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WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF THE FIRM – AN EMPIRICAL STUDY ON THE FMCG SECTOR

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Abstract *The management of working capital is very important for the organisation. In the case of small organisations, its importance is very high. Current assets and current liabilities are the elements through which we can easily calculate working capital. In this study, debtors' turnover ratio, inventory turnover ratio, creditors' turnover ratio, and cash conversion cycle have been used to measure the influence of working capital management on profitability. In this study, the top three FMCG companies (Britannia, Dabur, and Godrej) have been selected for analysis. The data of the said companies have been analysed through descriptive statistics, ADF unit root test, and least square regression equation. DTR (debtors' turnover ratio), ITR (inventory turnover ratio), and CTR (creditors' turnover ratio) have a positive relationship with profitability; however, CCC (cash conversion cycle) is negatively associated with profitability. Based on the findings, we can say that efficient working capital management has an impact on firm's profitability. We also recommend that there is need to review the debtors, creditors, and inventory periodically. Sales, purchase, and inventory departments are to work together as a united team so that optimum inventory level can be maintained and profitability can be increased.*

Keywords: *Working Capital Management, Profitability, Debtors, Creditors, Inventory Turnover Ratio, Return on Net-Worth, Cash Conversion Cycle*

JEL Codes: *G32, G33, G35*

INTRODUCTION

The management of working capital (WCM) is the management of short-term finances. The assets are allocated in such a way that optimum benefit can be obtained and waste can be minimised (Brealey, Myers & Allen, 2013). The attention of WCM has been highlighted during recessions and similar patterns in shifting attention during crises, e.g. oil crises of 1970s (Scholleva, 2012). The importance of WCM has been shifted from larger organisations to smaller organisations due to improvement of the economic climate. Larger organisations are more easily able to collect funds or financial support from external sources or markets because of higher credit rating and quick issue of bonds and so on in the market. Thus, due to varying availability of liquidity, the importance of WCM of companies can be affected (Benham, 2013; Sing, 2003).

Working capital is the difference between current assets and current liabilities. Current assets mean those assets which can be converted into cash or near cash item within a year. The most important elements of current assets are debtors or account receivables, inventories or stocks, and cash and/or near cash items. On the other hand, current liabilities include creditors, payables, bank overdraft, and so on. Working capital may be positive or negative. If current assets are greater than current liabilities, then the difference is known as a positive working capital. On the contrary, when current liabilities are greater than current assets, then the difference is known as a negative working capital.

WCM is related to profitability. The goal of WCM is to increase profitability in good as well as in harsh economic climates (Gill et al. 2010). Russ Banham investigated that 1,000 of the largest public companies in Europe directed their attention to a decreasing WCM trend when companies gain their strength after a recession. In recent developments, since 2012, it is found that a general increase in revenues is due to an increasing large amount of net working capital. It implies that the companies are not efficiently managing their working capital, so that growing revenue is becoming too expensive.

Research in the field of working capital is not new. From past studies, it is observed that WCM can influence corporate

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profitability (e.g. Shin & Soenen, 1998; Hawawini, Viallet & Vora, 1986; Deloof, 2003; Lazaridis & Tryfonidis, 2006). A company whose liquidity position is better can invest its funds in some shares of good companies rather than maintaining their funds as working capital. Because, with capital efficiency, the net present value of cash flows increases and it adds to the shareholders' value. From past studies, we can see that WCM can increase corporate profitability. However, what are the factors responsible for such a development is the question. In other words, what are the metrics that the management of the company must consider at the time of minimising its investment in working capital?

Working capital cannot be reduced to a minimum without considering operational activities of the business. Working capital should be optimised and managed in such a way that it does not affect future sales and profit. Companies which shorten the payment terms too much must have problems in selling their product in the market. Generally, buyers expect longer payment periods to enhance their own working capital or to judge the quality of the product. Another metric is the inventory level. So, by minimising the inventory level, the company is not able to take the advantage of a sudden increase in demand or miss out on sales. The other metric is creditors. Deferring the payments of companies can increase heavy financing rates of their credit or not get discount for quick payment. These metrics may vary from industry to industry. Considering these metrics, we examined cash conversion cycle, which also has an impact on working capital management. However, whatever may be the situation and metrics, the need for working capital depends on the industry. In this study, we focused on the Indian FMCG sector.

LITERATURE REVIEW

Brealey and others (2013) in their book 'Working capital management' highlighted the effective levels as well as the struggle to measure the WC efficiently. In their study, they also criticised the WCM. A pure model of WCM is still not found.

