** has showed with the maximum mean value of 0.21 in the year 2009-10 revealing that there was high leverage and the minimum value have been found at (0.01) in the year 2005-06. There was an increasing trend followed for the period from 2006-07 to 2009-10. There was a decreasing trend followed for the period from 2012-13 to 2014-15. It stood constant during the years 2015-17. The maximum coefficient of variation has been found in the year 2017-18 with the value of 200.

The **Metal sector** has revealed the maximum mean value of 0.58 in the year 2014-15 and the minimum value have been found at (0.26) in the year 2005-06. There was an increasing trend followed for the period from 2012-13 to 2014-15. There was a decreasing trend followed for the period from 2015-16 to 2018-19. It stood constant during the years 2007-12. The maximum inconsistency has been found in the year 2008-09 with the value of 106.06.

Amidst all the selected sectors, the financial sector has used a large (12.08) amount of long term financing in the year 2006-07. It reveals that the main source of fund from deposits and investments. The IT sector has shown the least value of 0.01 in the year 2005-06 indicates that they are not depend more on outsiders fund.

D. Firm Size

The sector wise analysis of firm size of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 6.

Table 6

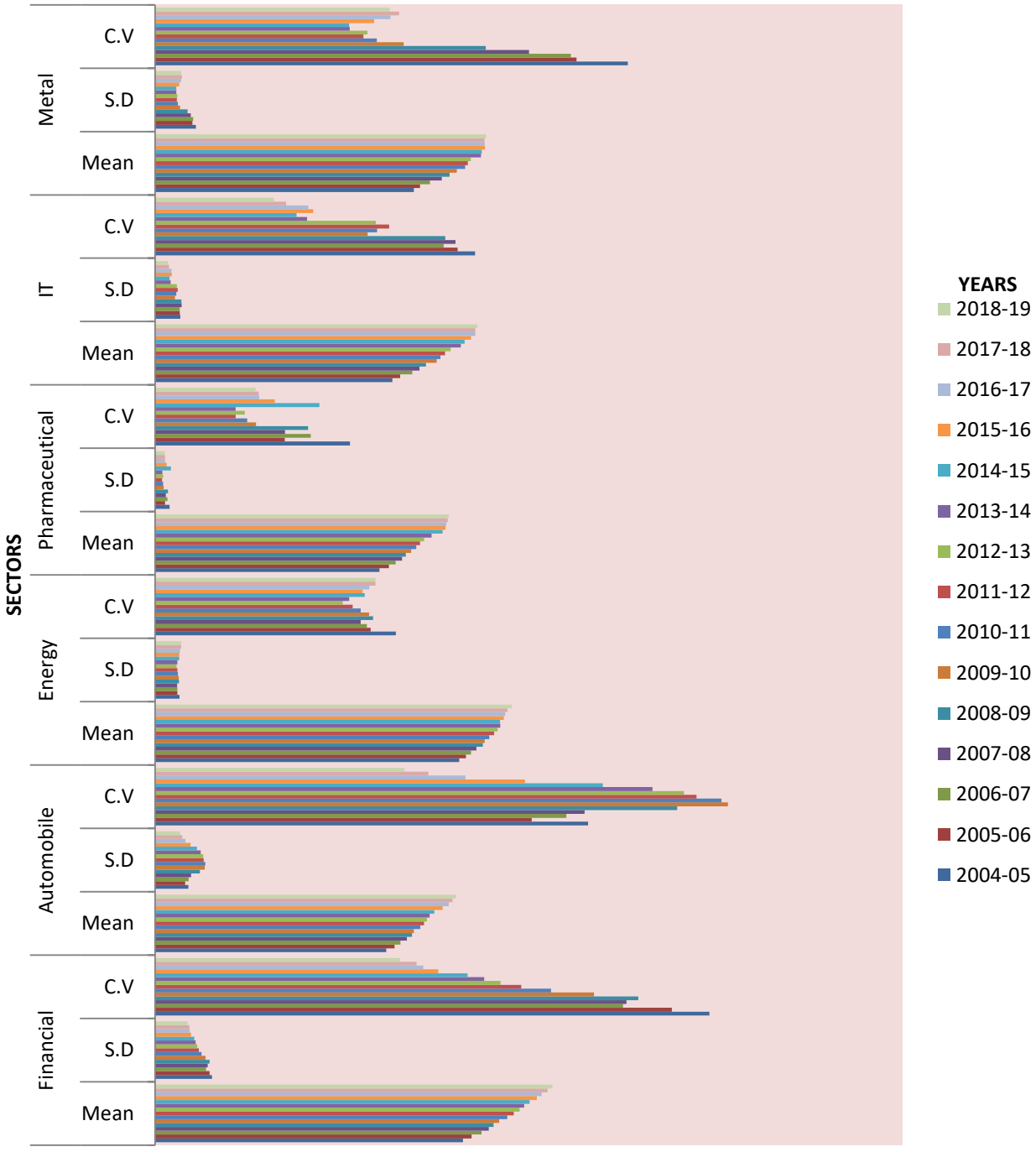
Firm Size - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	10.3	1.91	18.54	7.73	1.12	14.48	10.17	0.82	8.06	7.51	0.49	6.52	7.94	0.85	10.7	8.66	1.37	15.81
2005-06	10.59	1.83	17.28	8.01	1.01	12.6	10.4	0.75	7.21	7.82	0.34	4.34	8.2	0.83	10.12	8.86	1.25	14.1
2006-07	10.92	1.71	15.65	8.21	1.13	13.76	10.57	0.75	7.09	8.05	0.42	5.21	8.6	0.83	9.65	9.2	1.28	13.91
2007-08	11.16	1.76	15.77	8.42	1.21	14.37	10.75	0.74	6.88	8.26	0.36	4.35	8.85	0.89	10.05	9.59	1.2	12.51
2008-09	11.32	1.83	16.16	8.59	1.5	17.46	10.96	0.8	7.29	8.39	0.43	5.12	9.06	0.88	9.71	9.85	1.09	11.06
2009-10	11.51	1.69	14.68	8.66	1.66	19.16	11.03	0.79	7.16	8.57	0.29	3.38	9.42	0.67	7.11	10.09	0.84	8.32
2010-11	11.78	1.56	13.24	8.87	1.68	18.94	11.18	0.77	6.88	8.74	0.27	3.08	9.55	0.71	7.43	10.37	0.77	7.42
2011-12	12	1.47	12.25	9	1.63	18.11	11.34	0.75	6.61	8.86	0.24	2.7	9.7	0.76	7.83	10.46	0.73	6.97
2012-13	12.19	1.41	11.56	9.1	1.61	17.69	11.46	0.72	6.28	9	0.27	3	9.89	0.73	7.38	10.56	0.75	7.1
2013-14	12.35	1.36	11.01	9.19	1.53	16.64	11.55	0.75	6.49	9.25	0.25	2.7	10.23	0.52	5.08	10.9	0.71	6.51
2014-15	12.53	1.31	10.45	9.34	1.4	14.98	11.54	0.81	7.01	9.62	0.53	5.5	10.35	0.49	4.73	10.93	0.71	6.49
2015-16	12.77	1.21	9.47	9.62	1.19	12.37	11.66	0.81	6.94	9.72	0.39	4.01	10.57	0.56	5.29	11.04	0.81	7.33
2016-17	12.93	1.16	8.97	9.82	1.02	10.38	11.71	0.84	7.17	9.74	0.34	3.49	10.71	0.55	5.13	11.03	0.87	7.88
2017-18	13.13	1.15	8.75	9.95	0.91	9.14	11.79	0.87	7.37	9.79	0.34	3.47	10.71	0.47	4.38	11.02	0.9	8.16
2018-19	13.29	1.09	8.2	10.07	0.84	8.34	11.93	0.88	7.37	9.82	0.33	3.36	10.78	0.43	3.98	11.07	0.87	7.85

Source: Computed data

Chart 5
Firm Size - Sector Wise Analysis



The **Financial sector** has showed the maximum mean value of 13.29 in the year 2018-19 and the minimum value have been found at (10.3) in the year 2004-05. There was a continuous increasing trend for the period from 2004-05 to 2018-19. The maximum coefficient of variation has been found in the year 2004 -05 with the value of 18.54.

The **Automobile sector** has registered the maximum mean value of 10.07 in the year 2018-19 and the minimum value have been found at (7.73) in the year 2008-09. There was a gradual increase in the mean value of firm size in all the subsequent years. The maximum coefficient of variation has been found in the year 2009-10 with the value of 19.16.

The **Energy sector** has recorded the maximum mean value of 11.93 in the year 2018-19 and the minimum value have been found at (10.17) in the year 2008-09. There was a continual increase in the mean value of firm size followed for the period from 2004-05 to 2018-19. The maximum coefficient of variation has been found in the year 2004-05 with the value of 8.06.

The **Pharmaceutical sector** has the maximum mean value of 9.82 in the year 2018-19 and the minimum value have been found at (7.51) in the year 2008-09. There was a gradual increase in the mean value of firm size in all the subsequent years. The maximum coefficient of variation has been found in the year 2004-05 with the value of 6.52.

The **IT sector** has showed with the maximum mean value of 10.78 in the year 2018-19 and the minimum value have been found at (7.94) in the year 2004-05. There was an increasing trend followed for the period from 2004-05 to 2018-19. It stood constant during the years 2016 -18. The maximum coefficient of variation has been found in the year 2005-06 with the value of 10.12.

The **Metal sector** has revealed the maximum mean value of 11.07 in the year 2010-11 and the minimum value have been found at (8.66) in the year 2004-05. There was an increasing trend followed for the period from 2004-05 to 2015-16. There was a slight decrease in the mean value of firm value for the period from 2016-18. The maximum inconsistency has been found in the year 2004-05 with the value of 1.37.

Among all the sectors, financial sector has recorded the maximum mean value of 13.29 in the year 2018-19. The pharmaceutical sector has shown the least value of 7.51 in the year 2008-09. The maximum inconsistency was found in the year 2004-05 in all the sectors except automobile and IT sector.

E. Growth

The company's growth is ascertained by dividing the market capitalization to net asset. The sector wise analysis of growth of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 7.

The **Financial sector** has showed the maximum mean value of 4.31 in the year 2018-19 revealing that there was high growth in the financial sector and the minimum value have been found at (1.58) in the year 2008-09. The mean value shows alternate increase and decrease in the study period. The maximum coefficient of variation has been found in the year 2008 -09 with the value of 66.45.

The **Automobile sector** has registered the maximum mean value of 10.11 in the year 2014-15 indicating that there was highest growth in this particular sector and the minimum value have been found at (3.82) in the year 2004-05. There was an increasing trend followed for the period from 2012-13 to 2014-15 and the decreasing trend for the period from 2015-16 to 2018-19. The maximum inconsistency has been found in the year 2014-15 with the value of 13.15.

The **Energy sector** has recorded the maximum mean value of 2.41 in the year 2007-08 showing that there was high growth and the minimum value have been found at (1.43) in the year 2013-14 and 2015-16. There was a fluctuating trend for the period from 2004-05 to 2018-19.The maximum coefficient of variation has been found in the year 2006-07 with the value of 63.79.

Table 7

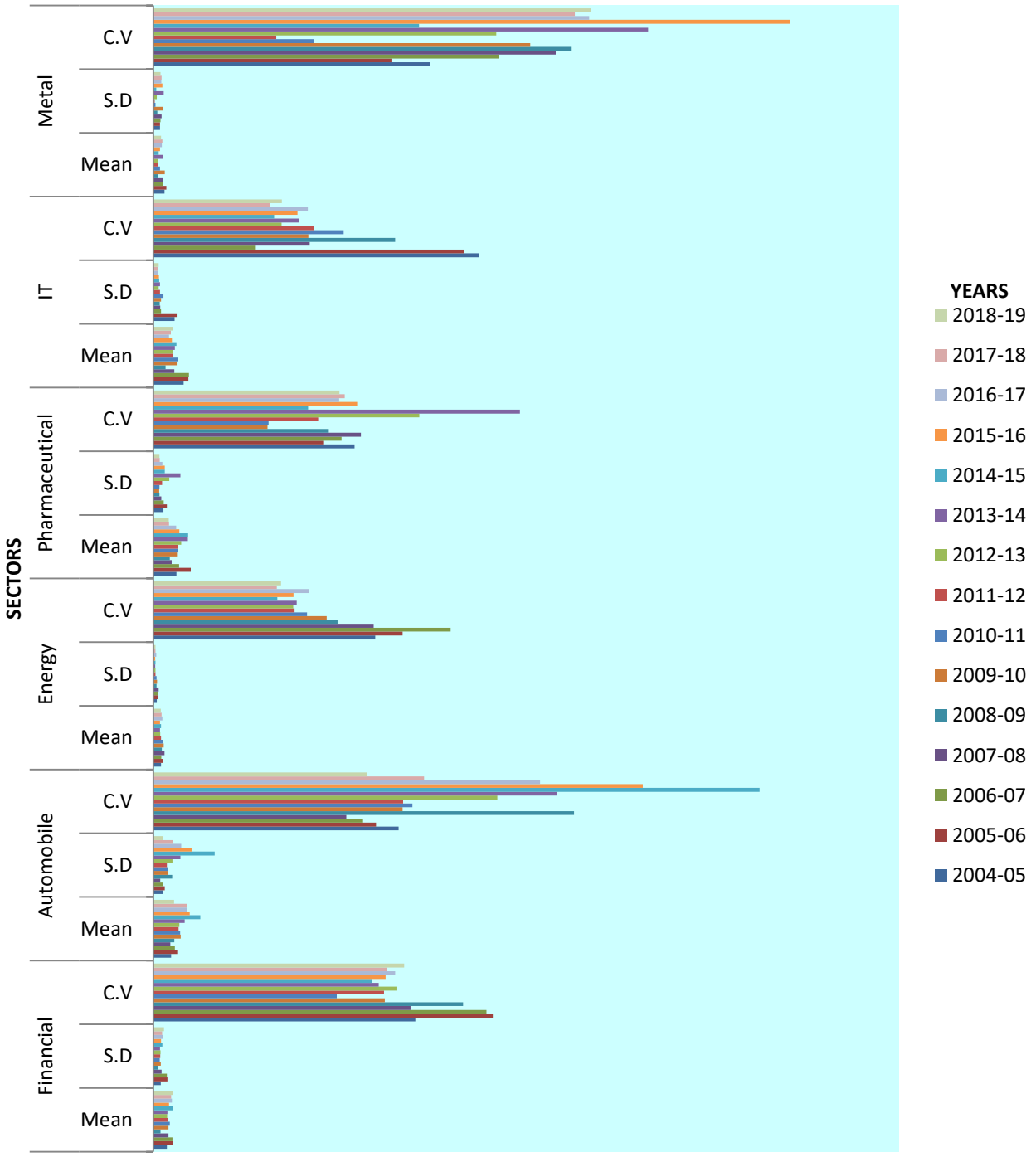
Growth - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	2.9	1.63	56.2	3.82	2.01	52.61	1.66	0.79	47.59	5	2.16	43.2	6.53	4.56	69.83	2.39	1.42	59.41
2005-06	4.2	3.06	72.85	5.15	2.46	47.76	2	1.07	53.5	8.05	2.95	36.64	7.52	5.02	66.75	2.8	1.43	51.07
2006-07	4.1	2.93	71.46	4.62	2.08	45.02	1.74	1.11	63.79	5.55	2.24	40.36	7.63	1.68	22.01	2.13	1.58	74.17
2007-08	3.28	1.81	55.18	3.67	1.52	41.41	2.41	1.14	47.3	3.93	1.75	44.52	4.5	1.51	33.55	2.05	1.77	86.34
2008-09	1.58	1.05	66.45	4.52	4.08	90.26	1.82	0.72	39.56	3.53	1.33	37.67	2.66	1.38	51.87	0.96	0.86	89.58
2009-10	3.28	1.63	49.69	5.87	3.14	53.49	2.23	0.83	37.21	5.1	1.25	24.5	5.02	1.67	33.26	2.46	1.99	80.89
2010-11	3.53	1.39	39.37	5.79	3.22	55.61	2.06	0.68	33	5.3	1.31	24.71	5.36	2.19	40.85	1.45	0.5	34.48
2011-12	3.09	1.53	49.51	5.45	2.92	53.57	1.65	0.5	30.3	5.37	1.9	35.38	4.27	1.47	34.42	1.06	0.28	26.41
2012-13	3	1.57	52.33	5.58	4.12	73.83	1.5	0.45	30	5.99	3.42	57.09	4.29	1.18	27.5	1.06	0.78	73.58
2013-14	3.02	1.46	48.34	6.73	5.83	86.62	1.43	0.44	30.76	7.44	5.85	78.62	4.66	1.46	31.33	2.12	2.25	106.13
2014-15	4.2	1.97	46.9	10.11	13.15	130.06	1.69	0.45	26.62	7.5	2.49	33.2	4.97	1.29	25.95	1.14	0.65	57.01
2015-16	3.37	1.68	49.85	7.81	8.2	104.99	1.43	0.43	30.06	5.58	2.45	43.9	4.01	1.24	30.92	1.45	1.98	136.55
2016-17	4.01	2.08	51.87	7.23	6	82.98	1.95	0.65	33.33	4.94	1.97	39.87	3.38	1.12	33.13	1.85	1.73	93.51
2017-18	3.83	1.92	50.13	7.26	4.22	58.12	1.81	0.48	26.51	3.36	1.38	41.07	3.77	0.94	24.93	1.98	1.79	90.4
2018-19	4.31	2.32	53.82	4.45	2.04	45.84	1.64	0.45	27.43	3.33	1.33	39.93	4.21	1.16	27.55	1.65	1.55	93.93

Source: Computed data

Chart 6
Growth - Sector Wise Analysis



The **Pharmaceutical sector** has the maximum mean value of 8.05 in the year 2009-10 revealing that there was high growth and the minimum value have been found at (3.33) in the year 2018-19. There was an increasing trend followed for the period from 2009-10 to 2014-15. There was a decreasing trend for the period from 2015-16 to 2018-19.The maximum coefficient of variation has been found in the year 2013 -14 with the value of 78.62.

