



LIQUIDITY MANAGEMENT OF MARUTI SUZUKI INDIA LIMITED: A CASE STUDY

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Abstract

In the present paper, an attempt was made to analyse the liquidity management of Maruti Suzuki India Limited (MSIL), a leading company in the Indian Automobile industry, for the period 2010-11 to 2019-20. While tackling the issue, ratio analysis and some suitable statistical measures were used. The liquidity management of MSIL in the first half of the study was better compare to the second half and WCR and DTR had significantly impacted the ROCE during the study period.

I. Introduction

The success of a company largely depends upon two important factors, namely liquidity and profitability. Liquidity is the ability of a company to meet its short-term obligations while profitability measures the company's earning capability. Adequate liquidity is a pre-requisite for a company to run its business wheel smoothly as well as to keep its reputation and goodwill intact in the market. However, excessive liquidity indicates insufficiency in the company's investment opportunity which may hurt its profitability. So, a balance between liquidity and profitability is highly desirable. Without proper management of liquidity, the company cannot maintain a perfect blend of liquidity and profitability. Hence, the liquidity management is recognized as one of the most important facets of financial management of each and every company. In fact, the essentiality of managing liquidity for a company cannot be undermined. Particularly, in today's challenging and competitive environment, the efficient management of liquidity in all categories of businesses is considered as an integral component of overall corporate strategy to create shareholders' value. India is one of the fastest growing economies in the world and its automobile industry has established itself as one of the largest globally, both regarding production as well as sales. India is expected to be the world's third-largest automotive market in terms of volume by 2026. So, the automobile industry has been making significant contribution towards the country's economic growth. Maruti Suzuki India limited (MSIL) is presently the biggest passenger car manufacturer in India. The company buys over 95 per cent of its components (by value) from suppliers with manufacturing plants in India, making MSIL a notable contributor to local employment and an epitome of the; Make in India' initiative of the Government of India (Annual Report of MSIL for 2019-20). In this backdrop, the present paper seeks to analyse the liquidity management of MSIL for the period 2010-11 to 2019-20.

The remainder of the paper is structured as follows. Section II sets the objectives of the study. Section III deals with the methodology adopted in the study. A brief profile of MSIL is presented in Section IV. Section V discusses the empirical results. In Section VI, concluding remarks are provided.

II. Objectives of the study

The present study has the following objectives:

- To evaluate the liquidity of MSIL by using some selected ratios.
- To assess the liquidity status of the company under study more precisely applying comprehensive scores.
- To check whether there is any uniformity among the selected aspects of the liquidity management of MSIL.



- To analyze the association between the liquidity and profitability of the selected companies.

III. Methodology of the study

The data for the period 2010-11 to 2019-20 used in the study were taken from secondary sources i.e., published annual reports of MSIL. For analyzing the data, some selected ratios were used. Simple statistical tools like mean, statistical techniques like analysis of Kendall's Coefficient of concordance, Pearson's simple correlation analysis, Spearman's rank correlation analysis, Kendall's rank correlation analysis and trend analysis, and statistical tests like Chi square and t-test were applied at appropriate places.

IV. A brief profile of MSIL

MSIL, a public limited company, was incorporated in 1981 as per the Companies Act, 1956 by signing a joint venture agreement between the Government of India and Suzuki Motor Corporation (SMC), Japan. It is the largest car manufacturer in India. The company became a subsidiary of SMC in 2002. Presently MSIL is 56.28 percent owned subsidiary of SMC. In terms of production volume and sales, the company is now SMC's largest subsidiary. MSIL is the market leader in the passenger vehicle segment in India with 14,36,124 units sold in 2019-20. The Company recorded the highest ever market share of 58 percent as of July 2018 in the Indian automobile market.

V. Empirical results and Discussion

In Table 1, we analyzed the liquidity of MSIL by using few selected ratios. In this table, linear trend equation was fitted to identify the nature of the trend in each of the selected ratios during the period under study and t test was performed to check whether the slopes of the trend lines were statistically significant or not. To measure the liquidity of the MSIL, the following ratios were analyzed.