Banham (2013) also conducted a study on WCM and concluded that it is not solely managing short-term investment and financing. He opined that there are some aspects that might have to be considered at the time of determining the need for working capital.

Shin and Soenen (1998) conducted a study on working capital management and cash conversion cycle. In their study, they argued that CCC measures the number of days it takes to receive payment from investment in resources. They also opined that CCC be used as a tool to measure the net changes in levels of inventory, AP, and AR.

Gill and others (2010) made a study on working capital management and CCC. They also considered inventory, receivables, and payables to calculate CCC. They opined that the CCC model is not connected to investments in general, but directly to a company's refining process of suppliers.

The effect of working capital management on Belgian companies' profitability is studied by Deloof (2003). He collected data from the National Bank of Belgium of 2,000 of the most important Belgian firms. He excluded companies from energy and water, banking and finance, and other services. He opined that for many firms financial assets are a significant part of total assets.

Lazaridis and Tryfonidis (2006) conducted a study on the relationship between WCM and profitability of listed companies in the Athens stock exchange. They also used CCC as a model of efficient working capital management and gross operating profit as a determinant of profitability. The authors observed a negative relationship between CCC and profitability.

Das (2015), in his study, highlighted different perspectives by which we can control the corporate cash of the company from the cash conversion cycle, cash flow, and credit-worthiness points of view. In this paper, he tried to interlink them to control and manage cash well, so that bankruptcy can be prevented and profitability may be improved.

Majanga (2015) established the relationship between a company's liquidity, measured by the length of the cash conversion cycle, and its profitability, measured by return on capital. Using a correlation and regression test, he used data from a sample of 12 Malawian manufacturing firms from 2007 to 2015. He found that there exists an inverse relationship between the cash conversion cycle and the company's return on investment and return on equity, and provides evidence that the cash conversion cycle, a measure of business liquidity, has an impact on a firm's performance.

Kaur and Kaur (2016) attempted to ascertain the determinants of profitability of the automobile industry in India by taking a sample of all the automobile firms, covering various segments of the automobile industry in India, viz. commercial vehicles, three-wheelers, two-wheelers, and passenger vehicles which are listed on BSE, from 2003-04 to 2013-14. They found that the profitability of the automobile industry in India is significantly influenced by the liquidity position of the firm, growth of the firm, inventory turnover ratio, debt equity ratio, and average payment period.

ABOUT THE COMPANIES

Britannia: Britannia Industries Ltd. manufactures food products in India. During 2004 to 2018, the market capitalisation of the company moved from Rs. 2,400 crores to Rs. 76,000 crores. In 2017-18, the net sales of the company was Rs. 9,905.60 crores. The net profit of the company in 2017-18 was Rs. 1,777.40 crores.

Dabur: Dabur India Limited is a well-known FMCG company in India. In 2014, Dabur launched India's first Ayurvedic Medical journal for the first time. In 2015, there was an agreement between Dabur and Starcom Media Vest Group (SMG). On 26 September 2017, Dabur announced its alliance with Amazon to make its product global. From 2018, Dabur has been manufacturing products like cosmetics and body and health products.

Godrej: Godrej consumer product is a famous FMCG company in India. It has been serving consumers of India for over 122 years. This group enjoys the patronage of 1.15 billion consumers globally. Now, Godrej has expanded their products to the emerging markets of Asia, Africa, and Latin America.

RESEARCH GAP

Working capital management and its impact on profitability is not new to us. Different studies have been conducted to measure the impact of working capital management on profitability of companies. Out of these studies, some are on the FMCG sector. In those studies, either current assets, current liabilities, or account receivables, account payables, and cash balances are considered. In some studies, current ratios and liquid ratios are considered. However, in this study, we considered debtors' turnover ratio, inventory turnover ratio, and creditors' turnover ratio. We also computed CCC and measured the impact of these variables on return on net-worth by using Eviews. In this study, Augmented Dickey-Fuller unit root test, Jarque-Bera statistics for normality, and least square test has been done, which has not yet been considered earlier.

RESEARCH METHODOLOGY

Research Statement

Working capital management and profitability of the firm – an empirical study on FMCG sector.

Hypothesis of the Study

H_0 – *Null Hypothesis:* There is no significant impact of various variables (ratios) on RONW of the selected FMCG companies.

H_1 – *Alternative Hypothesis:* There is a significant impact of various variables (ratios) on RONW of the selected FMCG companies.