The **IT sector** has showed with the maximum mean value of 7.63 in the year 2006-07 and the minimum value have been found at (2.66) in the year 2008-09. There was a fluctuating trend followed for the period from 2004-05 to 2018-19. The maximum coefficient of variation has been found in the year 2004-05 with the value of 69.83.

The **Metal sector** has revealed the maximum mean value of 2.56 in the year 2005-06 and the minimum value have been found at (0.96) in the year 2008-09. There was a decreasing trend followed for the period from 2005-06 to 2008-09. The mean value of growth stood constant for the period 2011-2013. The maximum inconsistency has been found in the year 2015-16 with the value of 1.98.

Among all the six sectors, the automobile sector recorded the maximum growth rate at 10.11in the year 2014-15 it indicates that the sector could convert more of market capitalization from its net assets while metal sector has shown the least value of 0.96 in the year 2008-09.

F. Risk

The sector wise analysis of risk of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 8.

Table 8

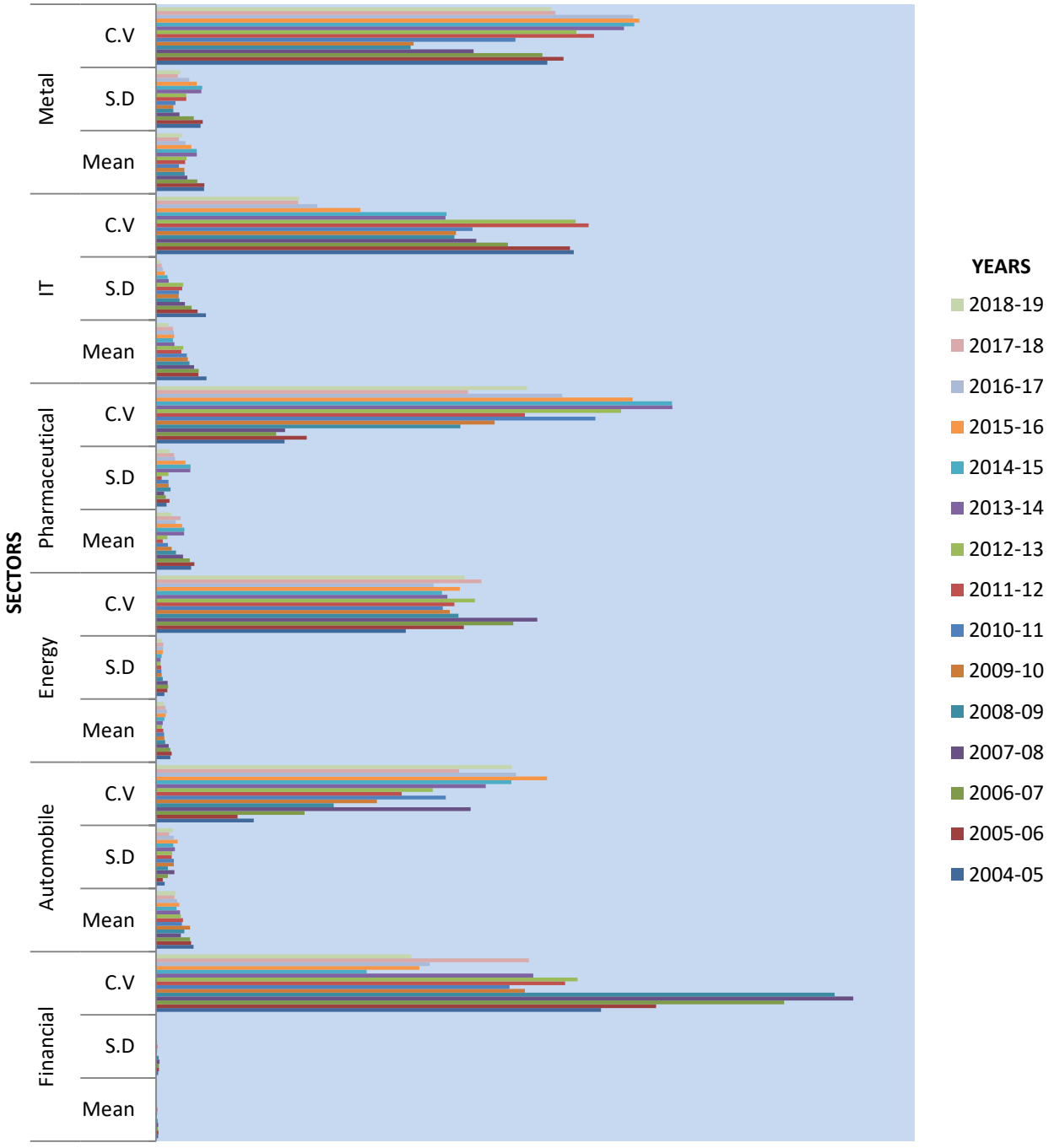
Risk - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	0.54	0.57	105.55	8.96	2.08	23.21	3.44	2.04	59.3	8.33	2.54	30.49	11.98	11.87	99.08	11.4	10.58	92.8
2005-06	0.59	0.7	118.64	8.37	1.62	19.35	3.71	2.71	73.04	9.09	3.25	35.75	10.1	9.92	98.21	11.49	11.11	96.69
2006-07	0.49	0.73	148.97	8.12	2.86	35.22	3.41	2.89	84.75	8.06	2.3	28.53	10.13	8.46	83.51	9.84	9.02	91.66
2007-08	0.52	0.86	165.38	5.91	4.41	74.61	3.04	2.75	90.46	6.43	1.97	30.63	9.07	6.89	75.96	7.46	5.62	75.33
2008-09	0.41	0.66	160.97	6.76	2.85	42.15	2.23	1.6	71.74	4.79	3.46	72.23	7.94	5.62	70.78	6.82	4.12	60.41
2009-10	0.24	0.21	87.5	8.09	4.24	52.41	1.98	1.38	69.69	3.76	3.02	80.31	7.56	5.38	71.16	6.74	4.12	61.12
2010-11	0.31	0.26	83.87	6.18	4.25	68.77	1.94	1.32	68.04	2.82	2.94	104.25	7.3	5.48	75.06	5.44	4.64	85.29
2011-12	0.34	0.33	97.05	6.4	3.73	58.28	1.78	1.26	70.78	1.6	1.4	87.5	6.05	6.21	102.64	6.95	7.22	103.88
2012-13	0.29	0.29	100	5.94	3.9	65.65	1.44	1.09	75.69	2.71	2.99	110.33	6.51	6.48	99.53	7.25	7.23	99.72
2013-14	0.19	0.17	89.47	5.74	4.49	78.22	1.62	1.12	69.13	6.67	8.17	122.48	4.41	3.03	68.7	9.72	10.79	111
2014-15	0.14	0.07	50	4.91	4.14	84.31	1.99	1.35	67.83	6.73	8.24	122.43	4.06	2.8	68.96	9.67	10.97	113.44
2015-16	0.16	0.1	62.5	5.52	5.12	92.75	2.33	1.68	72.1	6.21	7.02	113.04	4.31	2.09	48.49	8.43	9.67	114.7
2016-17	0.2	0.13	65	5	4.27	85.4	2.58	1.7	65.89	4.7	4.53	96.38	4.26	1.63	38.26	6.98	7.9	113.18
2017-18	0.26	0.23	88.46	4.38	3.15	71.91	2.24	1.73	77.23	5.84	4.32	73.97	4.06	1.37	33.74	5.5	5.21	94.72
2018-19	0.33	0.2	60.6	4.7	3.97	84.46	1.9	1.39	73.15	3.67	3.23	88.01	3.06	1.04	33.98	6.15	5.77	93.82

Source: Computed data

Chart 7
Risk - Sector Wise Analysis



The **Financial sector** has showed the maximum mean value of 0.59 in the year 2005-06 revealing that there was high risk in the financial sector and the minimum value have been found at (0.14) in the year 2014-15. There was an increasing trend followed for the period from 2014-15 to 2018-19. There was a fluctuating trend for the rest of the study period. The maximum coefficient of variation has been found in the year 2007 -08 with the value of 0.86.

The **Automobile sector** has registered the maximum mean value of 8.96 in the year 2004-05 depicting higher risk in the sector and the minimum value have been found at (4.38) in the year 2017-18. There was a decreasing trend followed for the period from 2005-06 to 2007-08. The maximum inconsistency has been found in the year 2015-16 with the value of 92.75.

The **Energy sector** has recorded the maximum mean value of 3.71 in the year 2005-06 revealing that there was high risk and the minimum value have been found at (1.44) in the year 2012-13. There was an increasing trend for the period from 2013-14 to 2016-17. There was a decreasing trend followed for the period from 2007-08 to 2012-13. The maximum coefficient of variation has been found in the year 2007-08 with the value of 90.46.

The **Pharmaceutical sector** has the maximum mean value of 9.09 in the year 2005-06 revealing that there was high risk and the minimum value have been found at (1.6) in the year 2011-12. There was an increasing trend followed for the period from 2012-13 to 2014-15. The maximum coefficient of variation has been found in the year 2013 -14 with the value of 122.48.

The **IT sector** has showed with the maximum mean value of 11.98 in the year 2004-05 revealing that there was high risk and the minimum value have been found at (3.06) in the year 2018-19. There was a decreasing trend followed for the period from 2005-06 to 2011-12 and there was a fluctuation in the mean value for the rest of the years. The maximum coefficient of variation has been found in the year 2011-12 with the value of 102.64.

The **Metal sector** has revealed the maximum mean value of 11.49 in the year 2004-05 and the minimum value have been found at (5.5) in the year 2017-18. There was an increasing trend followed for the period from 2011-12 to 2013-14. There was a decreasing trend during the period from 2006-07 to 2010-11 and 2015-16 to 2017-18. The maximum coefficient of variation has been found in the year 2015-16 with the value of 114.7.

As far as the risk is concerned among all the selected sectors, the IT sector has highest value of risk in the year 2004-05 and the automobile sector has shown the least value of (0.14) in the year 2014-15.

G. Past Dividend

If it is an existing company, the directors decides current year dividend rate on the basis of last year's dividend. It is better for the business enterprise to maintain stable dividend policy. The last year dividend rate is an indicator of past dividend. The sector wise analysis of Past Dividend of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 9.

The **Financial sector** has showed the maximum mean value of 25.66 in the year 2004-05 revealing that there was high past dividend in the financial sector and the minimum value have been found at (11.16) in the year 2018-19. There was a fluctuating trend followed for the period in all the subsequent years. The maximum coefficient of variation has been found in the year 2018 -19 with the value of 93.9.

The **Automobile sector** has registered the maximum mean value of 84.96 in the year 2013-14 and the minimum value have been found at (24.34) in the year 2006-07. There was a fluctuating trend followed for the period in all the subsequent years. The maximum inconsistency has been found in the year 2013-14 with the value of 116.01.

The **Energy sector** has recorded the maximum mean value of 42.36 in the year 2017-18 and the minimum value have been found at (24.19) in the year 2008-09. There was an alternative increase and decrease in the mean value of the past dividend for all the subsequent years. The maximum inconsistency has been found in the year 2017-18 with the value of 19.75.

Table 9

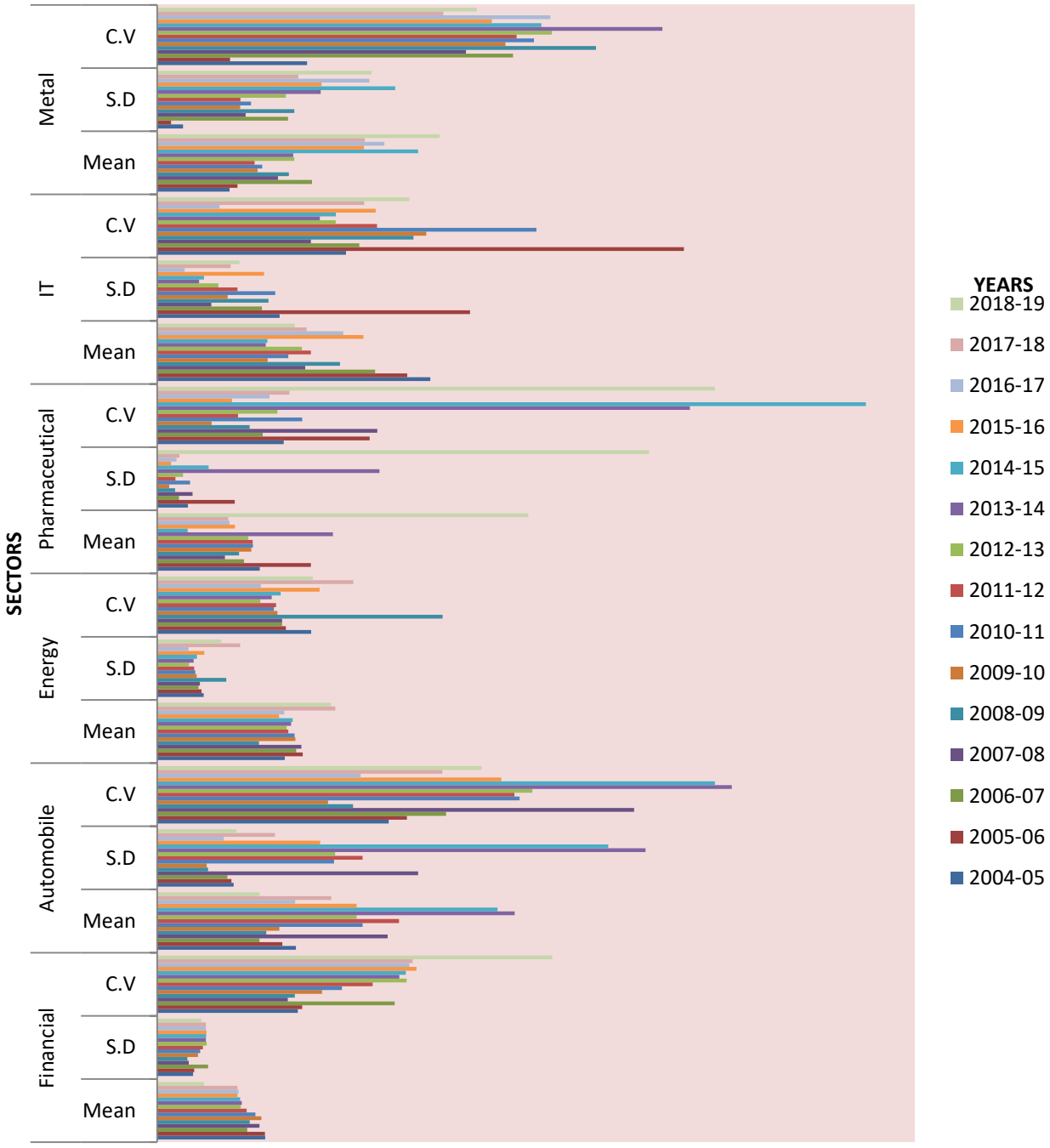
Past Dividend- Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	25.66	8.58	33.43	33.01	18.16	55.01	30.31	11.09	36.58	24.4	7.34	30.08	64.94	29.14	44.87	17.25	6.15	35.65
2005-06	25.59	8.83	34.5	29.73	17.64	59.33	34.59	10.58	30.58	36.54	18.45	50.49	59.4	74.33	125.13	19.09	3.31	17.33
2006-07	21.41	12.09	56.46	24.34	16.72	68.69	33.06	9.82	29.7	20.66	5.19	25.12	51.8	24.89	48.05	36.81	31.14	84.59
2007-08	24.32	7.55	31.04	54.74	62.03	113.31	34.25	10.17	29.69	16.13	8.44	52.32	35.18	12.86	36.55	28.69	21.06	73.4
2008-09	22.03	7.21	32.72	25.97	12.1	46.59	24.19	16.41	67.83	19.5	4.29	22	43.48	26.49	60.92	31.29	32.62	104.25
2009-10	24.78	9.72	39.22	29.07	11.8	40.59	32.88	9.4	28.58	22.36	2.9	12.96	26.25	16.79	63.96	23.86	19.75	82.77
2010-11	23.36	10.26	43.92	48.82	42.05	86.13	32.64	9.06	27.75	22.77	7.85	34.47	31.19	28.1	90.09	24.96	22.35	89.54
2011-12	21.26	10.89	51.22	57.48	48.8	84.89	31.19	8.81	28.24	22.69	4.37	19.25	36.53	19.08	52.23	23.17	19.79	85.41
2012-13	19.87	11.78	59.28	47.42	42.28	89.16	30.81	7.56	24.53	21.66	6.19	28.57	34.41	14.59	42.4	32.63	30.61	93.8
2013-14	20.12	11.58	57.55	84.96	116.01	136.54	31.84	8.67	27.22	41.77	52.86	126.55	25.8	9.98	38.68	32.35	38.84	120.06
2014-15	19.77	11.68	59.07	80.91	107.21	132.5	32.21	9.47	29.4	7.25	12.21	168.41	26.22	11.14	42.48	62.01	56.61	91.29
2015-16	19.06	11.74	61.59	47.37	38.74	81.78	28.96	11.19	38.63	18.5	3.29	17.78	49.03	25.45	51.9	49.15	39.09	79.53
2016-17	19.38	11.62	59.95	32.78	15.85	48.35	30.19	7.44	24.64	17.2	4.6	26.74	44.25	6.55	14.8	53.97	50.44	93.45
2017-18	19.08	11.58	60.69	41.38	28.04	67.76	42.36	19.75	46.62	16.89	5.31	31.43	35.51	17.47	49.19	49.35	33.56	68
2018-19	11.16	10.48	93.9	24.42	18.84	77.14	41.33	15.29	36.99	88.2	116.89	132.52	32.67	19.59	59.96	67.11	50.98	75.96

Source: Computed data

Chart 8
Past Dividend- Sector Wise Analysis



The **Pharmaceutical sector** has the maximum mean value of 88.2 in the year 2018-19 revealing that there was high profitability and the minimum value have been found at (8.66) in the year 2014-15. There was a fluctuating trend followed for the period in all the subsequent years The maximum coefficient of variation has been found in the year 2014 -15 with the value of 168.41.

