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Liquidity management practices among automobile companies in India

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Abstract
The automobile industry is a mainstay for macroeconomic evolution and technological advancement of the global economy. India is a prominent auto exporter and has strong export growth expectations for the near future. Automobile exports grew 26.5% during April-July 2018. It is expected to grow at a CARG of 3% during 2016-2026.The contribution of India automobile industry is 7.1% in Gross Domestic Product (GDP). Due to the favorable policies of Indian Government the key players of this sector will make India a learning industry in the production of 2W and Four Wheeler (4W) and world break all the markets worldwide by 2020. Liquidity management is a process to make cash available then and there it is required, and to make the efficient profitable use of any cash surpluses while avoiding idle liquid cash. An effective profitability management is equally important as the liquidity management, as it determines the sustainability and enhancement of the business enterprise. For any business the tradeoff between profitability and liquidity management is important. The current study considers 3 BSE Listed Automobile Companies among the top 10 in India for 5 years (2013-14 to 2017-18). The study aims to reveal the relationship between liquidity ratios and ROA and to study the impact of liquidity ratios on ROE of the selected companies.

Keywords: Indian automobile industry, liquidity management, return on asset, return on equity

1. Introduction
Automobile industry plays a vital role in manufacturing and selling self-powered vehicles, including passenger cars, trucks, farm equipment, and other commercial vehicles. The automobile industry has become one of the largest purchasers of many key industrial products, such as steel. The people in the industry employs has made it a key determinant of economic growth. In present time, the Automobile Industry in India become one of the most rapidly rising sectors. Indian Automobile exports increased to 14.50 per cent during FY2019 and has secured second rank in the global two–wheeler market and fourth in biggest commercial vehicle market. Globally, eleventh and fifth rank in the international passenger car market and pertaining to the number of buses and trucks sold in the world.
Liquidity management is considered in various terms for a business. It is an extent to which an organization holds cash to meet its immediate and short-term obligations, or asset which can be quickly converted into cash. On the other hand, Profitability is the ability of a company to use its resources to generate revenue in excess of its expenses. Profitability is the relationship of income that indicates the relative ability to earn income on assets. The aim of any business concern is to maintain a proper level of the liquidity, supported by adequate returns. That was the reason behind the current study, where it was checked out that whether the automobile companies in India are making a perfect balance between the liquidity management and profitability. The scope of the study will enable the automobile industry to effectively implement liquidity management practices, which will enable the firms to derive maximum benefits in managing working capital components to boost profitability. This research work aims to contribute to the literature on the relationship between liquidity management and profitability and also focus on automobile industry.

2. Research objectives and Methodology
The research objectives of the current study are to reveal the relationship between liquidity ratios and return on assets (ROA) of the companies and to study the impact of liquidity ratios on the return on equity (ROE) of the companies.

The research is based on the secondary data for five years (2013-14 to 2017-18) collected from the audited annual reports of the three BSE listed automobile companies in India. The companies are Hero Motocorp, Maruthi Suzuki, and Mahindra & Mahindra. The sample selection criteria used in this study was, the net profit should be higher than 20,000 crores and should be continuously listed for five years. The statistical tools applied are Correlation and ANOVA using SPSS 21 version software.

3. Results and Discussion

The variables selected for this study are current assets, liquid assets, current liabilities, net profit, total assets and equity capital which are used to determine the current ratio, Liquid ratio, Return on Assets (ROA) and Return on Equity (ROE).

3.1 Correlation - Liquidity Ratios to Return on Asset

Hypothesis: There is no relationship between Liquidity Ratios and Return on Asset.

A. Hero Motocorp

Table 1: Correlation of Hero Motocorp

		Current Ratio	Liquid Ratio	Return on Asset
Current Ratio	Pearson Correlation	1	.998**	.401
	Sig. (2-tailed)		.000	.503
	N	5	5	5
Liquid Ratio	Pearson Correlation	.998**	1	.362
	Sig. (2-tailed)	.000		.549
	N	5	5	5
Return on Assets	Pearson Correlation	.401	.362	1
	Sig. (2-tailed)	.503	.549	
	N	5	5	5
** Correlation is significant at the 0.01 level (2-tailed)				

***Source*:** Computed data

In Hero MotoCorp company, it is revealed that liquid ratio (r=0.998) has been positively correlated with current ratio showing significance at 1% level. Then again current ratio (r=0.998) has been correlated with liquid ratio showing significance at 1% level. Liquidity ratios showed a minimum correlation with return on assets during the study period. Hence, the hypothesis is accepted.