About the Research Problem

In this study, we measure the impact of debtors' turnover ratio, inventory turnover ratio, creditors' turnover ratio, and cash conversion cycle on return on net-worth. In this study, we selected three Indian FMCG companies. We used the secondary data from Capitaline database. The data is for 15 years for all the companies selected in the study. By using Eviews software 11 (student version), we find out unit root test (Augmented Dickey-Fuller at level and at 1st difference) and descriptive statistics, and also estimate the regression equation through least square method.

Research Design

In this study, we used an ex post facto method, and for selecting the companies, purposive sample technique has been used. The study is ex post facto because in this study we start with the explanatory variable and then observe the explainer variables considering the effect of the explanatory variable (Nelson, Krokeme, Markyarkson & Timipere, 2018).

In this study, four independent variables, such as debtors' turnover ratio (Sales / Average receivables), inventory turnover ratio (Cost of goods sold / Average inventory), creditors' turnover ratio (Cost of goods sold / Average payables), and cash conversion cycle (CCC) (Days of sales outstanding + Days of inventory outstanding − Days of payables outstanding), have been used. Here, the dependent variable is return on net-worth (RONW). The independent variables shall be regressed against RONW. So we can write the following regression equation.

$$RONW = f(DTR, ITR, CTR, CCC)$$

We used the least square method to regress the above regression. Thus:

$$RONW = a_1 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + E.$$

Where,

RONW = Return on net-worth,

X_1 = Debtors turnover ratio (DTR),

X_2 = Inventory turnover ratio (ITR),

X_3 = Creditors turnover ratio (CTR),

X_4 = Cash Conversion Cycle (CCC), and

E = Error term.

Objectives of the Study

The objectives of the present study are as follows:

- To analyse the profitability of the selected FMCG companies in India by comparing profitability ratio RONW.
- To analyse the efficiency position of the selected FMCG companies in India by comparing different turnover ratios.
- To analyse whether there is any impact of the variables (ratios) on RONW of the selected FMCG companies.

Nature and Source of Data

The present study is based on secondary data, which have been collected from Capitaline database from the University of Burdwan. Other information have been collected from annual reports of the company and also from the Internet, as per the requirement.

Period of the Study

The present study covers a period of 15 years, from 2003-04 to 2017-18.

Sample Design

In the present study, purposive sample technique is used to select the leading FMCG companies from the FMCG industry.

Population

The population consists of popular FMCG companies in India.

Sampling Units and Sample Size

For the present study, three FMCG companies have been selected as the sampling units. These companies are listed in the BSE and NSE or both in India. Out of many companies only the top three companies have been selected for this study. All units of population are classified on the basis of size of the company.

Tools and Techniques

In the present study, we used Augmented Dickey-Fuller unit root test, descriptive statistics, Jarque-Bera statistics, ratio analysis, and different techniques of average (mean), standard deviation, and so on. For evaluating the impact of various selected variables, least square regression analysis has been done. For multi-collinearity Durbin-Watson test has been implemented.

FINDINGS OF THE STUDY

From Table 1, the descriptive statistics of Britannia shows that the mean value of RONW, DTR, ITR, CTR, and CCC are 31.394, 76.795, 15.16, 16.624, and 3.57, respectively. The Jarque-Bera statistics depicted that all the variables are normally distributed; the P value of RONW is 0.39, DTR is 0.69, ITR is 0.599, CTR is 0.50, and CCC is 0.504.

For stationarity test (i.e. statistical property which does not vary with time), we used Augmented Dickey-Fuller test. In this study, we considered level and 1st difference test. From Table 2, it is clear that all the variables of Britannia selected in this study – the statistics t_x value (ADF test value) – are greater than critical values at 1%, 5%, and 10% level of significance. So all the variables are not stationary at all levels; however, a few of them are stationary at 1st difference.

Table 3 depicts that the coefficient of DTR is 0.162, which means that 1% change in DTR leads to 16.20% positive change in RONW; however, it is insignificant at 5% level. Similarly, ITR has a coefficient of 4.159, which means that 1% change in ITR leads to 415.9% change in RONW in a positive direction; it is statistically significant at 5% level. CTR has a coefficient of −1.278, which means that with 1% change in CTR, the RONW changes in a negative direction by 127.88%; it is statistically significant at 5% level. CCC has a coefficient of 1.075, which means that with 1% change in CCC, the RONW changes by 107.5% in a positive direction; it is also statistically significant at 5% level. From the table, it is also clear that R squared is 0.8517, whereas adjusted R squared is 0.79246; this implies that 79.25% of changes in return on net-worth is attributed to the joint effect of DTR, ITR, CTR, and CCC. The F-statistics of the estimation is 14.36, with a probability of 0.000376; this signifies that the joint effect of independent variables on the dependent variable is statistically significant.