The **IT sector** has showed with the maximum mean value of 64.94 in the year 2004-05 revealing that there was high past dividend and the minimum value have been found at (25.8) in the year 2013-14. There was an alternative increase and decrease in the mean value of the past dividend for period. The maximum coefficient of variation has been found in the year 2005-06 with the value of 125.13.

The **Metal sector** has revealed the maximum mean value of 67.11 in the year 2018-19 and the minimum value have been found at (17.25) in the year 2014-15. There was a fluctuating trend followed for the period from 2004-05 to 2018-19. The maximum inconsistency has been found in the year 2013-14 with the value of 120.06.

Among all the six sectors, the pharmaceutical sector has the maximum (88.2) amount of past dividend in the year 2018-19. The minimum value (8.66) have also found in the pharmaceutical sector during the year 2014-15. Generally all the sectors fluctuated during the study period.

H. Earnings Per Share

The sector wise analysis of earnings per share of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 10.

The **Financial sector** has showed the maximum mean value of 73.65 in the year 2012-13 revealing that there was high EPS in the financial sector and the minimum value have been found at (27.88) in the year 2005-06. There was an increasing trend followed for the period from 2005-06 to 2012-13. There was a decreasing trend for the period from 2005-06 to 2008-09 and from 2013-14 to 2016-17.The maximum coefficient of variation have been found in the year 2015 -16 with the value of 135.55.

Table 10

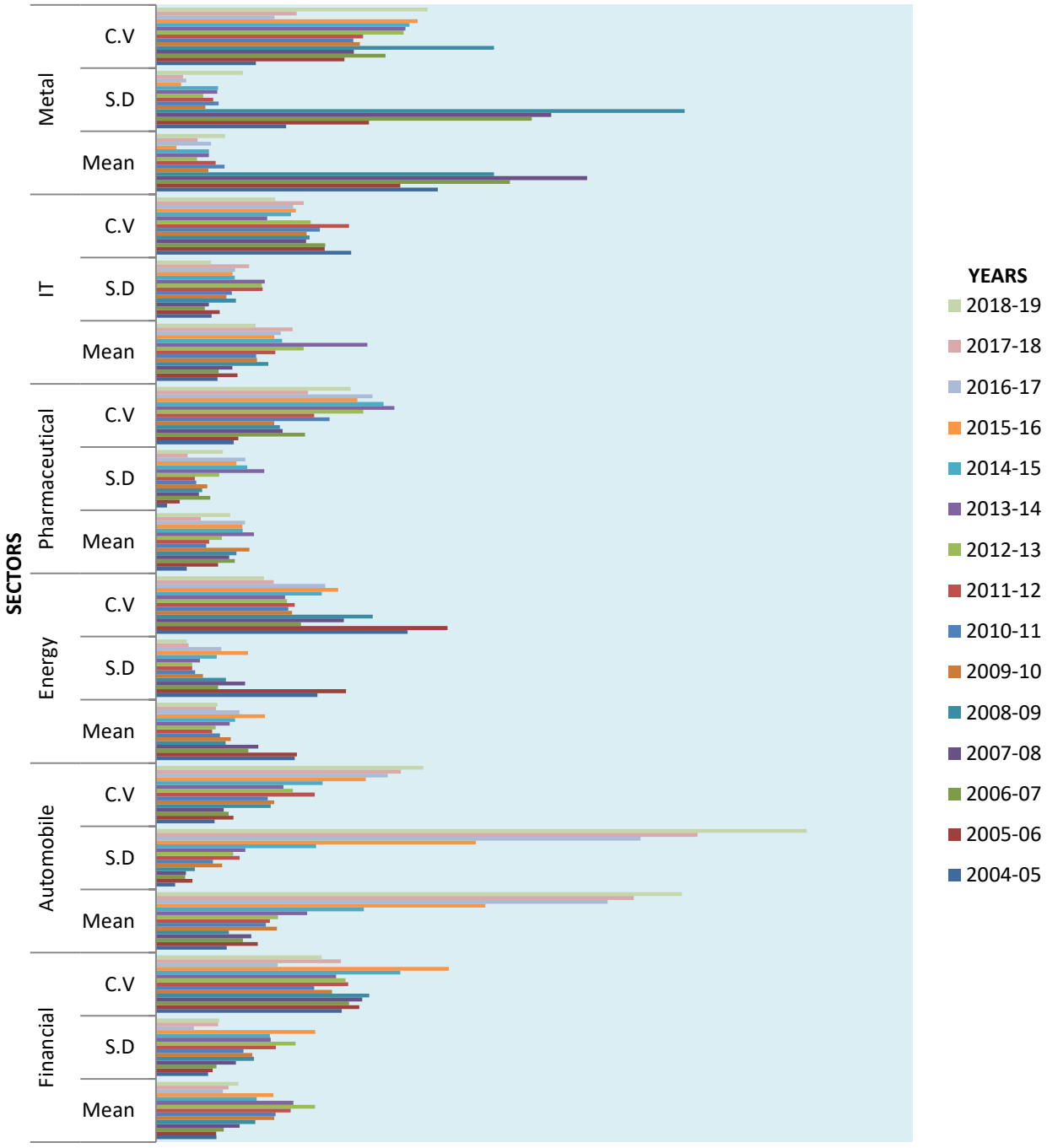
Earnings Per Share - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	28.03	24.1	85.97	32.77	8.9	27.15	64.22	74.81	116.49	14.26	5.14	36.04	28.57	25.83	90.4	130.43	60.3	46.23
2005-06	27.88	26.23	94.08	47.2	16.93	35.86	65.25	88.04	134.92	28.76	10.99	38.21	37.82	29.57	78.18	113.09	98.64	87.22
2006-07	31.42	28.07	89.33	40.26	13.53	33.6	42.8	28.76	67.19	36.51	25.22	69.07	28.98	22.72	78.39	163.84	173.97	106.18
2007-08	38.74	36.97	95.43	44.18	13.89	31.43	47.44	41.28	87.01	33.94	19.92	58.69	35.38	24.58	69.47	199.52	182.89	91.66
2008-09	46.03	45.45	98.73	33.83	17.98	53.14	32.28	32.41	100.4	37.22	21.36	57.38	52.02	36.98	71.08	156.41	244.64	156.4
2009-10	54.76	44.6	81.44	56.02	30.66	54.73	34.65	21.83	63	43.3	23.73	54.8	46.75	32.62	69.77	24.27	22.9	94.35
2010-11	55.34	40.55	73.27	50.91	26.36	51.77	29.68	18.19	61.28	23.24	18.69	80.42	46.36	35.19	75.9	31.8	29.06	91.38
2011-12	62.43	55.55	88.97	52.73	38.76	73.5	26.02	16.73	64.29	24.61	18.04	73.3	55.28	49.39	89.34	27.64	26.51	95.91
2012-13	73.65	64.67	87.8	56.49	35.83	63.42	27.68	16.8	60.69	30.51	29.27	95.93	68.44	49.06	71.68	19.1	21.9	114.65
2013-14	63.67	53.12	83.43	70.03	41.37	59.07	34.17	20.44	59.81	45.45	50.17	110.38	97.92	50.41	51.48	24.59	28.39	115.45
2014-15	46.66	52.8	113.15	96.2	74.15	77.07	36.66	28.14	76.75	40.15	42.3	105.35	58.33	36.48	62.54	24.56	28.81	117.3
2015-16	54.4	73.74	135.55	152.48	148.05	97.09	50.51	42.62	84.37	40.02	37.3	93.2	54.77	35.5	64.81	9.6	11.63	121.14
2016-17	31.08	17.5	56.3	209.11	224.35	107.28	38.65	30.32	78.44	41.29	41.37	100.19	57.72	36.64	63.47	25.48	13.98	54.86
2017-18	33.64	28.81	85.64	221.16	250.63	113.32	27.77	15.14	54.51	20.85	14.68	70.4	63.2	43.2	68.35	19.33	12.59	65.13
2018-19	38.18	29.32	76.79	243.42	301.22	123.74	28.57	14.31	50.08	34.45	31.05	90.13	46.14	25.42	55.09	31.99	40.24	125.78

Source: Computed data

Chart 9
Earnings Per Share - Sector Wise Analysis



The **Automobile sector** has registered the maximum mean value of 243.42 in the year 2018-19 and the minimum value have been found at (32.77) in the year 2004-05. There was an increasing trend followed for the period from 2011-12 to 2018-2019. There was a fluctuating trend followed for the period from 2004-05 to 2010-12. The maximum inconsistency has been found in the year 2018-19 with the value of 123.74.

The **Energy sector** has recorded the maximum mean value of 65.25 in the year 2005-06 revealing that there was high EPS and the minimum value have been found at (26.02) in the year 2011-12. There was an alternative increasing and decreasing trend of the mean value for all the subsequent years. The maximum inconsistency has been found in the year 2005-06 with the value of 134.92.

The **Pharmaceutical sector** has the maximum mean value of 45.45 in the year 2013-14 revealing that there was high EPS and the minimum value have been found at (14.26) in the year 2004-05. There was an alternative increasing and decreasing trend followed for the period in all the subsequent years. The maximum coefficient of variation has been found in the year 2013 -14 with the value of 110.38.

The **IT sector** has showed with the maximum mean value of 97.92 in the year 2013-14 and the minimum value have been found at (28.57) in the year 2004-05. There was an increasing trend followed for the period 2005-06, 2007-09, and from 2011-12 to 2013-14 and there was a fluctuating trend in the rest of the years. The maximum coefficient of variation has been found in the year 2004-05 with the value of 90.4.

The **Metal sector** has revealed the maximum mean value of 199.52 in the year 2007-08 and the minimum value have been found at (9.6) in the year 2015-16. There was a fluctuating trend over for the period from 2004-05 to 2018-19. The maximum inconsistency has been found in the year 2008-09 with the value of 156.4.

Amidst all the selected sectors, automobile sector has recorded a maximum average value of 243.42 in the year 2018-19. It reveals the competence of automobile sector to pay dividend to their investors. The minimum mean value have been found in the metal sector during the year 2015-16.

I. Tangibility

The tangibility is measured by dividing fixed asset to total asset. The sector wise analysis of tangibility of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 11.

Table 11

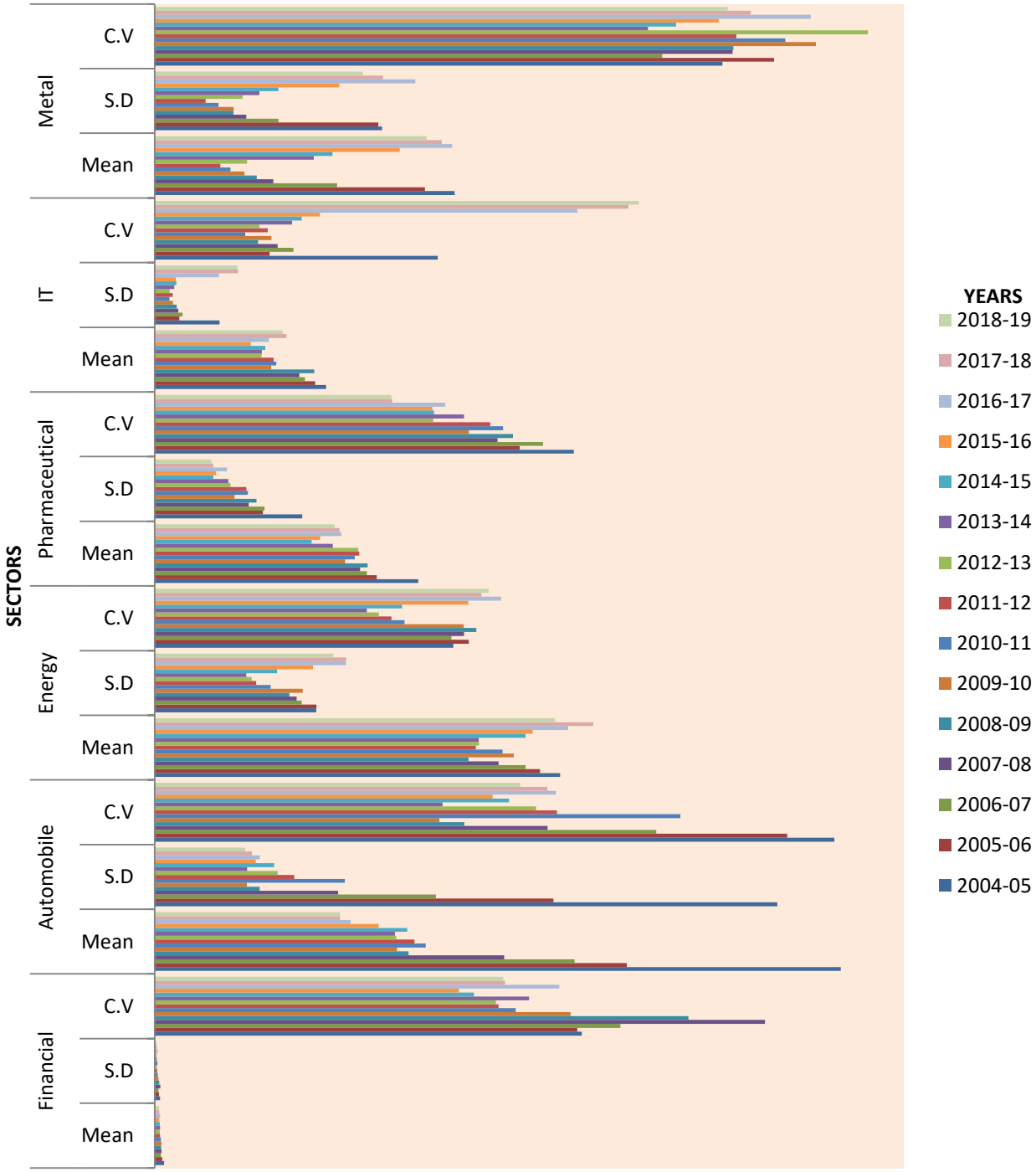
Tangibility - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	1.28	0.73	57.03	91.61	83.16	90.77	54.15	21.59	39.87	35.2	19.71	55.99	22.91	8.66	37.8	40.07	30.38	75.81
2005-06	1.01	0.57	56.43	63.05	53.27	84.48	51.47	21.6	41.96	29.67	14.47	48.76	21.43	3.29	15.35	36.11	29.87	82.71
2006-07	0.82	0.51	62.19	56.09	37.57	66.98	49.54	19.63	39.62	28.32	14.69	51.87	20.07	3.72	18.53	24.37	16.52	67.78
2007-08	0.92	0.75	81.52	46.66	24.49	52.48	45.94	18.98	41.31	27.45	12.57	45.79	19.31	3.17	16.41	15.85	12.23	77.16
2008-09	0.87	0.62	71.26	33.91	14.02	41.34	41.91	18.01	42.97	28.43	13.61	47.87	21.34	2.95	13.82	13.64	10.54	77.27
2009-10	0.9	0.5	55.55	32.36	12.31	38.04	47.96	19.8	41.28	25.45	10.68	41.96	15.57	2.43	15.6	11.98	10.58	88.31
2010-11	0.85	0.41	48.23	36.19	25.41	70.21	46.45	15.5	33.36	26.72	12.44	46.55	16.26	1.97	12.11	10.14	8.54	84.22
2011-12	0.74	0.34	45.94	34.71	18.65	53.73	42.9	13.57	31.63	27.32	12.25	44.83	15.9	2.4	15.09	8.78	6.82	77.67
2012-13	0.68	0.31	45.58	32.25	16.43	50.94	43.3	12.96	29.93	27.2	10.12	37.2	14.27	2	14.01	12.35	11.76	95.22
2013-14	0.74	0.37	50	32.08	12.34	38.46	43.29	12.26	28.32	23.78	9.83	41.33	14.31	2.63	18.37	21.24	13.99	65.86
2014-15	0.68	0.29	42.64	33.75	15.97	47.31	49.53	16.37	33.05	20.98	7.83	37.32	14.77	2.9	19.63	23.74	16.53	69.62
2015-16	0.64	0.26	40.62	29.91	13.5	45.13	50.46	21.14	41.89	22.11	8.2	37.08	12.86	2.84	22.08	32.72	24.64	75.3
2016-17	0.74	0.4	54.05	26.18	14.03	53.59	55.23	25.55	46.26	24.92	9.67	38.8	15.25	8.61	56.45	39.73	34.81	87.61
2017-18	0.62	0.29	46.77	24.76	12.98	52.42	58.6	25.58	43.65	24.7	7.84	31.74	17.62	11.15	63.28	38.35	30.53	79.6
2018-19	0.58	0.27	46.55	24.76	12.09	48.82	53.48	23.85	44.59	24.06	7.61	31.62	17.12	11.07	64.66	36.31	27.79	76.53

Source: Computed data

Chart 10
Tangibility - Sector Wise Analysis



The **Financial sector** has showed the maximum mean value of 1.28 in the year 2004-05 revealing that there was high tangibility in the financial sector and the minimum value have been found at (0.58) in the year 2018-19. There was a fluctuating trend followed for the period in all the subsequent years. The maximum coefficient of variation has been found in the year 2007 -08 with the value of 81.52.