1. **Working capital ratio (WCR):** It measures the ability of the company to meet its short-term obligations. The higher the value of WCR, the higher is the company's capability to pay off its current obligations. Table 1 shows that the WCR of MSIL ranged between 0.51 in 2017-18 and 1.76 in 2013-14. On the average, it was 1.1. The linear trend line fitted to the WCR series indicates a declining trend which was found to be statistically significant at 5 per cent level. It reveals that a notable downward trend in the company's short term debt paying capability was observed during the study period.
2. **Acid test ratio (ATR):** It is a stricter test of liquidity as compared to the WCR. This ratio shows the company's ability to pay off its immediate obligations. Table 1 discloses that the ATR of MSIL was the highest (1.54) in 2013-14 and it was the lowest (0.31) in 2017-18. The mean ATR of the company was 0.84. The straight-line trend equation fitted to the ATR series shows a decreasing trend which was found to be statistically significant at 5 per cent level. It implies that there was a significant declining trend in the instant capacity of MSIL to meet its immediate obligations during the period under study
3. **Inventory turnover ratio (ITR):** This ratio measures the efficiency of the company in terms of managing its inventory. Higher the value of the ITR, higher the company has managed its inventory in a better fashion which also indicates higher sales whereas a low



ITR indicates lower sales, excessive level of inventory and also poor liquidity of inventory. Table 1 exhibits that the ITR of the MSIL varied between 20.39 in 2015-16 and 28.56 in 2010-11. On the average it was 24.42 during the study period which reflects that one rupee invested in inventory could be able to generate Rs. 24.42 worth of sales. A downward trend was found by fitting the trend line equation to the ITR series which was found to be not statistically significant. It indicates that there was no notable decrease in the efficiency of inventory management of the company during the study period.

4. **Debtors turnover ratio:** It indicates how effectively the company is managing its credit and collection policies. A high DTR is always expected because it means the company is collecting its debts quickly whereas a low DTR means the company has a poor credit policy or the company has an inadequate collection process. It is observed from Table 1 that the DTR of the "MSIL" ranged between 33.8 in 2012-13 and 64.43 in 2016-17. On the average it was 44.68 during the study period. The straight line fitted to the DTR series of the MSIL which shows an increasing trend but it was not statistically significant. This implies that there was no such impact able change in the efficiency of credit management of the MSIL during the study period.
5. **Cash turnover Ratio (CTR):** This ratio is used to determine whether there is an adequate amount of cash and whether the cash available is effectively used by the company to generate sales. The higher CTR shows higher amount of cash and efficient cash management. From Table 1 we can notice that the CTR of MSIL was the highest (5898.18) in 2016-17 and it was the lowest (15.85) in 2015-16. The average value of the CTR was 1585.73. The straight line fitted to the CTR series of the MSIL found that there was an upward trend in the CTR of the company which was not statistically significant. It shows that there is a negligible upward trend in the cash turnover ratio for the study period.

Table 1					
Maruti Suzuki India Ltd.					
Selected Ratios relating to the liquidity management					
Year	WCR	ATR	DTR	CTR	ITR
2010-11	1.56	1.21	45.25	16.11	28.56
2011-12	1.69	1.42	41.18	15.85	21.49
2012-13	1.6	1.33	33.8	62.08	26.14
2013-14	1.76	1.54	33.83	75.95	28.03
2014-15	0.93	0.63	50.26	2938.17	20.56
2015-16	0.63	0.36	49.18	1633.42	20.39
2016-17	0.65	0.5	64.43	5898.18	23.69
2017-18	0.51	0.31	56.09	1153.23	25.94
2018-19	0.87	0.64	37.23	480.83	25.87
2019-20	0.75	0.46	35.55	3583.44	23.52
Average	1.10	0.84	44.68	1585.73	24.42
Maximum	1.76	1.54	64.43	5898.18	28.56



Minimum	0.51	0.31	33.8	15.85	20.39
Slope of the Trend line	-0.134	-0.125	0.529	345.324	-0.175
t-value	-4.003*	-3.696*	0.444	1.756	-0.516
*Significant at 5% level, **Significant at 1% level					
Source: Compiled and computed from Published Annual Reports of MSIL for the years 2010-11 to 2019-20.					

