

## SHORT TERM SOLVENCY ANALYSIS OF SELECT PASSENGER CAR COMPANIES IN INDIA

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### ABSTRACT

India became the fourth largest auto market in 2019. The Government of India encourages foreign investment in the automobile sector and has allowed 100% foreign direct investment (FDI) under the automatic route. Passenger vehicle sales stood at 3, 10,294 units in October 2020, compared with 2, 71,737 units in October 2019, registering a 14.19% growth. As per the Federation of Automobile Dealers Associations (FADA). The automobile industry is supported by various factors such as availability of skilled labour at low cost, robust R&D centres, and low-cost steel production. The industry also provides great opportunities for investment and direct and indirect employment to skilled and unskilled labour. The present paper measures the short term solvency analysis of select passenger car companies in India for the period of 10 years from 2010-2011 to 2019-2020. The secondary data were used for this study and analysed the data by using of Ratio analysis, Mean, SD, CV and ANOVA finally it conclude that companies belong to the same industry followed a different debt equity position during the study period.

**Key Words:** *Foreign Investment, Direct investment, Shortterm solvency.*

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### INTRODUCTION

The Indian automobile market is one of the largest in the world, both in positions of sales volume and production. India is one of the fastest growing economies in the world. The India automotive industry accounts for 7.1% of the country's total Gross Domestic Product (GDP). On the other hand, passenger vehicles segment accounts for about 15% of total automobile industry of the country. Passenger vehicles exports marginally increased by 0.17% and two-wheeler exports registered a growth of 7.30% in April-March 2020 over the same period last year. India is a very favorable market for small cars be it production, sales or export. Since the Indian automobile industry is the largest manufacturer of small cars companies. The Indian automobile exports registered a 22.30 percent growth in the year 2019.

### REVIEW OF LITERATURE

**Ebrahim Manoori and Datin Dr. Jariah Muhammad (2012)** in their study ascertain that firm size, operation cash flow to sales, and capital expenditures to total sales are correlated to working capital. Also, they find that gross domestic product is inversely correlated to the working capital management.

**Farai Kwenda and Merle Holden (2014)** in their study identify that financial leverage, short-term finance and fixed investment significantly influences the level of working capital.

**Namita Srivastava (2014)** in her study finds that there exists negative relationship between firm size, growth, profitability and liquidity.

**Fidel Anake Atseye, James Ike Ugwu and Samuel Menyo Takon (2015)** in their study observes that working capital of a firm depends on size of the firm, firm's age, earning potential, market share (power), growth in sales and firm's cash flow.

### OBJECTIVE OF THE STUDY:

- To ascertain Short Term Solvency position of select Passenger car companies in India.
- To study the liquidity position of select Passenger car companies in India.

## RESEARCH METHODOLOGY

The present study is analytical in nature. Secondary data required for the study.

### SOURCE OF DATA

Data used for the study are secondary in nature. Secondary data are collected from Capitaline Plus data base. The variables used in the study have been selected after a detailed survey of the available literature on the subject and discussions with several knowledgeable persons in the field of finance.

### SAMPLING

The companies for which the data were not available for more than one year of the study period have been dropped. The database has made collection for more than thirty of companies, of which only ten companies have a financial data available for a continuous period of 10 years, namely 2010-011 to 2019-20. The sample companies are:

- Fiat India Automobiles Ltd
- Ford India Pvt Ltd
- General Motors India Pvt Ltd
- Hindustan Motors Ltd
- Honda Cars India Ltd
- Hyundai Motor India Ltd
- Mahindra & Mahindra Ltd
- Mahindra Electric Mobility Ltd
- Maruti Suzuki India Ltd
- Toyota Kirloskar Motor Pvt Ltd

### PERIOD OF STUDY

The study covers period of ten years from 2010-11 to 2019-20. The financial year runs from 1st April to 31st March every year.

### FRAMEWORK OF ANALYSIS

The statistical tools used to analyze the data include Ratio analysis, Mean, SD, CV and ANOVA.

### LIMITATIONS OF THE STUDY

Financial information collected for the present study is entirely secondary in nature. In such a case, the study carries all the limitations inherent with the secondary data and financial information. The study is restricted to select companies for the period of ten years.