The **Automobile sector** has registered the maximum mean value of 91.61 in the year 2004-05 revealing that there was high tangibility and the minimum value have been found at (24.76) in the year 2017-18 and 2018-19. There was an increasing trend in the year 2010-11 and 2014-15. There was an decreasing trend followed for the period from 2004-05 to 2009-10, 2011-12 to 2013-14 and 2015-16 to 2016-17. The mean value of tangibility stood constant for the period 2017-2019. The maximum coefficient of variation has been found in the year 2004-05 with the value of 90.77.

The **Energy sector** has recorded the maximum mean value of 58.6 in the year 2017-18 revealing that there was high tangibility and the minimum value have been found at (41.91) in the year 2008-09. There was a decreasing trend followed for the period from 2004-05 to 2008-09. There was a increasing trend followed for the period from 2014-15 to 2017-18.The maximum inconsistency have been found in the year 2017-18 with the value of 25.58.

The **Pharmaceutical sector** has the maximum mean value of 35.2 in the year 2004-05 revealing that there was high tangibility and the minimum value have been found at (8.66) in the year 2014-15. There was an alternative increase and decrease in the mean value of the tangibility for all the subsequent years. The maximum coefficient of variation has been found in the year 2004-05 with the value of 55.99.

The **IT sector** has showed with the maximum mean value of 22.91 in the year 2004-05 revealing that there was high tangibility and the minimum value have been found at (12.86) in the year 2015-16. There was a decreasing trend followed for the period from 2004-05 to 2007-08. There was a fluctuating trend followed for the period from 2008-09 to 2018-19. The maximum coefficient of variation has been found in the year 2018-19 with the value of 64.66.

The **Metal sector** has revealed the maximum mean value of 40.07 in the year 2004-05 and the minimum value have been found at (8.78) in the year 2011-12. There was a decreasing trend followed for the period from 2004-05 to 2011-12. There was an increasing trend followed for the period from 2012-13 to 2016-17. The maximum coefficient of variation has been found in the year 2012-13 with the value of 95.22.

Among all the six sectors, the automobile sector has a maximum average value of (91.61) fixed asset to total asset in the year 2004-05. The minimum mean value has found in the financial sector in the year 2018-19.

J. Investment Opportunities

The investment opportunities are measured by market value of the firm to total assets. The sector wise analysis of investment opportunities of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 12.

The **Financial sector** has showed the maximum mean value of 84.78 in the year 2017-18 revealing that there was high investment opportunities in the financial sector and the minimum value have been found at (14.45) in the year 2008-09. There was an increasing trend followed for the period from 2005-06 to 2007-08. There was an alternative increase and decrease for the period from 2008-09 to 2018-19.The maximum coefficient of variation have been found in the year 2017 -18 with the value of 187.22.

The **Automobile sector** has registered the maximum mean value of 98.76 in the year 2013-14 revealing that there was high investment opportunities and the minimum value have been found at (13.63) in the year 2004-05. There was an increasing trend followed for the period from 2008-09 to 2013-14. There was a decreasing trend followed for the period from 2005-06 to 2007-08. The maximum inconsistency has been found in the year 2012-13 with the value of 161.41.

The **Energy sector** has recorded the maximum mean value of 18.37 in the year 2005-06 revealing that there was high investment opportunities and the minimum value have been found at (9.27) in the year 2004-05. There was a fluctuating trend in the mean value of the investment opportunities for all the subsequent years. The maximum inconsistency has been found in the year 2005-06 with the value of 13.59.

Table 12

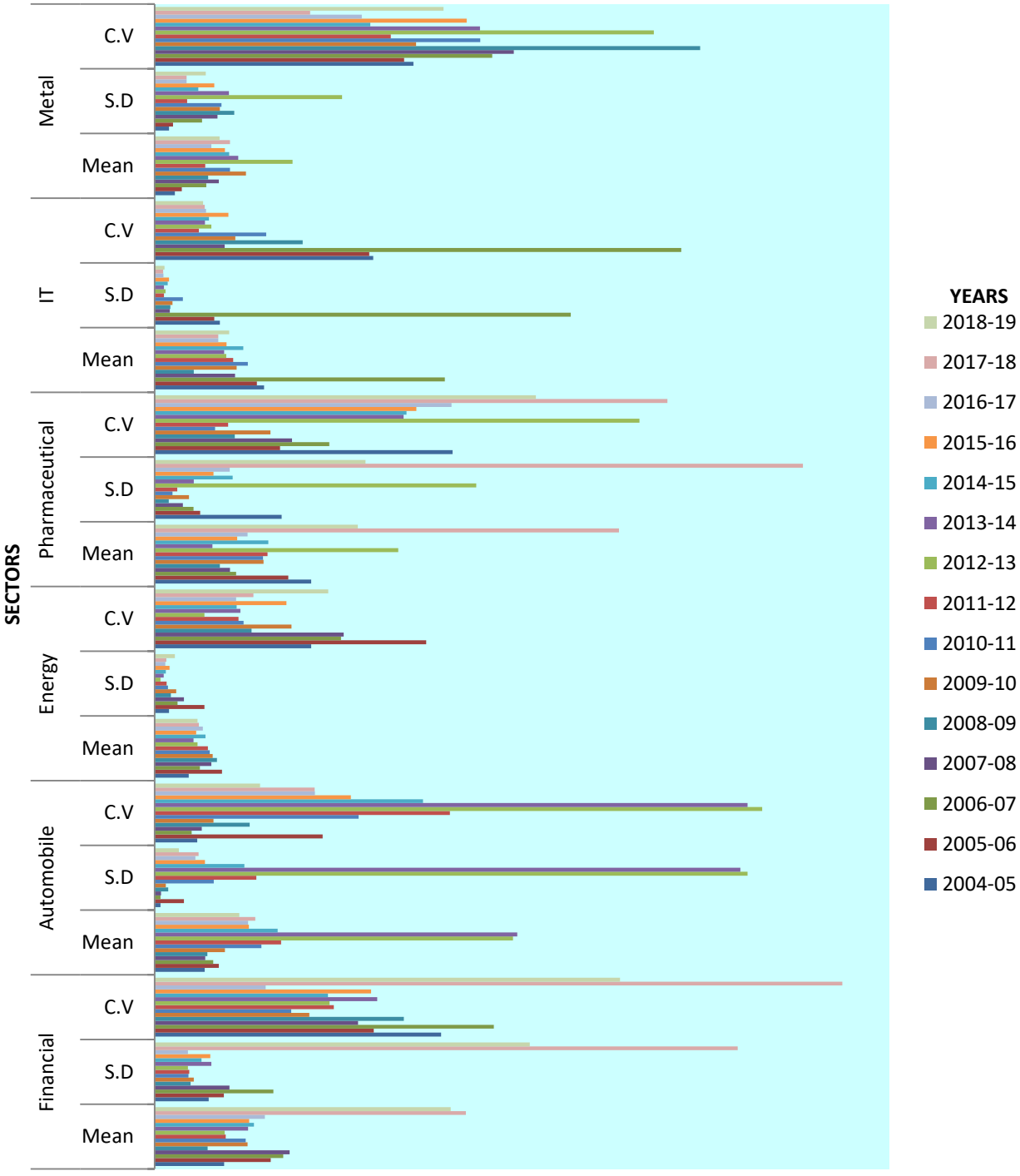
Investment Opportunities - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	18.94	14.77	77.98	13.63	1.59	11.66	9.27	3.95	42.61	42.65	34.61	81.14	29.81	17.75	59.54	5.55	3.91	70.45
2005-06	31.64	18.88	59.67	17.49	8	45.74	18.37	13.59	73.97	36.42	12.45	34.18	27.88	16.29	58.42	7.39	5.02	67.92
2006-07	35.03	32.36	92.37	16	1.62	10.12	12.33	6.26	50.77	22.23	10.58	47.59	79.02	113.32	143.4	14.1	12.96	91.91
2007-08	36.74	20.36	55.41	13.77	1.77	12.85	15.49	7.97	51.45	20.57	7.7	37.43	21.9	4.18	19.08	17.49	17.1	97.77
2008-09	14.45	9.81	67.88	14.38	3.73	25.93	16.98	4.48	26.38	17.79	3.89	21.86	10.69	4.31	40.31	14.59	21.67	148.52
2009-10	25.33	10.67	42.12	19.17	3.08	16.06	15.8	5.89	37.27	29.66	9.37	31.59	22.32	4.91	21.99	24.92	17.75	71.22
2010-11	24.84	9.25	37.23	29.06	16.15	55.57	15.02	3.64	24.23	29.53	4.86	16.45	25.36	7.7	30.36	20.54	18.21	88.65
2011-12	19.4	9.47	48.81	34.43	27.68	80.39	14.54	3.32	22.83	30.73	6.16	20.04	21.41	2.59	12.09	13.82	8.89	64.32
2012-13	19.11	9.1	47.61	97.56	161.41	165.44	11.73	1.59	13.55	66.33	87.58	132.03	19.55	3.03	15.49	37.55	51.03	135.89
2013-14	25.47	15.45	60.65	98.76	159.44	161.44	10.64	2.49	23.4	15.75	10.68	67.8	18.94	2.6	13.72	22.82	20.22	88.6
2014-15	27.06	12.78	47.22	33.48	24.47	73.08	13.88	3.1	22.33	31	21.27	68.61	24.19	3.58	14.79	20.3	11.92	58.71
2015-16	25.73	15.17	58.95	25.65	13.7	53.41	11.33	4.07	35.92	22.49	16.03	71.27	19.57	3.93	20.08	19.17	16.29	84.97
2016-17	30.03	9.09	30.26	25.44	11.1	43.63	13.13	2.92	22.23	25.29	20.45	80.86	17.33	2.43	14.02	15.5	8.74	56.38
2017-18	84.78	158.73	187.22	27.44	11.96	43.58	12.07	3.25	26.92	126.4	176.52	139.65	17.37	2.37	13.64	20.54	8.7	42.35
2018-19	80.59	102.14	126.74	23.04	6.62	28.73	11.73	5.55	47.31	55.33	57.46	103.84	20.29	2.68	13.2	17.74	13.96	78.69

Source: Computed data

Chart 11
Investment Opportunities - Sector Wise Analysis



The **Pharmaceutical sector** has the maximum mean value of 126.4 in the year 2017-18 revealing that there was high investment opportunities and the minimum value have been found at (15.75) in the year 2013-14. There was an increasing trend followed for the period from 2015-16 to 2017-18. There was a decreasing trend for the period from 2005-06 to 2008-09.The maximum coefficient of variation has been found in the year 2017 -18 with the value of 139.65.

The **IT sector** has showed with the maximum mean value of 79.02 in the year 2006-07 revealing that there was high investment opportunities and the minimum value have been found at (10.69) in the year 2008-09. There was a fluctuating trend followed for all the subsequent years. The maximum coefficient of variation has been found in the year 2006-07 with the value of 143.4.

The **Metal sector** has revealed the maximum mean value of 37.55 in the year 2012-13 and the minimum value have been found at (5.55) in the year 2004-05. There was a fluctuating trend followed for all the subsequent years. There was a alternative increase and decrease in the mean value of investment opportunities followed for all the subsequent years. The maximum inconsistency has been found in the year 2012-13 with the value of 51.03.

In all the sectors, the pharmaceutical sector has shown the high investment opportunities in the year 2017-18 it leads to increase the growth of the company and also increase in share price. There was less investment opportunities in the metal sector in the year 2004-05.

K. Cash Flow

Cash flow is proxied by profit before tax to total asset. Higher the cash flow will lead to increase the dividend payout. The sector wise analysis of cash flow of the six sectors for the study period from 2004-05 to 2018-19 are shown in table 13.

Table 13

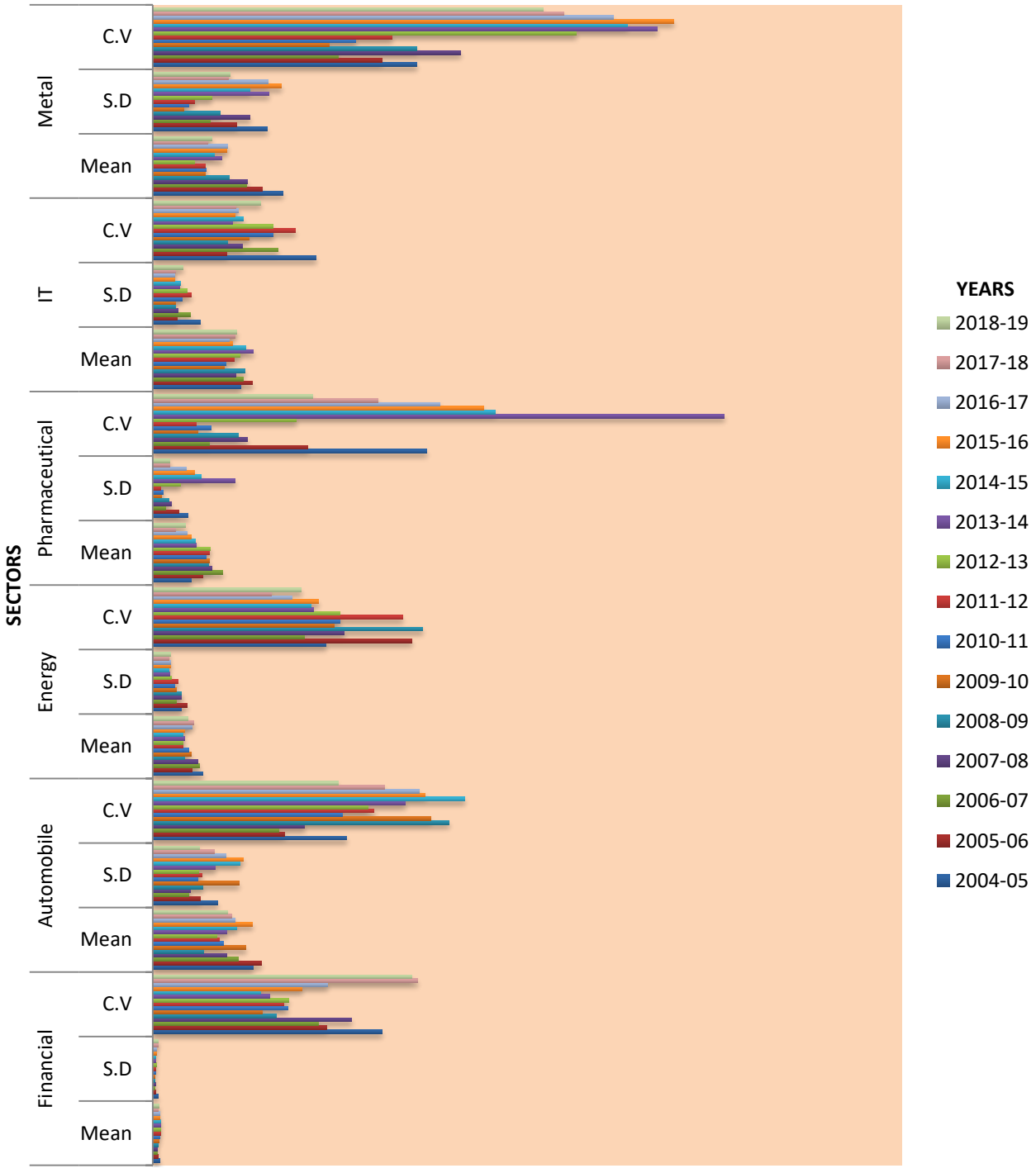
Cash Flow - Sector Wise Analysis

(In percent)

Years	Sector																	
	Financial			Automobile			Energy			Pharmaceutical			IT			Metal		
	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V	Mean	S.D	C.V
2004-05	2.44	1.87	76.63	33.5	21.63	64.56	16.71	9.67	57.86	12.88	11.76	91.3	29.37	16.02	54.54	43.37	38.23	88.14
2005-06	1.81	1.05	58.01	36.26	16	44.12	13.28	11.47	86.37	16.8	8.69	51.72	33.25	8.2	24.66	36.62	28	76.46
2006-07	1.61	0.89	55.27	28.61	12.07	42.18	15.73	7.96	50.6	23.48	4.47	19.03	30.23	12.61	41.71	31.21	19.34	61.96
2007-08	1.63	1.08	66.25	24.71	12.5	50.58	15.18	9.71	63.96	19.86	6.3	31.72	27.75	8.34	30.05	31.61	32.49	102.78
2008-09	1.75	0.72	41.14	17.04	16.83	98.76	10.77	9.69	89.97	18.68	5.34	28.58	30.92	7.74	25.03	25.63	22.58	88.09
2009-10	2.13	0.78	36.61	31.07	28.82	92.75	12.91	7.81	60.49	19.06	2.9	15.21	24.03	7.7	32.04	17.44	10.29	59
2010-11	2.44	1.1	45.08	23.69	14.97	63.19	11.97	7.48	62.48	17.95	3.51	19.55	24.45	9.82	40.16	17.89	12.12	67.74
2011-12	2.56	1.12	43.75	22.17	16.38	73.88	10.24	8.53	83.3	18.96	2.78	14.66	27.21	12.93	47.51	17.48	13.95	79.8
2012-13	2.66	1.21	45.48	21.53	15.45	71.76	10.26	6.4	62.37	19.27	9.25	48	29.02	11.62	40.04	13.89	19.64	141.39
2013-14	2.66	1.04	39.09	24.84	20.93	84.25	10.65	5.7	53.52	14.41	27.47	190.63	33.46	8.91	26.62	22.99	38.66	168.16
2014-15	2.66	0.96	36.09	28.1	29.25	104.09	10.1	5.33	52.77	14.28	16.32	114.28	31.08	9.41	30.27	20.46	32.39	158.3
2015-16	2.39	1.19	49.79	33.38	30.37	90.98	10.68	5.9	55.24	12.75	14.07	110.35	26.63	7.3	27.41	24.72	42.98	173.86
2016-17	2.28	1.33	58.33	27.57	24.53	88.97	13.02	6.07	46.62	11.62	11.12	95.69	25.67	7.36	28.67	24.99	38.43	153.78
2017-18	1.99	1.76	88.44	26.49	20.47	77.27	13.8	5.47	39.63	7.51	5.64	75.09	27.5	7.61	27.67	18.36	25.16	137.03
2018-19	2.08	1.8	86.53	25.07	15.53	61.94	11.9	5.88	49.41	10.93	5.82	53.24	28	10.06	35.92	19.86	25.84	130.11

Source: Computed data

Chart 12
Cash Flow - Sector Wise Analysis



The **Financial sector** has showed the maximum mean value of 2.66 in the year 2012-13,2013-14 and 2014-2015 revealing that there was high cash flow in the financial sector and the minimum value have been found at (1.61) in the year 2006-07. There was an increasing trend followed for the period from 2008-09 to 2012-13. There was a decreasing trend for the from 2015-16 to 2017-18.The maximum coefficient of variation have been found in the year 2017 -18 with the value of 88.44.