Table -2

Table -2, Maruti Suzuki India Limited												
Statement of ranking in order of liquidity and analysis of Kendall's Coefficient of Concordance among selected liquidity indicators												
Year	WC R (A)	AT R (B)	DTR (C)	CTR (D)	ITR (E)	Liquidity Ranks					Sum of Ranks (AR+BR+CR+DR+ER)	Ultimate Rank
						AR	BR	CR	DR	ER		
2010-11	1.56	1.21	45.25	16.11	28.56	4	4	9	5	1	23	2
2011-12	1.69	1.42	41.18	15.85	21.49	2	2	10	6	8	28	6
2012-13	1.6	1.33	33.8	62.08	26.14	3	3	8	10	3	27	5
2013-14	1.76	1.54	33.83	75.95	28.03	1	1	7	9	2	20	1
2014-15	0.93	0.63	50.26	2938.17	20.56	5	6	3	3	9	26	4
2015-16	0.63	0.36	49.18	1633.42	20.39	8	9	4	4	10	35	10
2016-17	0.65	0.5	64.43	5898.18	23.69	9	7	1	1	6	24	3
2017-18	0.51	0.31	56.09	1153.23	25.94	10	10	5	2	4	31	8
2018-19	0.87	0.64	37.23	480.83	25.87	6	5	6	7	5	29	7
2019-20	0.75	0.46	35.55	3583.44	23.52	7	8	2	8	7	32	9
Kendall's Coefficient of Concordance among five sets of liquidity performance ranks(w) is 0.904 and Chi-square value of W is 36.16 being significant at 5 % level.												
Source: Compiled and computed from Published Annual Reports of MSIL for the years 2010-11 to 2019-20.												



Table 3				
Maruti Suzuki India Limited				
Analysis of Spearman's Rank Correlation between Liquidity and Profitability				
Year	Liquidity Rank (as shown in table 2)	ROCE(%)	Profitability Rank (on the basis of ROCE)	Spearman's rank correlation coefficient between liquidity and profitability is -0.006 which is not significant.
2010-11	2	21.84	5	
2011-12	6	13.89	10	
2012-13	5	16.07	8	
2013-14	1	17.01	7	
2014-15	4	18.2	6	
2015-16	10	21.9	4	
2016-17	3	30.1	1	
2017-18	8	28.1	2	
2018-19	7	23.8	3	
2019-20	9	14.9	9	
Average		20.58		
Maximum		30.1		
Minimum		13.89		
Slope of the Trend line		0.67		
t-value		1.11		

Source: Compiled and computed from Published Annual Reports of MSIL for the years 2010-11 to 2019-20.

Table 4					
Analysis of correlation between ROCE and selected Liquidity Indicators					
Correlation measures	Correlation between ROCE and selected liquidity indicators				
	WCR	ATR	DTR	CTR	ITR
Pearson	-.632*	-.585	.789**	.410	.151
Spearman	-.511*	-.552	.697*	.442	.079
Kendall	-.685*	-.422	.511*	.333	.067

***Significant at 5% level, **Significant at 1% level**

Source: Compiled and computed from Published Annual Reports of MSIL for the years 2010-11 to 2019-20.



