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COMPARATIVE STUDY OF LIQUIDITY AND PROFITABILITY WITHIN THE COMPANY AND INDUSTRY: EVIDENCE FROM INDIAN TEA INDUSTRY

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Abstract : In this paper we have studied and analyzed whether there exists any relationship (correlation) between the liquidity and profitability position within the company and industry over a period of time by taking a sample of the five leading companies falling within the Tea industry in India. The result of the study shows that the overall relationship of current ratio, quick ratio, total debt/equity ratio and long term debt/equity ratio with the different profitability ratios, i.e operating profit ratio, gross profit ratio, net profit ratio, return on capital employed ratio and return on net worth ratio, 'does not significantly exists', but\it 'significantly and definitely exists' for the Mcleod Russel (India) Ltd. and to some extent for the Tata Coffee Ltd. i.e. forming part of the sample under the study

Key Terms – Liquidity Ratios, Current Ratio, Quick Ratio, Total Debt/Equity Ratio, Long Term Debt/Equity Ratio, Profitability Ratios. Operating Profit Ratio, Gross Profit Ratio, Net Profit Ratio, Return on Capital Employed Ratio, Return on Net Worth (Proprietors Funds) Ratio

INTRODUCTION

Liquidity of Company

The liquidity of the company lies in its skillful utilization of its resources in meeting its immediate Short Term, Short Term and Long Term obligations smoothly without any disturbance in its production and trading activities over a period of time and thereby maximizing the profitability of the company, which in turn maximizes the returns in the hands of the owners i.e. shareholders of the company.

Profitability of Company

Every business organization starts its business with main motive of 'making profits' (though at times it suffers losses), so the success of any company is measured through its profitability made over a period of time.

Profitability is the mirror of the success of the company. It is through this mirror one can see the affairs and financial position of the company.

Therefore the study and analysis of the liquidity ratios of a company with its effect (if any) on the profitability of the company is of vital importance to comment upon the stability, progress and achievement made by a particular company, over a period of time. It also forms the basis to researcher and scholars for their further studies.

The various factors studied under the present study as a (possible ?) relationship of liquidity with the profitability of a company and its industry are grouped as under:

Liquidity Ratio:

❖Current Ratios (CR)
❖Quick Ratios (QR)
❖Total Debt/Equity Ratios (TD/E)
❖Long Term Debt/Equity Ratios (LTD/E)

Profitability Ratio:

❖Operating Profit Ratio (OP)
❖Gross Profit Ratio (GP)
❖Net Profit Ratio (NP)
❖Return on Capital Employed Ratio (ROC)
❖Return on Net Worth (RONW)

Since Food, Clothing and Shelter are the basic necessities of every citizen of this country. Tea which is forming part of Food is the "National Drink' of our country. Even our present Prime Minister, Mr. Narendra Modi has utilised the platform of 'Chai Pe Charcha' campaign to reach out to the citizens of our country to 'interact with them', to come to the power in the Central Government of our Country. Also whenever any visitor or guest comes to any home or to any organization, he/she is always first offered 'tea' as a 'mark of our tradition' in the country. So we have chosen the tea manufacturing and selling companies from the Tea Industry in India, to study the possible (?) relationship of liquidity and profitability of these companies within themselves and with respect to the Textile Industry as such.

The five prominent tea companies (subject to the availability of the data) namely, Tata Global Beverages Ltd. (Tata Global) , Bombay Burmah Trading Corporation Ltd. (Bombay Burmah), Mcleod Russel (India) Ltd. (Mcleod), CCL Products India Ltd. (CCL) and Tata Coffee Ltd. (Tata Coffee), are selected from the Tea Industry in India, as a sample of the study, on the basis of factors like market capitalization, Sales Turnover, Net Profit and Total Assets, as given herein below.

List of Tea Companies
(on the basis as on 31.03.2014)

Co. No	Name of the Company	Market Capitalisation as on 31.03.14 Rs. in Crores	Sales (Turnover) as on 31.03.14 Rs. in Crores	Net Profit as on 31.03.14 Rs. in Crores	Total Assets as on 31.03.14 Rs. in Crores
01	Tata Global Beverages Ltd. (Tata Global)	9,875.83	2,682.95	446.97	3,029.76
02	Bombay Burmah Tading Corporation Ltd. (Bombay Burmah)	3,267.07	277.82	5.13	451.46
03	Mcleod Russel (India) Ltd. (Mcleod)	2,467.68	1,475.06	208.10	2,107.02
04	CCL Products India Ltd. (CCL)	2,157.05	611.10	73.26	464.41
05	Tata Coffee Ltd. (Tata Coffee)	1,768.72	650.92	106.57	697.56

For the understanding and analysis of the following objectives we have assembled a comprehensive tabulation of liquidity and profitability ratios (as given herein above) for the years 2009-10 to 2013-14 of the given five prominent companies, as said herein above to measure the possible (?) relationship of liquidity and profitability of the these companies.