The **Automobile sector** has registered the maximum mean value of 36.26 in the year 2005-06 revealing that there was high cash flow and the minimum value have been found at (17.04) in the year 2008-09. There was a fluctuating trend followed for the period in all the subsequent years. The maximum coefficient of variation has been found in the year 2014-15 with the value of 104.09.

The **Energy sector** has recorded the maximum mean value of 16.71 in the year 2004-05 revealing that there was high cash flow and the minimum value have been found at (10.1) in the year 2014-15. There was an alternative increase and decrease in the mean value of cash flow for all the subsequent years. The maximum inconsistency has been found in the year 2005-06 with the value of 11.47.

The **Pharmaceutical sector** has the maximum mean value of 23.48 in the year 2006-07 revealing that there was high cash flow and the minimum value have been found at (7.51) in the year 2017-18. There was a decreasing trend for the period from 2013-14 to 2017-18. There was a fluctuating trend followed for all the other years. The maximum coefficient of variation has been found in the year 2013 -14 with the value of 190.63.

The **IT sector** has showed with the maximum mean value of 33.46 in the year 2013-14 revealing that there was high cash flow and the minimum value have been found at (24.03) in the year 2009-10. There was an increasing trend followed for the period from 2010-11 to 2013-14. There was a decreasing trend for the period from 2014-15 to 2016-17. The maximum coefficient of variation has been found in the year 2004-05 with the value of 54.54.

The **Metal sector** has revealed the maximum mean value of 43.37 in the year 2004-05 and the minimum value have been found at (17.44) in the year 2009-10. There was a fluctuating trend followed for the period from 2004-05 to 2018-19. The maximum inconsistency has been found in the year 2015-16 with the value of 42.98.

Amidst all the six sectors, the average value of cash flow has maximum of 43.37 in the metal sector during 2004-05. It indicates that the sector generates sufficient source to use financial activities of the business enterprise. The minimum mean value have been found in the financial sector during the year 2006-07.

4.1.2 Repeated Measures ANOVA

This section deals with identifying the significant difference across years, among the sectors, and the influence of sectors over years with that of dividend determinants.

A. Profitability

Repeated measures ANOVA was conducted to find whether profitability ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The Profitability ratio of companies do not vary significantly among different sectors.

Ho2: The Profitability ratio of companies do not vary significantly among the years for the study period.

Ho3: The Profitability ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 14

Profitability - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	1663.212	5	332.642	1.928	0.121
Error	4830.769	28	172.527		
Between Years	1064.459	14	76.033	1.033	0.419
Years* Sectors	7024.957	70	100.357	1.363	0.037
Error(Years)	28856.127	392	73.613		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

It is seen from Table 14, that the calculated F-ratio for 'Between Sectors' is given as 1.928, which tests for the equality of means of profitability ratio among the six sectors. The F-ratio is found to be not significant. This indicates that the profitability ratio do not vary significantly among companies of different sectors. Hence, hypothesis Ho1 is accepted.

The F-ratio comparing the mean profitability ratio among different years is given as 1.033 which is found to be not significant (since P>0.05). That is, the profitability ratio do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Next, the interaction effect, that is the influence of sector on profitability ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.363 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean profitability ratio for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

B. Liquidity

Repeated measures ANOVA was conducted to find whether liquidity ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The liquidity ratio of companies do not vary significantly among different sectors.

Ho2: The liquidity ratio of companies do not vary significantly among the years for the study period.

Ho3: The liquidity ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 15

Liquidity - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	9.696	5	1.939	1.905	0.125
Error	28.507	28	1.018		
Between Years	13.012	14	0.929	1.042	0.410
Years* Sectors	39.582	70	0.565	0.634	0.989
Error(Years)	349.509	392	0.892		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

It is found from Table 15, that the calculated F-ratio for 'Between Sectors' is given as 1.905, which tests for the equality of means of liquidity ratio among the six sectors. The F-ratio is found to be not significant. This shows that the liquidity ratio do not vary significantly among companies of different sectors. Hence, hypothesis Ho1 is accepted.

The F-ratio comparing the mean liquidity ratio among different years is given as 1.042 which is found to be not significant (since P>0.05). That is, the liquidity ratio do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Finally, the interaction effect, that is the influence of sector on liquidity ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 0.634 which is found to be not significant as the probability is more than 0.05 (P>0.05). That is, the pattern of differences between mean liquidity ratio for different sectors do not significantly vary at each year. Hence, hypothesis Ho3 is accepted.

C. Leverage

Repeated measures ANOVA was conducted to find whether leverage ratio vary across years, among the eight sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The leverage ratio of companies do not vary significantly among different sectors.

Ho2: The leverage ratio of companies do not vary significantly among the years for the study period.

Ho3: The leverage ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 16

Leverage - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	437.058	5	87.412	26.487	0.000
Error	89.105	27	3.300		
Between Years	46.516	14	3.323	4.103	0.000
Years* Sectors	156.124	70	2.230	2.754	0.000
Error(Years)	306.114	378	0.810		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

It is evident from Table 16, that the calculated F-ratio for 'Between Sectors' is given as 26.487, which tests for the equality of means of leverage ratio among the six sectors. The F-ratio is found to be significant. This indicates that the leverage ratio change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean leverage ratio among different years is given as 4.103 which is found to be significant (since P<0.05). That is, the leverage ratio change significantly across the years during the study period. Hence, hypothesis Ho2 is rejected.

Then, the interaction effect, that is the influence of sector on leverage ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 2.754 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean leverage ratio for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

D. Firm Size

Repeated measures ANOVA was conducted to find whether firm size vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: Firm size of companies do not vary significantly among different sectors.

Ho2: Firm size of companies do not vary significantly among the years for the study period.

Ho3: Firm size of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 17

Firm Size - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	46.044	5	9.209	8.776	0.000
Error	29.383	28	1.049		
Between Years	285.038	14	20.360	159.149	0.000
Years* Sectors	14.814	70	0.212	1.654	0.002
Error(Years)	50.149	392	0.128		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

It is seen from Table 17, that the calculated F-ratio for 'Between Sectors' is given as 8.776, which tests for the equality of means of firm size among the six sectors. The F-ratio is found to be significant. This indicates that the firm size change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean firm size among different years is given as 159.149 which is found to be significant (since $P<0.05$). That is, the firm size change significantly across the years during the study period. Hence, hypothesis Ho2 is rejected.

Then, the interaction effect, that is the influence of sector on firm size depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.654 which is found to be significant as the probability is less than 0.05 ($P<0.05$). That is, the pattern of differences between mean firm size for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

E. Growth

Repeated measures ANOVA was conducted to find whether growth ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The growth ratios of companies do not vary significantly among different sectors.

Ho2: The growth ratio of companies do not vary significantly among the years for the study period.

Ho3: The growth ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 18

Growth - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	85.043	5	17.009	6.473	0.000
Error	73.575	28	2.628		
Between Years	145.567	14	10.398	2.438	0.003
Years* Sectors	408.557	70	5.837	1.369	0.035
Error(Years)	1671.512	392	4.264		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 18 portrays that the calculated F-ratio for 'Between Sectors' is given as 6.473, which tests for the equality of means of growth ratio among the six sectors. The F-ratio is found to be significant. This indicates that the growth ratio change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean growth ratio among different years is given as 2.438 which is found to be significant (since P<0.05). That is, the growth ratio change significantly across the years during the study period. Hence, hypothesis Ho2 is rejected.

Next, the interaction effect, that is the influence of sector on growth ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.369 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean growth ratio for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

F. Risk

Repeated measures ANOVA was conducted to find whetherrisk ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: Therisk ratio of companies do not vary significantly among different sectors.

Ho2: Therisk ratio of companies do not vary significantly among the years for the study period.

Ho3: The risk ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 19

Risk - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	264.060	5	52.812	7.367	0.000
Error	200.729	28	7.169		
Between Years	574.186	14	41.013	3.799	0.000
Years* Sectors	649.904	70	9.284	0.860	0.778
Error(Years)	1671.512	392	4.264		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 19 shows that the calculated F-ratio for 'Between Sectors' is given as 7.367, which tests for the equality of means of risk ratio among the six sectors. The F-ratio is found to be significant. This indicates that the risk ratio change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean risk ratio among different years is given as 3.799 which is found to be significant (since P<0.05). That is, the risk ratio change significantly across the years during the study period. Hence, hypothesis Ho2 is rejected.

Then, the interaction effect, that is the influence of sector on risk ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 0.860 which is found to be not significant as the probability is more than 0.05 (P>0.05). That is, the pattern of differences between mean risk ratio for different sectors do not vary significantly at each year. Hence, hypothesis Ho3 is accepted.

G. Past Dividend

Repeated measures ANOVA was conducted to find whetherpast dividend of companiesvary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: Past dividend of companies do not vary significantly among different sectors.

Ho2: Past dividend of companies do not vary significantly among the years for the study period.

Ho3: Past dividend of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 20

Past Dividend - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	20315.442	5	4063.088	2.311	0.071
Error	49235.364	28	1758.406		
Between Years	367329.765	14	26237.840	1.050	0.403
Years* Sectors	2925276.439	70	41789.663	1.672	0.001
Error(Years)	9799508.632	392	24998.747		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 20 depicts that the calculated F-ratio for 'Between Sectors' is given as 2.311, which tests for the equality of means of past dividend among the six sectors. The F-ratio is found to be not significant . This shows that the past dividend do not vary significantly among companies of different sectors. Hence, hypothesis Ho1 is accepted.

The F-ratio comparing the mean past dividend among different years is given as 1.050 which is found to be not significant (since P>0.05). That is, the past dividend do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Then, the interaction effect, that is the influence of sector on past dividend depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.672 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean past dividend for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

H. Earnings Per Share

Repeated measures ANOVA was conducted to find whetherearnings per share of companies vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: Earnings per share of companies do not vary significantly among different sectors.

Ho2: Earnings per share of companies do not vary significantly among the years for the study period.

Ho3: Earnings per share of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 21

Earnings Per Share - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	12659.716	5	2531.943	1.987	0.112
Error	35681.496	28	1274.339		
Between Years	29259.519	14	2089.966	0.616	0.853
Years* Sectors	663945.168	70	9484.931	2.794	0.000
Error(Years)	1330862.917	392	3395.058		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 21 presents that the calculated F-ratio for 'Between Sectors' is given as 1.987, which tests for the equality of means of earnings per share among the six sectors. The F-ratio is found to be not significant. This shows that the earnings per share do not vary significantly among companies of different sectors. Hence, hypothesis Ho1 is accepted.

The F-ratio comparing the mean earnings per share among different years is given as 0.616 which is found to be not significant (since P>0.05). That is, the earnings per share do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Then, the interaction effect, that is the influence of sector on earnings per share depend upon the period of study (years) is tested and the corresponding F-ratio is given as 2.794 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean earnings per share for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

I. Tangibility

Repeated measures ANOVA was conducted to find whethertangibility ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The tangibility ratio of companies do not vary significantly among different sectors.

Ho2: The tangibility ratio of companies do not vary significantly among the years for the study period.

Ho3: The tangibility ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 22

Tangibility - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	10647.126	5	2129.425	16.103	0.000
Error	3702.584	28	132.235		
Between Years	10018.074	14	715.577	3.957	0.000
Years* Sectors	24797.210	70	354.246	1.959	0.000
Error(Years)	70888.579	392	180.838		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 22 exhibits that the calculated F-ratio for 'Between Sectors' is given as 16.103, which tests for the equality of means of tangibility ratio among the six sectors. The F-ratio is found to be significant. This indicates that the tangibility ratio change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean tangibility ratio among different years is given as 3.957 which is found to be significant (since P<0.05). That is, the tangibility ratio change significantly across the years during the study period. Hence, hypothesis Ho2 is rejected.

Next, the interaction effect, that is the influence of sector on tangibility ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.959 which is found to be significant as the probability is less than 0.05 (P<0.05). That is, the pattern of differences between mean tangibility ratio for different sectors change significantly at each year. Hence, hypothesis Ho3 is rejected.

J. Investment Opportunities

Repeated measures ANOVA was conducted to find whetherinvestment opportunities of companies vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: Investment opportunities of companies do not vary significantly among different sectors.

Ho2: Investment opportunities of companies do not vary significantly among the years for the study period.

Ho3: Investment opportunities of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 23

Investment Opportunities - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	2736.581	5	547.316	3.283	0.019
Error	4667.956	28	166.713		
Between Years	33527.823	14	2394.845	1.500	0.108
Years* Sectors	133737.199	70	1910.531	1.196	0.149
Error(Years)	625961.495	392	1596.841		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 23 indicates that the calculated F-ratio for 'Between Sectors' is given as 3.283, which tests for the equality of means of investment opportunities among the six sectors. The F-ratio is found to be significant. This shows that the investment opportunities change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean investment opportunities among different years is given as 1.500 which is found to be not significant (since P>0.05). That is, the tangibility ratios do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Next, the interaction effect, that is the influence of sector on investment opportunities depend upon the period of study (years) is tested and the corresponding F-ratio is given as 1.196 which is found to be not significant as the probability is more than 0.05 (P>0.05). That is, the pattern of differences between mean investment opportunities for different sectors do not vary significantly at each year. Hence, hypothesis Ho3 is accepted.

K. Cash Flow

Repeated measures ANOVA was conducted to find whethercash flow ratio vary across years, among the six sectors, and the influence of sectors over years. The null hypothesis has been framed.

Ho1: The cash flow ratio of companies do not vary significantly among different sectors.

Ho2: The cash flow ratio of companies do not vary significantly among the years for the study period.

Ho3: The cash flow ratio of companies of different sectors do not vary significantly between years (No interaction between sectors and years).

Table 24

Cash Flow - Repeated Measures ANOVA

Source	Sum of Squares	Df	Mean Square	F	Prob.
Between Sectors	3264.045	5	652.809	7.509	0.000
Error	2434.113	28	86.933		
Between Years	1963.465	14	140.247	1.245	0.240
Years* Sectors	5844.375	70	83.491	0.741	0.937
Error(Years)	44167.888	392	112.673		

Source: Computed data

S- Significant (p-value<0.05) NS- Not Significant (p-value>0.05)

Table 24 portrays that the calculated F-ratio for 'Between Sectors' is given as 7.509, which tests for the equality of means of cash flow ratio among the six sectors. The F-ratio is found to be significant. This indicates that the cash flow ratio change significantly among companies of different sectors. Hence, hypothesis Ho1 is rejected.

The F-ratio comparing the mean cash flow ratio among different years is given as 1.245 which is found to be not significant (since P>0.05). That is, the cash flow ratio do not significantly vary across the years during the study period. Hence, hypothesis Ho2 is accepted.

Next, the interaction effect, that is the influence of sector on cash flow ratio depend upon the period of study (years) is tested and the corresponding F-ratio is given as 0.741 which is found to be not significant as the probability is more than 0.05 (P>0.05). That is, the pattern of differences between mean cash flow ratio for different sectors do not vary significantly at each year. Hence, hypothesis Ho3 is accepted.

4.1.3 Relationship between Dividend Determinant Factors

The relationship strength is identified by the absolute value of the correlation coefficient. Correlation matrix was performed to find the degree of relationship between the financial parameters (independent variables) which might affect the dividend policy.

A. Financial Sector

In table 25, the highest correlation (0.759) was found between Profitability and Cash Flow. The correlation was found to have positive and significant at 1 % level. The Firm size was found to have the highest negative correlation (-0.680) with Risk, statistically significant at 1 % level. That is when there is higher Risk then the Firm size decreases.