B. Maruti Suzuki

Table 2: Correlation of Maruti Suzuki

		Current Ratio	Liquid Ratio	Return on Assets
Current Ratio	Pearson Correlation	1	.987**	-.848
	Sig. (2-Tailed)		.002	.070
	N	5	5	5
Liquid Ratio	Pearson Correlation	.987**	1	-.755
	Sig. (2-Tailed)	.002		.140
	N	5	5	5
Return on Assets	Pearson Correlation	-.848	-.755	1
	Sig. (2-Tailed)	.070	.140	
	N	5	5	5
** Correlation is Significant at the 0.01 Level (2-Tailed).				

***Source*:** computed data

In Maruti Suzuki, it is implied that the liquid ratio (r= 0.987) has been correlated positively with the current ratio with 1% level of significance (2- tailed). Then the current ratio (r=0.987) has been correlated in positive values with liquid ratios showing the significance of 1% level (i.e., 0.01). The liquidity ratios (current ratio and liquid ratio) implied a lesser correlation with return on assets (ROA) in this duration of study. Hence, the hypothesis is accepted.

C. Mahindra & Mahindra

Table 3: Correlation of Mahindra & Mahindra

		Current Ratio	Liquid Ratio	Return on Assets
Current Ratio	Pearson Correlation	1	.964**	-.648
	Sig. (2-Tailed)		.008	.237
	N	5	5	5
Liquid Ratio	Pearson Correlation	.964**	1	-.596
	Sig. (2-Tailed)	.008		.289
	N	5	5	5
Return on Assets	Pearson Correlation	-.648	-.596	1
	Sig. (2-Tailed)	.237	.289	
	N	5	5	5
** Correlation is significant at the 0.01 level (2-tailed).				

***Source*:** Computed data

In Mahindra & Mahindra company, it is indicated that the liquid ratio (r=0.964) has the positive relationship with the current ratio with the significance of 0.01 level of correlation. The current ratio has also been correlated positively with the liquid ratio (r=0.964) with the significance of 1% level. The liquidity ratios inferred a lesser correlation with the return on assets (ROA) in this study period. Hence, the hypothesis is accepted.

3.2 ANOVA - Liquidity Ratios to Return on Equity

Hypothesis: There is no impact of liquidity ratios over Return on Equity.

A. Hero Motocorp

(I) Current Ratio on Return on Equity

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935[a]	.874	.832	7.127548

a. Predictors: (Constant), current ratio

Table 5: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1057.949	1	1057.949	20.825	.020[a]
	Residual	152.406	3	50.802		
	Total	1210.355	4			

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.370	17.500	.935	-.250	.819
	current ratio	49.543	10.856		4.563	.020

***Source*:** computed data

The R square is the co-efficient of determination that shows return on equity varies with changes in current ratio. From the above table the value of R square is 0.874. This implied

that there is a strong positive relationship between the independent variable (current ratio) and dependent variable (Return on Equity). The regression co-efficient in the above table showed that significance of the F statistics is 0.020 which is less than 0.05. This implies that there exists a significant relationship between return on equity and current ratio. The regression model is a good fit of the data. Hence the hypothesis is rejected.

(II) Liquid Ratio on Return on Equity

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.869	.826	7.262428

a. Predictors: (Constant), liquid ratio

Table 8: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1052.127	1	1052.127	19.948	.021[a]
	Residual	158.229	3	52.743		
	Total	1210.355	4			

a. Predictors: (Constant), liquid ratio
b. Dependent Variable: return on equity

Table 9: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.242	15.987	.932	.265	.808
	liquid ratio	49.781	11.146		4.466	.021

Dependent Variable: return on equity
***Source*:** computed data

On the above table co-efficient of determination i.e., the R square is 0.869. This indicates that there is a strong relationship between independent variable and the dependent variable but not stronger than the current ratio of the company. The regression co-efficient reveals that the significance of the F statistics is 0.021 which is lesser than 0.05. This shows that there is a significant relationship between liquid ratio and return on equity. The regression model is a good fit for the data. Hence the hypothesis is rejected.