### SHORT TERM SOLVENCY RATIOS

Following ratios are calculated to judge the long term financial solvency of the concern.

1. Current ratio
2. Quick ratio
3. Liquidity ratio

#### Current Ratio

The formula for the current ratio is as follows:

$$\text{Current Ratio} = \text{Current Assets} \div \text{Current Liabilities}$$

The current ratio indicates a firm's ability to pay its current liabilities from its current assets. This is the basic indicator of the company's liquidity. Higher numbers are better, meaning that the current assets amount of a firm is higher comparing to current liabilities and thus, company has the ability to easily pay off its short-term debt.

**Table No. 1. Mean, S.D, C.V of Current Ratio for Select Passenger car Companies in India**

Year	Fiat India	Ford India	General Motors	Hindustan	Honda Cars	Hyundai	M&M	Mahindra Electric	Maruti Suzuki	Toyota	Average	S D	CV
2010-11	0.53	1.00	1.08	0.63	0.67	1.48	0.92	0.50	1.13	1.49	0.94	0.36	38.47
2011-12	0.77	0.84	1.01	0.54	0.84	1.42	0.82	0.62	1.08	1.08	0.90	0.26	28.28
2012-13	0.79	0.92	0.81	0.52	0.86	1.45	0.88	0.78	0.86	1.03	0.89	0.24	26.52
2013-14	0.74	0.93	0.58	0.60	0.58	1.25	0.94	0.74	0.69	1.08	0.81	0.23	28.16
2014-15	1.00	0.91	0.29	0.58	0.38	1.15	0.92	0.42	0.59	1.46	0.77	0.38	49.15
2015-16	1.46	1.11	0.47	0.25	0.38	1.17	0.88	0.59	0.60	1.78	0.87	0.50	57.66
2016-17	1.60	1.02	0.82	0.12	0.45	1.31	0.94	1.37	0.56	1.85	1.00	0.54	53.76
2017-18	1.58	0.91	0.95	0.14	0.46	1.65	0.95	1.59	0.46	1.83	1.05	0.59	55.83
2018-19	1.57	0.82	1.17	0.21	0.50	1.97	0.97	1.26	0.47	2.03	1.10	0.63	56.99
2019-20	1.51	0.71	1.55	0.12	0.60	2.19	1.03	0.92	0.55	2.40	1.16	0.74	63.83
Average	1.16	0.92	0.87	0.37	0.57	1.50	0.93	0.88	0.70	1.60	0.95		
SD	0.43	0.11	0.37	0.22	0.17	0.34	0.06	0.40	0.24	0.46			
CV	36.94	12.23	41.98	59.18	30.37	22.80	6.16	45.31	34.71	28.44			

**Table No. 2. ANOVA of Current Ratio for Select Passenger car Companies in India**

ANOVA					
Source of Variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	13.292	9	1.477	15.490	.000
Within Groups	8.581	90	.095		
Total	21.873	99			

The mean value of Current Ratio (CR) of the selectten companies are found to range between 0.37 (Hindustan) and 1.60 (Toyota). Mean CR amounts to 0.95. Fiat (1.16), Hyundai (1.50) and Toyota(1.60)have CR above the average. The rest of Seven companies (Ford India 0.92, General Motors 0.87, Hindustan 0.37, Honda Cars0.57, M&M 0.93, Mahindra Electric 0.88, Maruti Suzuki 0.70) are with ratio below the average. Comparing to co-efficient of variation across the Ten companies shows that the level of CR has remained highly stable with M&M, while it is highly instable with Hindustan.

Year-wise comparison of CR shows that during the year 2019-2020, the ratio has remained the highest. Compared against the grand mean of 0.95, it is found that the ratio has remained well above during 2016-2017, 2017-2018, 2018-2019and 2019-2020. Regarding stability of CR across years, it is found that the ratio has remained more stable during 2012-2013. Volatility is found to be high during 2019-2020. Since, CR of Toyota is found to be high (2.40) as against any other

companies. As we calculated P Value is less than .001, there exists significant mean difference in Current ratio among select companies.

### Quick Ratio

The formula for the Quick ratio is as follows:

$$\text{Quick Ratio} = (\text{Cash Equivalents} + \text{Marketable Securities} + \text{Net Receivables}) \div \text{Current Liabilities}$$

The purpose of calculating the quick ratio is to measure how well a company can meet its short-term obligations with its most liquid assets.