Liquidity, Growth and Past Dividend were found to have positive correlation with profitability while Tangibility and Investment Opportunities showed negative correlation at 1 % level of significance. The EPS was found to have positive correlation with Profitability while Risk established negative correlation at 5 % level of significance.

The parameters Growth, Past Dividend and Cash Flow were observed to have positive correlation with Liquidity while Leverage recorded a negative correlation at 1 % level of significance.

Firm Size and Tangibility were found to have positive correlation with Leverage while Growth, Risk and Cash Flow recorded a negative correlation at 1 % level of significance.

The EPS was positively correlated with Firm Size at 5 % level of significance. Tangibility and Cash Flow were negatively correlated with Firm Size at 1 % level of significance.

Table 25

Correlation Between Dividend Decision Factors – Financial Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	.455**	-.446**	-.096	.442**	-.232*	.310**	.182*	-.385**	-.296**	.759**
Liquidity		1	-.234**	-.133	.313**	-.034	.397**	.126	-.296**	.007	.429**
Leverage			1	.375**	-.256**	-.360**	-.025	.076	.309**	-.003	-.625**
Firm Size				1	-.146	-.680**	.019	.209*	-.251**	.100	-.403**
Growth					1	-.207*	-.016	-.101	-.241**	.104	.376**
Risk						1	-.067	-.217*	.082	.106	.104
Past Dividend							1	.012	-.108	-.102	.119
EPS								1	-.326**	-.230*	.302**
Tangibility									1	-.034	-.374**
Investment Opportunities										1	-.236**
Cash Flow											1

Source: Computed data

** Correlation is probability significant at the 0.01 level (2-tailed).

* Correlation is probability significant at the 0.05 level (2-tailed).

Cash Flow was observed to have positive correlation with Growth while Tangibility established negative correlation, significant at 1 % level. Risk was negatively correlated with Growth at 5 % level of significance.

There exists a negative correlation between EPS and Risk at 5 % level of significance. Cash Flow showed positive correlation with EPS while Tangibility recorded negative correlation at 1 % level of significance. Investment Opportunity was found to have negative correlation with EPS at 5 % level of significance.

Tangibility and Investment Opportunities were negatively correlated with Cash Flow.

The correlation results found out for the financial sector shows that the parameters are having only low to moderate degree of relationship with other financial parameters.

B. Automobile Sector

In table 26, Cash Flow was found to have highest positive correlation (0.733) with Profitability while Leverage recorded highest negative correlation (-0.685), significant at 1 % level.

The parameters Growth and EPS were found to have positive correlation with Profitability while Firm Size and Past Dividend established a negative correlation at 1 % level of significance. The Risk was found to have positive correlation with Profitability at 5 % level of significance.

Growth and Past Dividend were negatively correlated with Liquidity at 1 % level of significance. Investment Opportunities and Cash Flow were also found to have negative correlation with Liquidity at 5 % level of significance.

Table 26

Correlation Between Dividend Decision Factors – Automobile Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	-.017	-.685**	-.444**	.593**	.248*	-.465**	.616**	.025	-.144	.733**
Liquidity		1	-.099	-.184	-.410**	-.048	-.326**	-.152	.027	-.230*	-.259*
Leverage			1	.304**	-.268*	-.058	.407**	-.420**	.029	.240*	-.640**
Firm Size				1	-.302**	-.595**	.109	-.016	-.135	.163	-.417**
Growth					1	.408**	-.068	.474**	-.010	.061	.615**
Risk						1	.049	.196	.216	-.148	.437**
Past Dividend							1	-.190	-.097	.520**	-.220
EPS								1	-.068	-.037	.461**
Tangibility									1	-.168	.163
Investment Opportunities										1	-.198
Cash Flow											1

Source: Computed data

** Correlation is probability significant at the 0.01 level (2-tailed).

* Correlation is probability significant at the 0.05 level (2-tailed).

Firm Size and Past Dividend were observed to have positive correlation with Leverage while EPS and Cash Flow recorded negative correlation at 1% level of significance. Investment Opportunities was found to have positive correlation with Leverage while Growth established negative correlation, significant at 5 % level. Growth, Risk and Cash Flow were observed to have negative correlation with Firm Size at 1 % level of significance.

Risk, EPS and Cash Flow were positively correlated with Growth at 1 % level of significance. The Risk and EPS were found to have positive correlation with Cash Flow at 1 % level of Significance. There exist a positive correlation between Investment Opportunities and Past Dividend, significant at 1 % level.

The correlation results found out for the automobile sector shows that there are low to moderate correlations between all the parameters except few.

C. Energy Sector

The relationship between the factors which might affect the dividend policy of selected companies in energy sector for the period from 2004-2005 to 2018-2019 is explained by correlation matrix.

Table 27

Correlation Between Dividend Decision Factors – Energy Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	.192*	.051	.225*	.269**	-.528**	.121	.007	-.197*	.099	.154
Liquidity		1	-.391**	-.063	.382**	-.108	.179	-.096	-.363**	.163	.307**
Leverage			1	-.026	-.325**	-.225*	-.160	-.083	.371**	-.049	-.665**
Firm Size				1	-.025	-.338**	-.178	-.059	-.326**	.007	-.200*
Growth					1	-.080	.125	-.071	.019	.337**	.597**
Risk						1	.138	.097	-.041	-.086	.188*
Past Dividend							1	-.289**	-.195*	-.090	.333**
EPS								1	.074	-.414**	.173
Tangibility									1	-.020	-.203*
Investment Opportunities										1	-.228*
Cash Flow											1

Source: Computed data

** Correlation is probability significant at the 0.01 level (2-tailed).

* Correlation is probability significant at the 0.05 level (2-tailed).

In Table 27, the highest positive correlation (0.597) exists between Growth and Cash Flow, statistically significant at 1% level. That is when there is higher Cash Flow then the Growth increases. The Cash Flow was observed to have highest negative correlation (-0.665) with Leverage at 1 % level significance.

The Growth was positively correlated and the Risk was negatively correlated at 1% level of significance to Profitability.

The parameters Growth and Cash Flow were observed to have positive correlation with Liquidity while Leverage and Tangibility showed negative correlation at 1% level of significance. The Tangibility was found to have positive correlation with Leverage while Growth recorded negative correlation at 1 % level of significance.

Risk and Tangibility showed negative correlation with Firm Size at 1% level of significance .Cash Flow recorded negative correlation with Firm Size at 5 % level of significance.

Positive correlation exist between Investment Opportunities and Growth at 1% level of significance. Cash Flow was found to have positive correlation with Risk, significant at 5 % level.

Cash Flow was observed to have positive correlation with Past Dividend while EPS recorded negative correlation at 1 % level of significance. There exist a negative correlation between Investment Opportunities and EPS at 1 % level of significance. Tangibility and Investment Opportunities were negatively correlated with Cash Flow at 5 % level of significance.

The correlation results found out for the energy sector shows that the parameters are having only moderate or lesser degree of relationship with other financial parameters.

D. Pharmaceutical Sector

The relationship between the factors which might affect the dividend policy of selected companies in pharmaceutical sector for the period from 2004-2005 to 2018-2019 is explained by correlation matrix and the results are displayed in table 28.

Table 28

Correlation Between Dividend Decision Factors – Pharmaceutical Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	.485**	.016	-.287*	-.331**	-.423**	.067	.290*	.012	.002	.720**
Liquidity		1	.062	-.237	.033	.016	.196	.026	-.233	-.136	.324*
Leverage			1	-.509**	.238	.134	-.015	.061	.215	-.054	-.063
Firm Size				1	-.011	.008	-.230	-.006	-.495**	.221	-.396**
Growth					1	.516**	.011	-.261*	-.327*	.052	-.231
Risk						1	-.126	-.270*	-.452**	.044	-.414**
Past Dividend							1	.154	.126	-.825**	.174
EPS								1	.009	-.221	.384**
Tangibility									1	-.181	.317*
Investment Opportunities										1	-.242
Cash Flow											1

Source: Computed data

** Correlation is probability significant at the 0.01 level (2-tailed)

* Correlation is probability significant at the 0.05 level (2-tailed)

In table 28, the positive correlation (0.720) was found between Profitability and Cash Flow at 1 % level of significance. Investment Opportunities was observed to have highest negative correlation (-0.825) with Past Dividend, statistically significant at 1 % level.

Liquidity was found to have positive correlation with Profitability while Growth and Risk were recorded negative correlation at 1% level of significance. EPS was observed to have positive correlation and Firm Size established negative correlation at 5 % level of significance to Profitability.

Cash Flow shows that there exist a positive correlation to Liquidity at 5 % level of significance. Firm Size was negatively correlated with Leverage at 1 % level of significance. The parameters Tangibility and Cash Flow were observed to have negative correlation with Firm Size, significant at 1 % level.

The Risk was positively correlated at 1 % level of significance to Growth. EPS and Tangibility were negatively correlated with Growth at 5 % level of significance.

Tangibility and Cash Flow showed 1 % level of significance with Risk. EPS recorded negative correlation with Risk, significant at 5 % level. Cash Flow was observed to have positive correlation with EPS at 1 % level of significance. The positive correlation was found between Tangibility and Cash Flow at 5 % level of significance.

The correlation results found out for the pharmaceutical sector shows that the parameters are having only moderate or lesser degree of relationship with other financial parameters.

E. Information Technology Sector

The relationship between the factors which might affect the dividend policy of selected companies in information technology sector for the period from 2004-2005 to 2018-2019 is explained by correlation matrix.

Table 29

Correlation Between Dividend Decision Factors – Information Technology Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	.521**	-.474**	.330**	.433**	-.231*	.170	.434**	.110	-.279*	.791**
Liquidity		1	-.427**	.454**	.159	-.329**	-.127	.698**	.038	-.102	.447**
Leverage			1	-.040	-.301**	.217	-.339**	-.320**	-.330**	-.116	-.560**
Firm Size				1	-.035	-.574**	-.199	.440**	-.533**	-.241*	.222
Growth					1	-.172	.208	.058	.089	.263*	.566**
Risk						1	-.176	-.177	.292*	.136	-.072
Past Dividend							1	-.116	.148	.106	.125
EPS								1	-.136	-.148	.508**
Tangibility									1	.151	.152
Investment Opportunities										1	-.182
Cash Flow											1

Source: Computed data

**Correlation is probability significant at the 0.01 level (2-tailed).

* Correlation is probability significant at the 0.05 level (2-tailed).

In table 29, Cash Flow have a highest positive correlation (0.791) with Profitability at 1 % level of significance. Risk recorded highest negative correlation (-0.574) with Firm Size, statistically significant at 1 % level.

Liquidity, Firm Size, Growth and EPS were observed to have positive correlation and Leverage established negative correlation at 1 % level of significance to Profitability. Risk and Investment Opportunities were negatively correlated with Profitability, significant at 5 % level.

The parameters Firm Size, EPS and Cash Flow were found to have positive correlation with Liquidity while Leverage and Risk showed negative correlation at 1 % level of significance. Growth, Past Dividend, EPS, Tangibility and Cash Flow were found to have negative correlation with Leverage at 1 % level of significance.

EPS was observed positive correlation with Firm Size while Tangibility showed negative correlation at 1 % level of significance. The negative correlation was found between Firm Size and Investment Opportunities at 5 % level of significance.

Cash Flow and Investment Opportunities were positively correlated with Growth, statistically significant at 1 % and 5 % level respectively. The Tangibility was found to have positive correlation with Risk at 5 % level of significance. There exist a positive correlation between EPS and Cash Flow at 1 % level of significance.

The correlation results found out for the information technology sector shows that there are low to moderate correlations between all the parameters except few.

F. Metal Sector

The relationship between the factors which might affect the dividend policy of selected companies in metal sector for the period from 2004-2005 to 2018-2019 is explained by correlation matrix and the results are displayed in table 30.

Table 30

Correlation Between Dividend Decision Factors – Metal Sector

Variables	Profitability	Liquidity	Leverage	Firm Size	Growth	Risk	Past Dividend	EPS	Tangibility	Investment Opportunities	Cash Flow
Profitability	1	.778**	-.728**	-.562**	.480**	.408**	.588**	.312*	-.655**	.052	.643**
Liquidity		1	-.620**	-.651**	.450**	.374**	.334**	.286*	-.647**	-.025	.563**
Leverage			1	.648**	-.580**	-.499**	-.316*	-.321*	.511**	.021	-.728**
Firm Size				1	-.664**	-.632**	-.006	-.392**	.260*	.052	-.740**
Growth					1	.754**	.301*	.071	-.205	-.135	.834**
Risk						1	.366**	.035	-.276*	-.030	.796**
Past Dividend							1	.088	-.306*	.114	.396**
EPS								1	-.226	.025	.179
Tangibility									1	-.129	-.282*
Investment Opportunities										1	-.218
Cash Flow											1

Source: Computed data

**Correlation is probability significant at the 0.01 level (2-tailed).

* Correlation is probability significant at the 0.05 level (2-tailed).

In table 30, the highest correlation (0.834) was found between Growth and Cash Flow. The correlation was found to have positive and significant at 1 % level. The Cash Flow was found to have the highest negative correlation (-0.740) with Firm Size, statistically significant at 1 % level.

Liquidity, Growth, Risk, Past Dividend and Cash Flow were observed to have positive correlation with Profitability while Firm Size and Tangibility established negative correlation at 1 % of significance. The EPS was found to have positive correlation with Profitability at 5 % level of significance.

The parameters Growth, Risk, Past Dividend and Cash Flow were observed to have positive correlation while Leverage, Firm Size and Tangibility recorded a negative correlation with Liquidity at 1 % level of significance. The positive correlation was found between Liquidity and EPS at 5 % level of significance.

The Firm Size and Tangibility were found to have positive correlation with Leverage while Growth, Risk and Cash Flow observed negative correlation at 1 % level of significance. EPS and Past Dividend were negatively correlated with Leverage at 5 % level of significance.

The Tangibility was found to have positive correlation with Firm Size at 5 % level of significance. Risk and Past Dividend were positively correlated with Growth, statistically significant at 1 % and 5 % level respectively.

Past Dividend and Cash Flow were found to have positive correlation with Risk at 1 % level of significance. Tangibility recorded negative correlation with Risk at 5 % level of significance.

Cash Flow was found to have positive correlation with Past Dividend at 1 % level of significance. The negative correlation was observed between Cash Flow and Tangibility at 5 % level of significance.

The correlation results found out for the metal sector shows that there are low to moderate correlations between all the parameters except few.

4.1.4 Effect of Dividend Determinant Factors on Dividend Payout Ratio

Regression analysis has been used to conduct the research whereby dividend payout ratio as dependent variable and profitability, liquidity, leverage, firm size, growth, risk, past dividend, tangibility, investment opportunities and cash flow as independent variables predominantly it focuses on identifying the relationship between dependent variable and one or more independent variables. It reveals the value of dependent variable fluctuates when one or more independent variables modified while retaining the values of other independent variables.

A. Financial Sector

The regression analysis provides the constant value of dividend determinants of financial sector which analyse the effect of dividend determinants on dividend payout ratio.

Table 31

Regression – Dividend Decision Factors- Financial Sector
Dependent Variable – Dividend Payout Ratio

Variables	Regression Coefficients(B)	Std. Error	Beta	T	Prob.
(Constant)	11.549	10.349		1.116	0.267
Profitability	0.056	0.152	0.035	0.368	0.713
Liquidity	0.404	0.274	0.087	1.471	0.144
Leverage	-0.003	0.200	-0.001	-0.017	0.987
Firm Size	-0.235	0.610	-0.037	-0.385	0.701
Growth	-0.170	0.353	-0.031	-0.481	0.631
Risk	-0.718	2.185	-0.029	-0.328	0.743
Past Dividend	0.785	0.057	0.763	13.792	0.000
EPS	-0.010	0.015	-0.039	-0.631	0.530
Tangibility	-2.218	1.494	-0.098	-1.485	0.141
Investment Opportunities	-0.051	0.011	-0.246	-4.482	0.000
Cash Flow	-0.829	0.969	-0.094	-0.855	0.394

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
0.872	0.761	0.736	31.203	0.000

Source: Computed Data

The table 31 shows that, among the several independent variables, Profitability, Liquidity and Past Dividend have positive effect on DPR that is increase in these variables will increase the DPR whereas remaining variables namely, Leverage, Firm Size, Growth, Risk, EPS, Tangibility, Investment Opportunities and Cash Flow have negative effect on DPR that is increase in these variables will proportionately decrease the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Past Dividend and Investment Opportunities alone significantly influence the DPR of companies at 1 percent level.

The R square value indicates that 76.1 % variations in DPR. The F value (31.203) indicates that the correlation is significant at 1 % level ($P<0.01$).

B. Automobile Sector

The coefficients are estimated to find out the effect of dividend determinants on dividend payout ratio of the automobile sector.

Table 32

Regression – Dividend Decision Factors- Automobile Sector

Dependent Variable – Dividend Payout Ratio

Variables	Regression Coefficients(B)	Std. Error	Beta	T	Prob.
(Constant)	52.150	43.864		1.189	0.239
Profitability	-2.565	1.277	-0.291	-2.009	0.049
Liquidity	-13.459	10.219	-0.107	-1.317	0.193
Leverage	6.086	15.108	0.040	0.403	0.688
Firm Size	-2.145	3.531	-0.060	-0.607	0.546
Growth	-1.828	0.957	-0.184	-1.910	0.061
Risk	1.978	1.264	0.147	1.564	0.123
Past Dividend	0.096	0.091	0.096	1.055	0.295
EPS	-0.010	0.033	-0.028	-0.314	0.754
Tangibility	-0.039	0.098	-0.026	-0.399	0.691
Investment Opportunities	0.619	0.064	0.750	9.707	0.000
Cash Flow	0.674	0.323	0.260	2.084	0.041

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
0.878	0.771	0.731	19.323	0.000

Source: Computed Data

The table 32 exhibit that, among the several independent variables, Leverage, Risk, Past Dividend, Investment Opportunities and Cash Flow have positive effect on DPR that is increase in these variables will increase the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Investment Opportunities alone have a significant influence on DPR of companies at 1 % level. Profitability and Cash Flow have a significant influence on DPR of companies at 5 % level.