2.Objectives

1.To study and analyze the relationship of liquidity and profitability of the companies, in the tea industry in India.
2.To study and analyze the impact and significance of the liquidity factors on the profitability of the companies, in the tea industry in India

3. Hypotheses of the study

H1: The impact of current ratio, on the profitability is not significant and not significantly different for the companies in tea industry in India.
H2: The impact of quick ratio, on the profitability is not significant and not significantly different for the companies in tea industry in India
H3: The impact of total debts and equity, on the profitability is not significant and not significantly different for the companies in tea industry in India
H4: The impact of long term debts and equity, on the profitability is not significant and not significantly different for the companies in tea industry in India

4. Research Methodology

To study and analysis liquidity management efficiency of the company and its possible (?) impact on the profitability of the company, one has to study the financial factors which are responsible for the same. This includes the current assets and current liabilities management, quick assets and quick liabilities management, total debts and equity funds management and long term debts and equity funds management of the company.

So for the measurement of the liquidity management efficiency as seen herein above, we calculate the following liquidity management efficiency ratios of the companies selected under the study for the given period.

Liquidity Efficiency Ratios

1.Current Ratio	= Current Assets/Current Liabilities
2.Quick Ratio	= Quick Assets/Quick Liabilities
3.Total Debt/Equity Ratio	= Total Debt/Equity
4.Long Term Debt/Equity Ratio	= Long Term Debt/Equity

Profitability Ratios

1.Operating Profit Ratio (OP)	= Operating Profit * 100/Net Sales
2.Gross Profit Ratio (GP)	= Gross Profit * 100/Net Sales
3.Net Profit Ratio (NP)	= Net Profit * 100/Net Sales
4.Return on Capital Employed Ratio (ROC)	= Net profit before Interest & Tax*100/ (Debt + Equity)
5.Return on Net Worth Ratio (ROC)	= Net profit after Interest & Tax*100/ Equity

•Sources of Data Collection:

As the study is specific in the nature, only secondary sources of data has been collected from the research papers and dissertations of the scholars, books of references, standard publications by institutes and organizations, financial reports and communications of authorities engaged in the study related to the topic under the study, in magazines, periodicals, news papers, internet etc. Also Annual Reports of the companies (under the sample of the study), published and submitted to Bombay Stock Exchange are tapped.

•Sample Framework:

The financial data i.e. income statements, balance sheets and ratios of the five years i.e. 2009-2010 to 2013-2014, of the five prominent tea companies (subject to the availability of the data) namely, Tata

Global Beverages Ltd. (Tata Global) , Bombay Burmah Tading Corporation Ltd. (Bombay Burmah), Mcleod Russel (India) Ltd. (Mcleod), CCL Products India Ltd. (CCL) and Tata Coffee Ltd. (Tata Coffee), are selected from the Tea Products Industry in India, as a sample of the study.

Methods of Data Analysis and Use of Statistical tools and techniques:

(A) Use of Statistical tools and techniques

For the purpose of the data analysis, various statistical applications and tools are used such as mean, standard deviation, correlation and co-variance etc.

(B) Ratio Analysis

Here to study and analyze the liquidity factors and their impact (?) on the Profitability of the companies over the period under the study, different ratios are calculated as mentioned herein above.

These ratios, so computed for five years under the study, are then averaged out for every company and then compared with the averages of the every other company under the study. Then the Mean Differences (i.e. standard deviations-SD) are calculated for each ratio of each company, in comparison with such ratios of other companies under the study. Finally the correlation coefficients (r values) are calculated for each ratio of each company, in comparison with such ratios of other companies under the study.
The results of the same are tabulated herein below:

5.Data Analysis, Interpretations, Finding, Conclusions and Testing of Hypotheses:
5.1Current Ratio and ProfitabilityCorrelation Analysis -