B. Maruti Suzuki

(I) Current Ratio on Return on Equity

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778[a]	.605	.473	10.577158

a. Predictors: (Constant), current ratio

Table 11: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	514.240	1	514.240	4.597	.121[a]
	Residual	335.629	3	111.876		
	Total	849.869	4			

a. Predictors: (Constant), current ratio

Table 12: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	54.776	10.532	-.778	5.201	.014
	current ratio	-22.510	10.499		-2.144	.121

Dependent variable: return on equity
***Source*:** computed data

On the above table co-efficient of determination i.e, the R square is 0.605.This indicates that there is a moderate relationship between current ratio (independent variable) and the return on equity (dependent variable). The regression co-efficient shows that the significance of the F statistics is 0.121 which is greater than 0.05. This shows that there is no significant relationship between current ratio and return on equity. Hence the hypothesis is accepted.

(II) Liquid Ratio on Return on Equity

Table 13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681[a]	.464	.286	12.318696

a. Predictors: (Constant), liquid ratio

Table 14: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	394.618	1	394.618	2.600	.205[a]
	Residual	455.251	3	151.750		
	Total	849.869	4			

a. Predictors: (Constant), liquid ratio

Table 15: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	48.071	10.005	-.681	4.804	.017
	liquid ratio	-19.801	12.279		-1.613	.205

Dependent Variable: return on equity
***Source*:** computed data

The R square is the co-efficient of determination that shows ROE varies with changes in liquid ratio. From the above table the value of R square is 0.464. This implied that there is a moderate relationship between the independent variable and dependent variable and is also lesser when compared to the current ratio. The regression co-efficient in the above table showed the significance of the F statistics is 0.205 which is greater than 0.05. This implies that there is no significant relationship between return on equity and current ratio. Hence the hypothesis is accepted.

C. Mahindra & Mahindra

(I) Current Ratio on Return on Equity

Table 16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645[a]	.416	.221	2.789583

a. Predictors: (Constant), current ratio

Table 17: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.615	1	16.615	2.135	.240[a]
	Residual	23.345	3	7.782		
	Total	39.960	4			

a. Predictors: (Constant), current ratio
b. Dependent Variable: return on equity

Table 18: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.199	12.297	.645	-.504	.649
	current ratio	14.397	9.853		1.461	.240

***Source*:** Computed data

The R square is the co-efficient of determination that shows ROE varies with changes in current ratio. From the above table the value of R square is 0.416. This implied that there is a very low positive relationship between the independent variable and ROE. The regression co-efficient in the above table showed the significance of the F statistics is 0.240 which is greater than 0.05. This implies that there is no significant relationship between current ratio and return on equity. Hence the hypothesis is accepted.

(II) Liquid Ratio on Return on Equity

Table 19: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.423[a]	.179	-.095	3.307855

a. Predictors: (Constant), liquid ratio

Table 20: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.135	1	7.135	.652	.478[a]
	Residual	32.826	3	10.942		
	Total	39.960	4			

a. Predictors: (Constant), liquid ratio

Table 21: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.426	12.779	.423	.112	.918
	liquid ratio	10.478	12.976		.807	.478

a. Dependent Variable: return on equity
***Source*:** computed data

On the above table co-efficient of determination i.e., the R square is 0.179. This indicates that there is a very low relationship between liquid ratio (independent variable) and the return on equity (dependent variable). The regression co-efficient shows that the significance of the F statistics is 0.478 which is greater than 0.05. This shows that there is no significant relationship between liquid ratio and return on equity. Hence the hypothesis is accepted.

3. Conclusion

The Indian automobile industry is expected to reach Rs 16.16-18.18 trillion by 2026. So, the Automobile sector has huge demand in our country. This demand attracts the giant automobile suppliers throughout the world to come and invest in the Indian Automobile Industry. The correlation results revealed mild correlation between liquidity ratios and Return on Asset. It depicted an appropriate trade off between current assets and current liabilities among the automobile companies in study. The ANOVA results indicated that in Hero Motocorp automobile company, the liquidity ratios impacts positively on Return on Equity. It implied the efficient liquidity management practice and effective profit earning capacity of the company. The Maruti Suzuki and Mahindra & Mahindra companies should improve their liquidity position and their capacity to earn better returns from equity and the fixed assets so as to make prompt payment of dividend and good capital gains for their shareholders. This would assist the companies, in attaining the primary objectives of Profit maximization and Wealth maximization as well. Hero Motocorp Limited automobile company seems to be the frontrunner in implementing efficient liquidity management practices, earning a fair return from their assets and a better return for their equity shareholders, among other top listed automobile companies in India.

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