The R square value indicates that 77 % variations in DPR are explained by the independent variables. The F value (19.323) indicates that the correlation is significant at 1 % level ($P<0.01$).

C. Energy Sector

The regression analysis used to estimate the effect of dividend determinants on dividend payout ratio of energy sector for the period from 2004 – 05 to 2018 – 2019.

Table 33

Regression – Dividend Decision Factors- Energy SectorDependent Variable – Dividend Payout Ratio

Variables	RegressionCoefficients(B)	Std. Error	Beta	t	Prob.
(Constant)	8.916	20.362		0.438	0.662
Profitability	0.046	0.106	0.041	0.436	0.664
Liquidity	1.062	2.541	0.037	0.418	0.677
Leverage	1.742	2.169	0.100	0.803	0.424
Firm Size	0.023	1.277	0.002	0.018	0.986
Growth	-0.800	2.308	-0.048	-0.347	0.730
Risk	0.055	0.607	0.008	0.090	0.928
Past Dividend	0.637	0.087	0.607	7.296	0.000
EPS	-0.041	0.027	-0.130	-1.533	0.128
Tangibility	0.019	0.060	0.029	0.313	0.755
Investment Opportunities	-0.098	0.245	-0.047	-0.401	0.689
Cash Flow	0.292	0.296	0.181	0.986	0.326

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
0.710	0.504	0.454	9.995	0.000

Source: Computed Data

The table 33 reveals that, among the several independent variables, Profitability, Liquidity, Leverage, Firm Size, Risk, Past Dividend, Tangibility, Cash Flow have positive effect on DPR that is increase in these variables will increase the DPR whereas remaining variables namely, Growth, EPS and Investment Opportunities have negative effect on DPR that is increase in these variables will proportionately decrease the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Past Dividend has a significant influence on DPR of companies at 1 % level.

The R square value indicates that 50 percent variations in DPR are explained by the independent variables. The F value (9.995) indicates that the correlation is significant at 1 % level ($P<0.01$).

D. Pharmaceutical Sector

The regression analysis used to evaluate the effect of dividend determinants on dividend payout ratio of pharmaceutical sector for the period from 2004 – 05 to 2018 – 2019.

Table 34

Regression – Dividend Decision Factors- Pharmaceutical Sector

Dependent Variable – Dividend Payout Ratio

Variables	RegressionCoefficients(B)	Std. Error	Beta	T	Prob.
(Constant)	450.216	404.400		1.113	0.271
Profitability	-3.362	1.811	-0.455	-1.857	0.069
Liquidity	53.941	24.241	0.329	2.225	0.031
Leverage	-52.537	75.618	-0.116	-0.695	0.491
Firm Size	-63.950	34.691	-0.360	-1.843	0.071
Growth	-6.919	9.078	-0.126	-0.762	0.450
Risk	-5.326	5.832	-0.165	-0.913	0.366
Past Dividend	0.040	0.071	0.132	0.565	0.574
EPS	1.242	0.780	0.228	1.593	0.118
Tangibility	-0.225	2.870	-0.017	-0.078	0.938
Investment Opportunities	1.760	0.625	0.672	2.816	0.007
Cash Flow	2.699	3.399	0.196	0.794	0.431

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
0.613	0.376	0.232	2.624	.010

Source: Computed Data

The table 34 portrays that, among the several independent variables, Liquidity, Past Dividend, EPS, Investment Opportunities, Cash Flow have positive effect on DPR that is increase in these variables will increase the DPR have negative effect on DPR that is increase in these variables will proportionately decrease the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Investment Opportunities have a significant influence on DPR of companies at 1 % level. Liquidity has a significant influence on DPR of companies at 5 % level.

The R square value indicates that 37 % variations in DPR are explained by the independent variables. The F value (2.624) indicates that the correlation is significant at 1 % level.

E. Information Technology Sector

The regression analysis used to analyse the effect of dividend determinants on dividend payout ratio of information technology sector for the period from 2004 – 05 to 2018 – 2019.

Table 35

Regression – Dividend Decision Factors- Information Technology Sector

Dependent Variable – Dividend Payout Ratio

Variables	RegressionCoefficients(B)	Std. Error	Beta	t	Prob.
(Constant)	89.736	46.793		1.918	0.060
Profitability	1.390	0.716	0.360	1.940	0.057
Liquidity	-2.345	4.886	-0.082	-0.480	0.633
Leverage	-90.588	32.406	-0.433	-2.795	0.007
Firm Size	-2.546	4.304	-0.107	-0.591	0.556
Growth	0.267	1.824	0.024	0.146	0.884
Risk	-0.166	0.663	-0.038	-0.250	0.803
Past Dividend	0.302	0.119	0.309	2.550	0.013
EPS	-0.076	0.117	-0.107	-0.653	0.516
Tangibility	-1.101	0.624	-0.244	-1.765	0.082
Investment Opportunities	0.043	0.111	0.051	0.384	0.702
Cash Flow	-1.211	0.676	-0.432	-1.790	0.078

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
0.632	0.400	0.293	3.751	0.000

Source: Computed Data

The table 35 shows that, among the several independent variables, Profitability, Growth, Past Dividend and Investment Opportunities have positive effect on DPR that is increase in these variables will increase the DPR whereas remaining variables namely, Liquidity, Leverage, Firm Size, Risk, EPS, Tangibility and Cash Flow have negative effect on DPR that is increase in these variables will proportionately decrease the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Leverage and Past Dividend have a significant influence on DPR of companies at 1 % level. Profitability has a significant influence on DPR of companies at 5 % level.

The R square value indicates that 40 % variations in DPR. The F value (3.751) indicates that the correlation is significant at 1 % level ($P<0.01$).

F. Metal Sector

The regression analysis is used to find out the effect of dividend determinants on dividend payout ratio of the metal sector during the study period.

Table 36

Regression – Dividend Decision Factors- Metal Sector

Dependent Variable – Dividend Payout Ratio

Variables	RegressionCoefficients(B)	Std. Error	Beta	T	Prob.
(Constant)	-102.015	61.282		-1.665	0.102
Profitability	0.940	0.226	0.848	4.164	0.000
Liquidity	-11.687	6.108	-0.278	-1.913	0.062
Leverage	12.181	20.561	0.092	0.592	0.556
Firm Size	9.506	5.532	0.310	1.718	0.092
Growth	3.634	3.890	0.143	0.934	0.355
Risk	1.608	0.828	0.325	1.943	0.058
Past Dividend	0.304	0.132	0.283	2.312	0.025
EPS	-0.005	0.033	-0.013	-0.136	0.892
Tangibility	0.096	0.211	0.058	0.455	0.651
Investment Opportunities	0.065	0.184	0.033	0.352	0.726
Cash Flow	-0.315	0.350	-0.232	-0.901	0.372

Source: Computed Data

R	R Square	Adjusted R Square	F	Prob.
.834	0.695	0.626	9.965	0.000

Source: Computed Data

The table 36 reveals that, among the several independent variables, Profitability, Leverage, Firm Size, Growth, Risk, Past Dividend, Tangibility and Investment Opportunities have positive effect on DPR that is increase in these variables will increase the DPR whereas remaining variables namely, Liquidity, EPS, and Cash Flow have negative effect on DPR that is increase in these variables will proportionately decrease the DPR. These results show that the variables of the positive regression coefficients will affect the Dividend Policy of the company positively and those having negative regression coefficients will affect the dividend policy negatively.

The t-test statistic calculated for the regression coefficients show that Profitability has a significant influence on DPR of companies at 1 % level. Risk and Past Dividend have a significant influence on DPR of companies at 5 % level.

The R square value indicates that 69 % variations in DPR are explained by the independent variables. The F value (9.965) indicates that the correlation is significant at 1 % level ($P<0.01$).

4.2 IMPACT OF DIVIDEND POLICY ON PROFITABILITY OF NIFTY COMPANIES

Firm's net earnings are the vital element of dividend adjustments (Litner 1956). The choice to pay dividends begins with earnings of the company. The concept shows that dividends normally paid out of the yearly earnings, which represents the ability of the firm to pay dividends to the investors. Correlation analysis, pooled OLS and panel data regression analysis were employed to analyse the effect of dividend policy on profitability. The select variables considered to analyse the effect of dividend policy on profitability are,

i. Independent Variables – Dividend Payout Ratio and Dividend Yield Ratio

ii. Dependent Variable – Return on Asset, Return on Net Worth and Return on Capital Employed

4.2.1 Relationship between dividend policy and profitability

The relationship between each variable is measured by correlation. The strength between the variables indicates the coefficient value in the correlation.A correlation with different determinant variables is depicted in a correlation matrix. Correlation matrix was adopted to find out the correlation coefficient between and within the dependent and independent variables.

A. Financial Sector

The relationship between the measures of dividend policy and profitability of selected companies in financial sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 37.

Table 37

Correlation Analysis of Financial Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	0.651**	.851**	.201*	.215*
RONW		1	.455**	.243**	.334**
ROCE			1	.161	.331**
DYR				1	.602**
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is inferred from table 37 that Return on Net Worth and Return on Capital Employed were found to have positive correlation with Return on Asset, statistically significant at 1 % level. Dividend Yield Ratio and Dividend Payout Ratio were

positively correlated with Return on Asset at 5 % level of significance.

The results of correlation analysis for the financial sector have shown that Return on Capital Employed have a high positive correlation with Return on Asset at 1 percent level of significance.

B. Automobile Sector

The relationship between the measures of dividend policy and profitability of selected companies in automobile sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 38.

Table 38

Correlation Analysis of Automobile Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	.931**	.932**	.205	-.148
RONW		1	.925**	.247*	-.144
ROCE			1	.178	-.136
DYR				1	.395**
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is indicated from table 38 that Return on Net Worth and Return on Capital Employed were positively correlated at 1 percent level of significance to Return on

Asset. Return on Capital Employed and Dividend Yield Ratio were observed to have positive correlation with Return on Net Worth, statistically significant at 1 % and 5 % level respectively. Dividend Payout Ratio have a positive correlation with Dividend Yield Ratio.

The results of correlation analysis for the automobile sector have shown that Return on Capital Employed have a high positive correlation with Return on Asset at 1 percent level of significance.

C. Energy Sector

The relationship between the measures of dividend policy and profitability of selected companies in energy sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 39.

Table 39

Correlation Analysis of Energy Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	.804**	.963**	.382**	.249**
RONW		1	.818**	.540**	.281**
ROCE			1	.377**	.301**
DYR				1	.536**
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is observed from table 38 that there exists positive correlation between all the select variables, such as Return on Asset, Return on Net Worth, Return on Capital Employed, Dividend Yield Ratio and Dividend Payout Ratio at 1 % level of significance.

The results of correlation analysis for the energy sector have shown that Return on Capital Employed have a high positive correlation with Return on Asset at 1 percent level of significance.

D. Pharmaceutical Sector

The relationship between the measures of dividend policy and profitability of selected companies in pharmaceutical sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 40.

Table 40

Correlation Analysis of Pharmaceutical Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	.748**	.736**	.307*	.135
RONW		1	.869**	.401**	.204
ROCE			1	.254*	.195
DYR				1	.098
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is revealed from table 40 that Return on Asset have a positive correlation with Return on Net Worth and Return on Capital Employed at 1 per cent level of significance and also with Dividend Yield Ratio at 5 per cent level of significance. Return on Capital Employed and Dividend Yield Ratio were positively correlated at 1 per cent level of significance to Return on Net Worth. There exists a positive correlation between Dividend Yield Ratio and Return on Capital Employed at 5 % level of significance.

The results of correlation analysis for the pharmaceutical sector have shown that Return on Capital Employed have a high positive correlation with Return on Net Worth at 1 percent level of significance.

E. Information Technology Sector

The relationship between the measures of dividend policy and profitability of selected companies in IT sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 41.

Table 41

Correlation Analysis of Information Technology Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	.940**	.783**	.053	-.007
RONW		1	.728**	-.043	-.127
ROCE			1	-.134	-.078
DYR				1	.709**
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is inferred from table 41 that Return on Net Worth and Return on Capital Employed were observed to have positive relationship with Return on Asset, statistically significant at 1 percent level. The positive correlation found between Return on Capital Employed and Return on Net Worth at 1 percent level of significance. And also there exists a positive correlation between Dividend Payout Ratio and Dividend Yield Ratio, significantly at 1 % level.

The results of correlation analysis for the Information Technology sector have shown that Return on Net Worth have a high positive correlation with Return on Asset at 1 % level of significance.

F. Metal Sector

The relationship between the measures of dividend policy and profitability of selected companies in metal sector for the period from 2004-2005 to 2018-2019 is depicted by correlation matrix and the results are displayed in table 42.

Table 42

Correlation Analysis of Metal Sector

Variables	ROA	RONW	ROCE	DYR	DPR
ROA	1	.985**	.916**	.489**	.458**
RONW		1	.941**	.464**	.383**
ROCE			1	.328**	.221
DYR				1	.648**
DPR					1

Source: Computed data

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It is indicated from table 42 that there exists positive relationship between all the select variables, such as Return on Asset, Return on Net Worth, Return on Capital Employed, Dividend Yield Ratio and Dividend Payout Ratio at 1 per cent level of significance except between Dividend Payout Ratio and Return on Capital Employed.

The results of correlation analysis for the Metal sector have shown that Return on Net Worth have a high positive correlation with Return on Asset at 1 percent level of significance.

4.2.2 Effect of dividend policy on profitability

This study include the effect of dividend policy on profitability of selected companies by using the following statistical tools such as pooled OLS and panel data regression analysis. The null hypothesis has been framed.

Ho1: Dividend policy does not have significant effect on profitability of select nifty companies.

A. Financial Sector

Regression analysis has been done to find the effect of dividend policy on profitability financial sector during the study period 2004-05 to 2018-19.

A.1 Return on Asset

Table 43

Return on Asset - Panel Data Regression - Financial Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	1.160 (0.170)	6.845 (0.000)	1.726 (0.326)	5.283 (0.000)	1.779 (0.161)	10.994 (0.000)
DYR	0.120 (0.121)	0.997 (0.321)	0.367 (0.079)	4.590 (0.000)	0.381 (0.080)	4.744 (0.000)
DPR	0.012 (0.009)	1.311 (0.192)	-0.028 (0.009)	-3.138 (0.002)	-0.032 (0.009)	-3.409 (0.000)
R Square	0.054		0.153		0.710	
Adjusted R Square	0.038		0.138		0.687	
Std. Error of the Estimate	0.86240		0.493		0.491	
F	3.359		10.591		30.061	
Prob.	0.038		0.000		0.000	
Hausman (Chi-Sq)			2.623			
Prob.			0.269			
Wald (Chi-Sq)			21.18			
Prob.			0.000			

Source: Computed data

Table 43 shows the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Asset of the financial sector. The Hausman test has revealed that the chi-square value is 2.623 which is insignificant and thus Random Effect model was considered to be more appropriate for further analysis. It is understood from R square value of Random Effect model (0.153) which shows low correlation among the dependent and independent variables. The F value shows a significant association between the selected independent variables and the Return on Asset. The Random Effect model has shown that the Dividend Yield Ratio has a significant positive effect on Return on Asset and Dividend Payout Ratio has a significant negative effect on Return on Asset. Thus, the null hypothesis rejected. The increase in Dividend Yield Ratio will lead to increase in share price of a company which in turn will increase the Return on Asset of the company. The decrease in Dividend Payout Ratio indicates deteriorate the performance of the company which leads to decrease the Return on Asset of the company. It concludes that Dividend Payout Ratio and Dividend Yield Ratio have influenced the Return on Asset of the Financial Sector during the study period.

A.2 Return on Net Worth

Table 44

Return on Net Worth - Panel Data Regression - Financial Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	11.477 (1.136)	10.103 (0.000)	12.807 (1.704)	7.515 (0.000)	13.973 (1.607)	8.693 (0.000)
DYR	0.484 (0.809)	0.598 (0.551)	1.934 (0.767)	2.518 (0.013)	2.463 (0.799)	3.080 (0.002)
DPR	0.167 (0.062)	2.708 (0.008)	0.025 (0.079)	0.319 (0.750)	-0.059 (0.093)	-0.639 (0.524)
R Square	0.114		0.086		0.405	
Adjusted R Square	0.099		0.070		0.356	
Std. Error of the Estimate	5.779		4.963		4.883	
F	7.559		5.515		8.339	
Prob.	0.001		0.005		0.000	
Hausman (Chi-Sq)			5.877			
Prob.			0.052			
Wald (Chi-Sq)			11.03			
Prob.			0.004			

Source: Computed data

Table 44 displays the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Net worth of the financial sector. The Hausman test has showed that the value of Chi-square is 5.877 which is significant and then Wald test has applied, it shows a significant correlation between the selected independent variables and the Return on Net Worth at one per cent level. Hence, the Fixed Effect Model was considered to find out the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Net Worth of the company. The R square value of Fixed Effect Model (0.405) which indicates moderate correlation between the dependent and independent variables. The F value shows a significant relationship between the selected independent variables and the Return on Net Worth. The Fixed Effect Model has depicts that the Dividend Yield Ratio has a significant positive effect on RONW. Hence, the null hypothesis rejected. Dividend Payout Ratio has not significantly influencing the Return on Net Worth. Hence, the null hypothesis accepted for this variable. Thus, it concludes in financial sector, Dividend Yield Ratio influenced the Return on Net Worth during the study period.