**Table No. 3. Mean, S.D, C.V of Quick Ratio for Select Passenger car Companies in India**

Year	Fiat India	Ford India	General Motors	Hindustan	Honda Cars	Hyundai	M&M	Mahindra Electric	Maruti Suzuki	Toyota	Average	SD	CV
2010-11	0.72	0.58	0.68	0.37	0.42	1.05	0.51	0.27	1.09	0.93	0.66	0.29	43.21
2011-12	0.72	0.50	0.78	0.42	0.63	1.52	0.64	0.36	0.85	0.56	0.70	0.33	47.00
2012-13	0.68	0.73	0.51	0.23	0.62	1.27	0.66	0.47	0.66	0.96	0.68	0.28	41.30
2013-14	0.90	0.91	0.38	0.66	0.42	0.95	0.80	0.59	0.54	1.01	0.71	0.23	31.93
2014-15	2.57	0.71	0.16	0.30	0.24	0.93	0.75	0.47	0.30	1.42	0.78	0.74	93.74
2015-16	3.56	1.08	0.58	0.12	0.27	0.84	0.77	0.92	0.34	1.39	0.99	0.98	99.60
2016-17	3.16	0.89	0.59	0.05	0.33	1.05	0.68	1.19	0.26	1.53	0.97	0.89	91.56
2017-18	3.00	0.73	0.68	0.28	0.20	1.52	0.77	1.20	0.23	1.65	1.03	0.86	84.13
2018-19	1.62	0.84	1.03	0.19	0.45	1.93	0.81	0.82	0.29	1.91	0.99	0.64	64.29
2019-20	1.41	0.80	1.23	0.13	0.19	1.93	0.94	0.80	0.36	2.02	0.98	0.67	68.19
Average	1.83	0.78	0.66	0.28	0.38	1.30	0.73	0.71	0.49	1.34	0.85		
SD	1.13	0.17	0.31	0.18	0.16	0.41	0.12	0.33	0.29	0.47			
CV	61.84	21.48	46.36	63.45	41.96	31.21	16.04	46.47	59.33	35.06			

**Table No. 4. ANOVA of Quick Ratio for Select Passenger car Companies in India**

ANOVA					
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	21.648	9	2.405	11.726	.000
Within Groups	18.461	90	.205		
Total	40.109	99			

The mean value of Quick Ratio (QR) of the select ten companies are found to range between 0.28 (Hindustan) and 1.83 (Fiat India). Mean QR amounts to (0.85). Fiat India (1.83), Hyundai (1.30) and Toyota (1.34) have QR above the average. The rest of seven companies (Ford India 0.78, General Motors 0.66, Hindustan 0.28, Honda Cars 0.38, M&M 0.73, Mahindra Electric 0.71, Maruti Suzuki 0.49) are with ratio below the average. Comparing to co-efficient of variation across the Ten companies shows that the level of QR has remained highly stable with M&M, while it is highly instable with Hindustan.

Year-wise comparison of QR shows that during the year 2017-2018, the ratio has remained the highest. Compared against the grand mean of 0.85, it is found that the ratio has remained well above during 2015-2016, 2016-2017, 2017-2018, 2018-2019, and 2019-2020. Regarding stability of

QR across years, it is found that the ratio has remained more stable during 2013-2014. Volatility is found to be high during 2015-2016. Since, QR of Fiat India is found to be high (3.56) as against any other companies. As we calculated P Value is less than .001, there is exists significant mean difference in Quick ratio among select companies.

### Liquidity Ratio

It's a ratio which tells one's ability to pay off its debt as and when they become due. In other words, we can say this ratio tells how quickly a company can convert its current assets into cash so that it can pay off its liability on a timely basis. Generally, Liquidity and short-term solvency are used together. Liquidity ratio affects the credibility of the company as well as the credit rating of the company. If there are continuous defaults in repayment of a short-term liability then this will lead to bankruptcy.