- ❖ Efficient management of working capital is important because it affects the liquidity and profitability position of the company. A proper management of WCM leads to an adequate liquidity position which is essential for the company for paying short term obligations promptly which further helps the company to increase its profit. Therefore to examine the liquidity of the MSIL more precisely a comprehensive test based on the sum of scores of separate individual rankings under the five yardsticks viz. WCR, ATR, DTR, CTR and ITR was made in Table 2. For examining the degree of uniformity among the five sets of ranking, Kendall's coefficient of concordance (W) was applied. To examine whether the computed value of W was statistically significant or not, Chi-square test was used. For any of the criterion mentioned above a larger value reflects appreciable liquidity position and the values were also rank ordered. The ultimate ranking was done on the concept that the liquidity position is more favourable when the points scored are low. From Table 2 we can notice that the computed value of W, which was 0.904 was found to be statistically significant at 5% level. It shows that there was a significant association among all the chosen indicators of liquidity performance of the company for the study period. From this table we can observe that the year 2013-14 had the most favourable liquidity position and it was followed by 2010-11, 2016-17, 2014-15, 2012-13, 2011-12, 2018-19, 2017-18, 2019-20 and 2015-16. It indicates that for most part the first half of the study period was better for overall liquidity of MSIL compared to the second half.
- ❖ In Table 3 we evaluated the overall profitability of MSIL by using the mean value and linear trend equation of the company's return on capital employed (ROCE) and t-test. We also measured the extent of relationship between liquidity and profitability of MSIL by using Spearman's rank correlation coefficient (RSP). The t-test was used to evaluate whether the computed value of RSP was significant or not. For this purpose, the composite ranks of liquidity (as per Table 2) and ranks of profitability (based on ROCE) were applied. We see in Table 3 that on an average the ROCE of the MSIL was 20.58 per cent during the study period, which ranged between 30.1 per cent (2016-17) to 13.89 per cent (2011-12). We fitted a straight-line trend to the ROCE series during the study period which showed an upward trend which was not statistically significant which indicates that the ROCE has increased during the period in a negligible way. The value of Spearman's rank correlation between liquidity and profitability was -0.006 which is not statistically significant which indicates there was not a significant degree of association between liquidity and profitability of the company during the study period.
- ❖ In Table 4 we calculated correlation coefficients among ROCE and selected liquidity indicators to find out the closeness of association among them. To identify the magnitude of the relationship we conducted Pearson's simple correlation coefficient; for ranking their magnitudes, Spearman's rank correlation coefficient and to find out the nature of their associated changes we used Kendall's correlation coefficient. These correlations were tested using t-test. This table shows that the significant association was found only between WCR and ROCE and DTR and ROCE. In the case of WCR and ROCE all the correlation coefficients were negative but in the case of DTR and ROCE, all the correlation coefficients were positive. Among these all the correlation coefficients were significant at 5 per cent level except the Pearson's correlation coefficient between DTR and ROCE was statistically significant at 1 per cent level. By analyzing the correlation coefficient between WCR and ROCE it showed that lower the liquidity higher the profitability during the period of study. The correlation coefficient between DTR and ROCE indicates higher efficiency in managing DTR will lead to higher profitability. Other than this the



correlation coefficients between the ATR and ROCE were negative but not statistically significant which means the impact of the quick assets management is not significant in enhancing the ROCE. The correlation coefficients between ITR and ROCE and CTR and ROCE were also not significant. These suggest that the inventory management and cash management of the MSIL had a positive impact on profitability but which is not noticeable during the period when this study was conducted.

VI. Concluding remarks

The short-term obligation paying capability along with the immediate debt paying capability of the MSIL had a significant downward trend during the study period. The cash management of the MSIL increased rapidly in the midway of the study period which was not statistically significant. The Inventory management had a negative trend but the debtor's management had a positive trend and both of these trends were not statistically significant. It indicates that the inventory management has an adverse effect and debtors' management has a beneficial effect on the overall liquidity of the company. From the comprehensive rank test, we can observe that the first half of the study period had a better liquidity position compared to the second half of the study period. The study also indicated that during the period of study there was an association among all the major liquidity indicators which was statistically significant. We also found that the company had a better profitability record in the second half compared to the first half of the study period but MSIL was not able to enlarge the effectiveness of Quick assets management, cash management and inventory management during the study period.

References

1. Sur, Debasish, et al. "Liquidity Management in PSUs in Post-Reform Era: A Case Study of Bhel." *The management Accountant* 48.8 (2013).
2. Sur, Debasish, Sumit Kumar Maji, and Deep Banerjee. "Efficiency in Managing Working Capital of NTPC Ltd. in the Pre-liberalization and Post-liberalization Periods: A Comparative Study."
3. Kamalnath, Dr P. "Liquidity Management: An Empirical Investigation in Maruti Suzuki India Limited (MSIL)." (2015).
4. Healey, P. *Liquidity analysis and management*. Reading, Mass.; Don Mills, Ont.: Addison-Wesley Pub., 1987.
5. Bhunia, Amalendu, and Islam Uddin Khan. "Liquidity management efficiency of Indian steel companies (a case study)." *Far East Journal of Psychology and Business* 3.3 (2011): 3-13.