(a)Within the Company

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG	SD
CR-OP	0.54	-0.26	-0.94	0.32	0.40	-0.21	0.63
CR-GP	0.56	-0.26	-0.94	0.74	0.38	-0.22	
CR-NP	0.10	0.83	-0.85	0.71	0.17	0.81	
CR-ROC	0.64	-0.32	-0.92	0.92	0.52	-0.45	
CR-RONW	0.34	0.53	-0.92	0.94	0.21	0.37	

(b) Between the Company and the Industry

Ratio	Ratio	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	CORREL
CR-OP	CR	1.00	1.86	0.72	0.69	1.31	Definite
	OP	10.04	8.93	24.93	18.88	19.39	-0.65
CR-GP	CR	1.00	1.86	0.72	0.69	1.31	Definite
	GP	9.37	6.15	22.72	15.41	16.45	0.70
CR-NP	CR	1.00	1.86	0.72	0.69	1.31	Poor
	NP	14.20	16.94	17.91	9.20	13.51	0.39
CR-ROC	CR	1.00	1.86	0.72	0.69	1.31	Definite
	ROC	12.49	31.14	22.22	17.85	19.37	0.68
CR-RONW	CR	1.00	1.86	0.72	0.69	1.31	Definite
	RONW	14.02	26.08	19.63	15.81	15.06	0.65

Interpretation Within the Company

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG
CR-OP	Some	No	High	No	Some	No
CR-GP	jSome	No	High	Definite	Some	No
CR-NP	No	Definite	High	Definite	No	Definite
CR-ROC	Some	No	High	High	Some	Some
CR-RONW	No	Some	High	High	No	Poor

The above analysis of current ratio with profitability of the companies within the companies and between the company and industry shows that,

- there is 'definite positive correlation' of current ratio with Gross Profit, return on capital employed and return on net worth of all the five companies and the tea industry over a period of five years under the study.
- there is 'definite negative correlation' of current ratio with Operating Profit of all the five companies and the tea industry over a period of five years under the study.
- there is 'poor correlation' of current ratio with net profit of all the five companies and the tea industry over a period of five years under the study.

So the hypothesis H1, that 'The impact of current ratio, on the profitability is not significant and not significantly different for the companies in tea industry in India', is disproved as the alternate hypothesis that, 'The impact of current ratio, on the profitability is not significant for the industry for net profit but it is significant for operating profit, gross profit, return on capital employed and return on net worht as such but is significantly different for the companies among themselves in tea industry in India', is proved.

5.2Quick Ratio and Profitability Correlation Analysis:

(a)Within Company

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG	SD
QR-OP	0.44	-0.48	-1.00	0.26	-0.13	-0.40	0.56
QR-GP	0.46	-0.47	-1.00	-0.09	-0.14	-0.40	
QR-NP	0.47	0.79	-0.96	-0.12	0.11	0.67	
QR-ROC	0.47	-0.19	-0.98	-0.49	-0.14	-0.17	
QR-RONW	0.63	0.50	-0.99	-0.40	0.10	0.36	

(b) Between the Company and the Industry

Ratio	Ratio	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	CORREL
QR-OP	QR	0.54	2.26	0.88	1.59	1.10	No
	OP	10.04	8.93	24.93	18.88	19.39	-0.32
QR-GP	QR	0.54	2.26	0.88	1.59	1.10	Some
	GP	9.37	6.15	22.72	15.41	16.45	-0.45
QR-NP	QR	0.54	2.26	0.88	1.59	1.10	No
	NP	14.20	16.94	17.91	9.20	13.51	-0.03
QR-ROC	QR	0.54	2.26	0.88	1.59	1.10	High
	ROC	12.49	31.14	22.22	17.85	19.37	0.82
QR-RONW	QR	0.54	2.26	0.88	1.59	1.10	Definite
	RONW	14.02	26.08	19.63	15.81	15.06	0.76

Interpretation Within the Company

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG
QR-OP	Poor	Some	Perfect	No	No	Poor
QR-GP	Some	Some	Perfect	No	No	Poor
QR-NP	Some	Definite	High	No	No	Definite
QR-ROC	Some	No	High	Some	No	No
QR-RONW	Definite	Some	High	Poor	No	Poor

The above analysis of quick ratio with profitability of the companies within the companies and between the company and industry shows that:

- ❖there is 'no correlation' of quick ratio with operating profit and net profit, of all the five companies and the tea industry over a period of five years under the study and
- ❖there is 'some correlation' of quick ratio with gross profit, of all the five companies and the tea industry over a period of five years under the study and
- ❖there is 'definite correlation' of quick ratio with return on net worth, of all the five companies and the tea industry over a period of five years under the study and
- ❖there is 'high correlation' of quick ratio with return on return on capital employed of all the five companies and the tea industry over a period of five years under the study.