**Table No. 5. Mean, S.D, C.V of Liquidity Ratio for Select Passenger car Companies in India**

Year	Fiat India	Ford India	General Motors	Hindustan	Honda Cars	Hyundai	M & M	Mahindra Electric	Maruti Suzuki	Toyota	Average	S D	CV
2010-11	5.73	3.94	6.56	6.84	7.90	15.52	13.85	4.95	25.88	13.69	10.49	6.79	64.79
2011-12	11.94	8.81	6.54	7.99	5.67	16.17	13.50	3.39	19.81	11.73	10.56	5.06	47.90
2012-13	16.89	7.52	7.48	8.89	6.19	13.93	16.71	1.68	23.68	12.96	11.59	6.46	55.75
2013-14	6.75	5.56	4.15	12.04	10.85	15.72	14.45	2.27	25.59	14.79	11.22	6.93	61.82
2014-15	15.57	5.74	4.61	1.43	15.18	12.44	15.77	1.80	18.60	17.04	10.82	6.68	61.75
2015-16	17.71	9.95	3.87	0.12	19.17	13.45	15.21	2.21	18.37	13.25	11.33	7.00	61.81
2016-17	16.84	7.03	3.18	0.35	10.44	13.32	15.97	2.83	20.86	21.29	11.21	7.63	68.09
2017-18	5.66	7.10	6.19	1.09	8.70	16.11	18.02	3.43	25.23	22.52	11.41	8.41	73.75
2018-19	7.07	8.11	7.87	1.26	11.46	16.81	13.96	5.52	25.87	21.04	11.89	7.57	63.61
2019-20	9.91	9.26	9.32	1.40	9.89	16.95	13.38	8.09	23.52	13.49	11.52	5.87	50.95
Average	11.41	7.30	5.98	4.14	10.55	15.04	15.08	3.62	22.74	16.18	11.20		
SD	5.00	1.85	1.98	4.35	4.09	1.61	1.53	2.03	3.05	4.01			
CV	43.83	25.30	33.09	105.01	38.79	10.71	10.17	56.00	13.42	24.79			

**Table No. 6. ANOVA of Liquidity Ratio for Select Passenger car Companies in India**

ANOVA					
Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3381.032	9	375.670	36.697	.000
Within Groups	921.341	90	10.237		
Total	4302.374	99			

The mean value of Liquidity Ratio (LR) of the selectten companies are found to range between 3.62 (Mahindra Electric) and 22.74 (Maruthi Suzuki). Mean LR amounts to 11.20. Fiat India (11.41), Hyundai (15.04), M&M (15.08), Maruthi Suzuki (22.74) and Toyota (16.18) have LR above the average. The rest of five companies (ford India 7.30, General motors 5.98, Hindustan 4.14, Honda cars 10.55 and Mahindra Electric 3.62) are with ratio below the average. Comparing to co-efficient of variation across the Ten companies shows that the level of LR has remained highly stable with M&M while it is highly instable with Hindustan.

Year-wise comparison of LR shows that during the year 2018-2019, the ratio has remained the highest. Compared against the grand mean of 11.20, it is found that the ratio has remained well above during 2012-2013, 2013-2014,2015-2016,2016-2017,2017-2018, 2018-2019 and 2019-2020. Regarding stability of LR across years, it is found that the ratio has remained more stable during 2011- 2012. Volatility is found to be high during 2017-2018. Since, CR of Maruthi Suzuki is found to be high (25.88) as against any other companies. As we calculated P Value is less than .001, there is exists significant mean difference in Liquidity ratio among select companies.

### FINDINGS OF THE STUDY

- Year-wise comparison of Current ratio (CR) shows that during the year 2019-2020, the ratio has remained the highest.
- Year-wise comparison of Quick Ratio (QR) shows that during the year 2017-2018, the ratio has remained the highest.
- Year-wise comparison of Liquidity Ratio (LR) shows that during the year 2018-2019, the ratio has remained the highest.
- Short term solvency analysis ratio's (Current ratio, Quick ratio and Liquidity ratio) co-efficient of variation across the ten company shows that the level of CR, QR and LR has remained highly stable with M&M, while it is highly instable with Hindustan.

### CONCLUSION

After analyzing the company's financial position we come on the conclusion that there is not much difference in the companies in short term solvency. In short term solvency analysis there is a exists significant mean difference in Current ratio, quick ratio among select companies, And as we calculated P Value is less than .001, there is exists significant mean difference in Liquidity ratio among select companies. The efficacy of utilizing the assets is also differing from company to company.

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