A.3 Return on Capital Employed

Table 45

Return on Capital Employed - Panel Data Regression - Financial Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	1.034 (0.819)	1.262 (0.210)	4.342 (1.747)	2.484 (0.014)	4.369 (0.296)	14.724 (0.000)
DYR	-0.321 (0.583)	-0.550 (0.583)	0.288 (0.147)	1.956 (0.052)	0.294 (0.147)	1.992 (0.048)
DPR	0.150 (0.044)	3.367 (0.001)	-0.045 (0.017)	-2.620 (0.009)	-0.046 (0.017)	-2.706 (0.007)
R Square	0.112		0.057		0.960	
Adjusted R Square	0.097		0.041		0.957	
Std. Error of the Estimate	4.168		0.899		0.901	
F	7.376		3.556		300.777	
Prob.	0.001		0.031		0.000	
Hausman (Chi-Sq)			1.585			
Prob.			0.452			
Wald (Chi-Sq)			7.11			
Prob.			0.028			

Source: Computed data

Table 45 portrays the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Capital Employed of the financial sector. The Hausman test has exhibits that the Chi-square value (1.585) is insignificant, thereby, Random Effect Model is more appropriate for further analysis than the Fixed Effect Model. The R square value shows low correlation between the variables. The F value has revealed a significant relationship among the selected dependent and independent variables. The Random Effect Model has displayed that the Dividend Yield Ratio has a significant positive effect on Return on Capital Employed and Dividend Payout Ratio has a significant negative effect on the dependent variable. Thus, the null hypothesis rejected. It is implied that in the financial sector, the variables, namely, Dividend Yield Ratio and Dividend Payout Ratio have influenced the Return on Capital Employed during the study period.

B. Automobile Sector

Regression analysis has been done to find the effect of dividend policy on profitability automobile sector during the study period 2004-05 to 2018-19.

B.1 Return on Asset

Table 46

Return on Asset - Panel Data Regression - Automobile Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	18.704 (2.373)	7.883 (0.000)	21.488 (3.029)	7.094 (0.000)	22.096 (1.717)	12.864 (0.000)
DYR	2.618 (1.018)	2.572 (0.012)	0.112 (0.740)	0.151 (0.879)	-0.402 (0.754)	-0.533 (0.595)
DPR	-0.076 (0.034)	-2.235 (0.029)	-0.039 (0.024)	-1.613 (0.111)	-0.033 (0.025)	-1.320 (0.191)
R Square	0.104		0.102		0.631	
Adjusted R Square	0.079		0.005		0.599	
Std. Error of the Estimate	13.334		9.504		8.797	
F	4.189		1.202		19.442	
Prob.	0.019		0.036		0.000	
Hausman (Chi-Sq)			14.041			
Prob.			0.000			
Wald (Chi-Sq)			2.41			
Prob.			0.300			

Source: Computed data

Table 46 exhibits the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Asset of the Automobile Sector. The Hausman test proves that the Chi-square value is 14.041 and its probability value is less than 0.05indicates significant effect followed by Wald test which has the Chi-square value (2.41) indicating the insignificant effect. Hence, Pooled OLS Model is suitable for further analysis. The F value was found to be significant at one per cent. The R square value of Pooled OLS Model (0.102) has a low correlation between the variables. The coefficient of Pooled OLS Model describes Dividend Yield Ratio has a positive relationship and Dividend Payout Ratio has a negative relationship on Return on Asset at five per cent level of significance. Thus, the null hypothesis rejected. The result says that Dividend Yield Ratio and Dividend Payout Ratio determine the Return on Asset of the Automobile sector during the study period.

B.2 Return on Net Worth

Table 47

Return on Net Worth - Panel Data Regression - Automobile Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	21.982 (2.929)	7.505 (`0.000)	23.032 (2.449)	9.403 (0.000)	26.279 (2.421)	10.852 (0.000)
DYR	3.779 (1.256)	3.007 (0.004)	2.873 (0.977)	2.939 (0.004)	0.234 (1.063)	0.220 (0.006)
DPR	-0.100 (0.042)	-2.394 (0.019)	-0.088 (0.032)	-2.710 (0.008)	-0.057 (0.035)	-1.625 (0.008)
R Square	0.130		0.094		0.533	
Adjusted R Square	0.106		0.068		0.492	
Std. Error of the Estimate	16.459		15.437		12.403	
F	5.385		3.738		12.959	
Prob.	0.007		0.028		0.000	
Hausman (Chi-Sq)			41.539			
Prob.			0.000			
Wald (Chi-Sq)			7.48			
Prob.			0.023			

Source: Computed data

Table 47 depicts the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Net Worth of the Automobile Sector. In the Hausman test, value of Chi-square (41.539) reports significant effect at one per cent and then Wald test has conducted, it proves that the significant effect between the selected independent variables and Return on Net Worth. Hence, the Fixed Effect Model is more suitable for further analysis. It is observed from R square value of Fixed Effect Model (0.533) which indicates moderate correlation between the dependent variable and independent variables. The value of F test shows a significant correlation at one per cent level. The Fixed Effect Model demonstrates that Dividend Yield Ratio has positive relationship and Dividend Payout Ratio has negative relationship with Return on Net Worth statistically significant at one per cent level. Hence, the null hypothesis rejected. It illustrates that Dividend Yield Ratio and Dividend Payout Ratio influenced the Return on Net Worth of the Automobile sector during the study period.

B.3 Return on Capital Employed

Table 48

Return on Capital Employed - Panel Data Regression - Automobile Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	28.062 (3.582)	7.835 (0.000)	32.269 (4.355)	7.408 (0.000)	33.705 (2.853)	11.813 (0.000)
DYR	3.423 (1.537)	2.228 (0.029)	0.151 (1.220)	0.123 (0.901)	-0.904 (1.252)	-0.721 (0.472)
DPR	-0.102 (0.051)	-1.983 (0.051)	-0.067 (0.040)	-1.664 (0.100)	-0.058 (0.041)	-1.401 (0.165)
R Square	0.082		0.034		0.542	
Adjusted R Square	0.056		0.007		0.502	
Std. Error of the Estimate	20.127		15.807		14.613	
F	3.203		1.294		13.457	
Prob.	0.046		0.280		0.000	
Hausman (Chi-Sq)			14.246			
Prob.			0.000			
Wald (Chi-Sq)			2.59			
Prob.			0.274			

Source: Computed data

Table 48 reveals the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Capital Employed of the Automobile Sector. The Hausman test reveals that the value of Chi-square (14.246) registers the significant effect, subsequently Walt test has applied, it proves that the insignificant effect between the variables. Hence, Pooled OLS Model is more appropriate for further analysis. The F value has found to be statistically significant at five per cent level. The R square value (0.082) states that the low correlation among the dependent and independent variables. The Dividend Yield Ratio was found to have positive relationship, while a negative relationship was observed in Dividend Payout Ratio with Return on Capital Employed, significant at five per cent level. Hence, the null hypothesis rejected. To conclude, the Return on Capital Employed of Automobile Sector has influenced by the independent variables, namely Dividend Yield Ratio and Dividend Payout Ratio during the study period.

C. Energy Sector

Regression analysis has been done to find the effect of dividend policy on profitability energy sector during the study period 2004-05 to 2018-19.

C.1 Return on Asset

Table 49

Return on Asset - Panel Data Regression - Energy Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	4.581 (1.286)	3.561 (0.001)	4.953 (1.910)	2.592 (0.010)	4.997 (1.273)	3.925 (0.000)
DYR	1.225 (0.355)	3.455 (0.001)	1.317 (0.304)	4.332 (0.000)	1.326 (0.307)	4.309 (0.000)
DPR	0.026 (0.042)	0.619 (0.537)	0.006 (0.044)	0.149 (0.881)	0.004 (0.046)	0.100 (0.920)
R Square	0.149		0.209		0.584	
Adjusted R Square	0.135		0.195		0.550	
Std. Error of the Estimate	4.700		3.359		3.387	
F	10.247		15.479		17.187	
Prob.	0.000		0.000		0.000	
Hausman (Chi-Sq)			0.037			
Prob.			0.981			
Wald (Chi-Sq)			30.96			
Prob.			0.000			

Source: Computed data

Table 49 identifies the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Asset of Energy Sector. The Hausman test has showed that the Chi-square value of 0.037 which is insignificant and thus Random Effect Model was considered to be more appropriate for further analysis. It is understood from R square value of Random Effect Model (0.209) which indicates low correlation between the variable. The F value shows a significant association between the dependent and independent variables. The Random Effect Model has shown that Dividend Yield Ratio has a positive effect on Return on Asset at one per cent level of significance. Hence, the null hypothesis rejected for this independent variable. It concludes that Dividend Yield Ratio have influenced the Return on Asset of the energy sector during the study period.

C.2 Return on Net Worth

Table 50

Return on Net Worth - Panel Data Regression - Energy Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	9.705 (1.349)	7.196 (0.000)	9.706 (1.592)	6.093 (0.000)	10.008 (1.778)	5.628 (0.000)
DYR	2.205 (0.372)	5.933 (0.000)	2.441 (0.392)	6.224 (0.000)	2.690 (0.429)	6.258 (0.000)
DPR	-0.005 (0.044)	-0.123 (0.903)	-0.025 (0.051)	-0.498 (0.619)	-0.056 (0.064)	-0.873 (0.384)
R Square	0.292		0.307		0.386	
Adjusted R Square	0.280		0.295		0.336	
Std. Error of the Estimate	4.928		4.737		4.732	
F	24.145		25.944		7.695	
Prob.	0.000		0.000		0.000	
Hausman (Chi-Sq)			2.256			
Prob.			0.323			
Wald (Chi-Sq)			51.89			
Prob.			0.000			

Source: Computed data

Table 50 presents the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Net Worth of the Energy Sector. The Hausman Chi-square (2.256) shows insignificant value between the selected variables. Thus, Random Effect Model was preferred to identify the variable. It is observed from R square value of Random Effect Model (0.307) which shows low correlation between the variables and the value of F test indicates a significant relation between the selected variables. The Dividend Yield Ratio was found to have positive effect with Return on Net Worth at one per cent level of significance. Thus, the null hypothesis rejected for this variable. It concludes that Dividend Yield Ratio have influenced the Return on Net Worth of the Energy Sector during the study period.

C.3 Return on Capital Employed

Table 51

Return on Capital Employed - Panel Data Regression - Energy Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	8.343 (1.783)	4.681 (0.000)	9.966 (2.617)	3.807 (0.000)	10.163 (1.810)	5.612 (0.000)
DYR	1.477 (0.491)	3.006 (0.003)	1.671 (0.431)	3.869 (0.000)	1.697 (0.437)	3.876 (0.000)
DPR	0.080 (0.058)	1.384 (0.169)	0.014 (0.063)	0.231 (0.817)	0.006 (0.065)	0.100 (0.920)
R Square	0.156		0.178		0.565	
Adjusted R Square	0.141		0.164		0.529	
Std. Error of the Estimate	6.513		4.783		4.819	
F	10.802		12.688		15.906	
Prob.	0.000		0.000		0.000	
Hausman (Chi-Sq)			0.245			
Prob.			0.884			
Wald (Chi-Sq)			25.38			
Prob.			0.000			

Source: Computed data

Table 51 portrays that the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Capital Employed of Energy Sector. The Hausman test has revealed that the Chi-square value is 0.245 which is insignificant and thus Random Effect Model was considered to be more suitable for further analysis. It is cleared from R square value of Random Effect Model (0.178) which shows low correlation among the dependent and independent variables. The F value exhibits a significant association between the selected independent variables and the Return on Capital Employed. The Random Effect Model has shown that the Dividend Yield Ratio has a significant positive effect on Return on Capital Employed. Thus, the null hypothesis rejected for this independent variable. It concludes that Dividend Yield Ratio have influenced the Return on Capital Employed of the Energy Sector during the study period.

D. Pharmaceutical Sector

Regression analysis has been done to find the effect of dividend policy on profitability pharmaceutical sector during the study period 2004-05 to 2018-19.

D.1 Return on Asset

Table 52

Return on Asset - Panel Data Regression - Pharmaceutical Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	4.292 (2.799)	1.544 (0.128)	4.836 (2.507)	1.928 (0.058)	6.432 (2.484)	2.588 (0.012)
DYR	8.326 (3.532)	2.357 (0.022)	7.567 (3.098)	2.441 (0.017)	5.347 (3.173)	1.684 (0.057)
DPR	0.007 (0.008)	0.843 (0.403)	0.006 (0.007)	0.971 (0.335)	0.006 (0.007)	0.962 (0.340)
R Square	0.105		0.095		0.358	
Adjusted R Square	0.074		0.064		0.299	
Std. Error of the Estimate	8.848		8.517		7.697	
F	3.360		3.023		6.037	
Prob.	0.042		0.056		0.000	
Hausman (Chi-Sq)			14.785			
Prob.			0.000			
Wald (Chi-Sq)			6.05			
Prob.			0.048			

Source: Computed data

Table 52 displays the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Asset of Pharmaceutical Sector. The Hausman test has showed that the value of Chi-square is 14.785 which shows significant value and then Wald test has applied it shows a significant correlation between the selected independent variables and the Return on Asset at five per cent level of significance. Thus, the Fixed Effect Model was considered to identify the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Asset. The R square value of Fixed Effect Model (0.358) which indicates moderate correlation between the dependent and independent variables. The F value has shown a significant relationship between the selected independent variables and the Return on Asset. The Fixed Effect Model depicts that Dividend Yield Ratio has significant positive relationship with Return on Asset. Hence, the null hypothesis rejected for this variable. It illustrates that Dividend Yield Ratio influenced the Return on Asset of the Pharmaceutical sector during the study period.

D.2 Return on Net Worth

Table 53

Return on Net Worth - Panel Data Regression - Pharmaceutical Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	8.750 (3.187)	2.745 (0.008)	9.960 (3.778)	2.636 (0.010)	10.348 (3.063)	3.378 (0.001)
DYR	13.001 (4.051)	3.209 (0.002)	11.316 (3.882)	2.914 (0.005)	10.777 (3.912)	2.754 (0.008)
DPR	0.013 (0.009)	1.387 (0.171)	0.012 (0.008)	1.455 (0.150)	0.012 (0.008)	1.444 (0.154)
R Square	0.188		0.166		0.327	
Adjusted R Square	0.160		0.137		0.265	
Std. Error of the Estimate	10.147		9.459		9.490	
F	6.611		5.713		5.255	
Prob.	0.003		0.005		0.000	
Hausman (Chi-Sq)			1.632			
Prob.			0.442			
Wald (Chi-Sq)			11.43			
Prob.			0.003			

Source: Computed data

Table 53 portrays the effect of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Net Worth of the Pharmaceutical Sector. The Hausman test has exhibits that the Chi-square value (1.632) is insignificant; thereby Random Effect Model is more appropriate for further analysis than the Fixed Effect Model and Pooled OLS Model. R square shows low correlation between the variables. The F value has revealed a significant relationship among the selected dependent and independent variables. The Random Effect Model has displayed that the Dividend Yield Ratio positively influence the Return on Net Worth significant at one per cent level. Thus, the null hypothesis rejected for this variable. It is implied that in the pharmaceutical Sector, Dividend Yield Ratio has influenced the Return on Net Worth during the study period.

D.3 Return on Capital Employed

Table 54

Return on Capital Employed - Panel Data Regression - Pharmaceutical Sector

Variables	Pooled OLS		Random Effects		Fixed Effects	
	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)	B (Std. Error)	t-Statistic (Prob.)
(Constant)	12.861 (3.139)	4.097 (0.000)	14.532 (4.093)	3.550 (0.000)	14.828 (2.916)	5.084 (0.000)
DYR	7.481 (3.990)	1.875 (0.066)	5.170 (3.706)	1.394 (0.168)	4.762 (3.724)	1.278 (0.206)
DPR	0.012 (0.009)	1.356 (0.181)	0.010 (0.008)	1.246 (0.217)	0.009 (0.008)	1.202 (0.234)
R Square	0.094		0.063		0.298	
Adjusted R Square	0.062		0.030		0.233	
Std. Error of the Estimate	9.993		8.978		9.033	
F	2.954		1.918		4.596	
Prob.	0.060		0.156		0.001	
Hausman (Chi-Sq)			1.296			
Prob.			0.523			
Wald (Chi-Sq)			3.84			
Prob.			0.146			

Source: Computed data

Table 54 exhibits the impact of Dividend Yield Ratio and Dividend Payout Ratio on the Return on Capital Employed of Pharmaceutical sector. The Hausman test proves that the Chi-square value is 1.296 and its probability value is greater than 0.05 indicates insignificant value. Hence, Random Effect Model is suitable for further analysis. The R square value of Random effect model shows very low correlation between the variables. The F value is found to be insignificant. The coefficient of Random Effect Model describes Dividend Yield Ratio and Dividend Payout Ratio has an insignificant relationship with the dependent Variable. Thus, the null hypothesis accepted. The result says that Dividend Yield Ratio and Dividend Payout Ratio do not influence the Return on Capital Employed of the Pharmaceutical Sector during the study period.

E. Information Technology Sector

Regression analysis has been done to find the effect of dividend policy on profitability Information Technology sector during the study period 2004-05 to 2018-19.