So the hypothesis H2, that, 'The impact of quick ratio, on the profitability is not significant and not significantly different for the companies in tea industry in India is disproved as the alternate hypothesis that, The impact of quick ratio, on the profitability is not significant for operating profit, gross profit and net profit but it is significantly for return on capital employed and return on net worth as such, also it is significantly different for the companies among themselves in tea industry in India', is proved

5.4 Long Term Debt/Equity and Profitability
Correlation Analysis:

(a)Within Company.

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG
LTD-OP	-0.39	0.83	0.90	0.33	-0.93	1.00
LTD-GP	-0.41	0.84	0.91	-0.24	-0.93	1.00
LTD-NP	-0.03	-0.24	0.90	-0.22	-0.99	0.05
LTD-ROC	-0.85	0.14	0.83	-0.84	-0.81	0.22
LTD-RONW	-0.36	0.08	0.93	-0.71	-0.98	0.38

(b)Between Company and Industry

Ratio	Ratio	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	CORREL
LTD/E-OP	LTD/E	0.15	1.09	0.09	0.12	0.12	Definite
	OP	10.04	8.93	24.93	18.88	19.39	-0.65
LTD/E-GP	LTD/E	0.15	1.09	0.09	0.12	0.12	Definite
	GP	9.37	6.15	22.72	15.41	16.45	-0.71
LTD/E-NP	LTD/E	0.15	1.09	0.09	0.12	0.12	Poor
	NP	14.20	16.94	17.91	9.20	13.51	0.40
LTD/E-ROC	LTD/E	0.15	1.09	0.09	0.12	0.12	Definite
	ROC	12.49	31.14	22.22	17.85	19.37	0.83
LTD/E-RONW	LTD/E	0.15	1.09	0.09	0.12	0.12	High
	RONW	14.02	26.08	19.63	15.81	15.06	0.88

Interpretation Within Company

CORREL	Tata Global	Bombay Burmah	Mcleod	CCL	Tata Coffee	AVG
LTD-OP	Poor	Definite	High	No	High	Perfect
LTD-GP	Poor	Definite	High	No	High	Perfect
LTD-NP	No	No	High	No	High	No
LTD-ROC	High	No	Definite	Definite	Definite	No
LTD-RONW	Poor	No	High	Definite	High	Poor

The above analysis of long term debt/equity ratio with profitability of the companies within the companies and between the company and industry shows that:

- there is 'negative definite significant correlation' of long term debt/equity ratio with operating profit, gross profit, ratios of all the five companies and the tea industry over a period of five years under the study and
- there is 'positive definite significant correlation' of long term debt/equity ratio with return on capital employed ratios of all the five companies and the tea industry over a period of five years under the study and
- there is 'high correlation' of long term debt/equity ratio with return on net worth ratios of all the five companies and the tea industry over a period of five years under the study and
- there is 'poor correlation' of long term debt/equity ratio with net profit of all the five companies and the tea industry over a period of five years under the study and So the hypothesis H4, that, 'The impact of long term debt/equity ratio, on the profitability is not significant and not significantly different for the companies in textile industry in India is disproved as the alternate hypothesis that, 'The impact of total debt/equity ratio, on the profitability is definitely significant (except for net profit) for the industry as such but is significantly different for the companies among themselves in textile industry in India', is proved.

Contribution of the Study

The contribution of the study indicates that there is 'significant definite correlation i.e. relationship' that exist between the liquidity ratios with the profitability of the business as far as Mcleod Russel (India) Ltd. and to some extent for Tata Coffee Ltd.

More studies for different companies from different industries need to undertaken to establish the 'probable relationship (correlation) between the liquidity position and profitability of the companies within the industries existing in the market of the country.

8. Limitations of the Study

- The results of the study are based upon the companies under the sample of the study. It might be different for the sample of the different companies taken from the same or different industries in India.
- The period of the study is only five years, i.e. from 2009-10 to 2013-14. The results of the study might differ for the different periods even taken for the same companies under the sample of the study.
- The study only includes the financial factors of the liquidity efficiency and not the other factors like human resources etc., which might have given the different results of the study.

9.Scope for Further Research

Research scholars and students of research could take different companies from the same industry or different period for the same companies or for the different companies from the different industry or different factors of the liquidity efficiency and study its impact on the profitability of the company contributing maximum return on net worth and earnings per share to the shareholders i.e. owners of the companies.

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