Table 1: Descriptive Statistics

	RONW	DTR	ITR	CTR	CCC
Mean	31.394	76.79467	15.166	16.62379	3.56973
Median	27.87	76.92	14.51	15.24938	3.0578
Maximum	50.92	117.83	22.41	32.94058	26.73408
Minimum	18.5	50.75	10.13	7.480181	−20.8531
Std. Dev.	10.81398	20.72797	3.697508	7.872782	17.22264
Skewness	0.762587	0.224554	0.476385	0.654049	−0.0707
Kurtosis	2.174616	2.02201	2.145101	2.291397	1.527224
Jarque-Bera	1.879633	0.723851	1.024139	1.383276	1.368162
Probability	0.390699	0.696334	0.599254	0.500755	0.504554
Sum	470.91	1151.92	227.49	249.3569	53.54595
Sum Sq. Dev.	1637.19	6015.085	191.402	867.7297	4152.669
Observat-ions	15	15	15	15	15

Table 2: Unit Root Test

Variables	Signif. Levels	ADF @ Level			ADF @ 1st Diff.		
		ADF Test Value	Critical Value	P-Value	ADF Test Value	Critical Value	P-Value
RONW	1%	−1.950577	−4.004425	0.3023	−5.733559	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.0006
DTR	1%	−1.327039	−4.004425	0.5859	−5.597894	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.0008
ITR	1%		−4.004425	0.3072	−1.468765	−4.057910	0.5168
	5%		−3.098896			−3.119910	
	10%	−1.938370	−2.690439			−2.701103	
CTR	1%		−4.004425	0.6625	−2.964882	−4.057910	0.0649
	5%		−3.098896			−3.119910	
	10%	−1.153200	−2.690439			−2.701103	
CCC	1%	−0.877441	−4.004425	0.7638	−1.952233	−4.057910	0.3012
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	

Table 3: Estimation

Dependent Variable: RONW				
Method: Least Squares				
Date: 05/26/20 Time: 21:55				
Sample: 1 15				
Included observations: 15				
Variable	**Coefficient**	**Std. Error**	**T-Statistic**	**Prob.**
C	−26.70936	13.79615	−1.936001	0.0816
DTR	0.162011	0.083076	1.950160	0.0797
ITR	4.159455	1.145002	3.632705	0.0046

Variable	Coefficient	Std. Error	T-Statistic	Prob.
CTR	−1.278815	0.488853	−2.615953	0.0258
CCC	1.075222	0.358944	2.995512	0.0134
R-squared	0.851758	Mean dependent var.		31.39400
Adjusted R-squared	0.792461	S.D. dependent var.		10.81398
S.E. of regression	4.926469	Akaike info criterion		6.288324
Sum squared resid.	242.7010	Schwarz criterion		6.524340
Log likelihood	−42.16243	Hannan-Quinn criter.		6.285810
F-statistic	14.36427	Durbin-Watson stat.		2.496504
Prob(F-statistic)	0.000376			

In Table 4, the descriptive statistics of Dabur shows that the mean value of RONW, DTR, ITR, CTR, and CCC are 43.388, 20.84, 9.581, 7.806, and 9.464, respectively. The Jarque-Bera statistics depicted that all the variables are normally distributed; the P value of RONW is 0.811, DTR is 0.562, ITR is 0.621, CTR is 0.00229, and CCC is 0.086.

For stationarity test (i.e. statistical property which does not vary with time), we used Augmented Dickey-Fuller test. In this study, we considered level and 1st difference test. From Table 5, it is clear that all the variables of Dabur selected in this study – the statistics t_x value (ADF test value) – are greater than critical values at 1%, 5%, and 10% level of significance. So all the variables are not stationary at all levels; however, a few of them are stationary at 1st difference.

Table 6 depicts that the coefficient of DTR is 0.022, which means that 1% change in DTR leads to a 2.22% positive change in RONW; however, it is insignificant at 5% level. Similarly, ITR has a coefficient of −1.317, which means that 1% change in ITR leads to 131.74% change in RONW in a negative direction; it is statistically insignificant at 5% level. CTR has a coefficient of 4.591, which means that with 1% change in CTR, the RONW changes in a positive direction by 459.10%; it is statistically insignificant at 5% level. CCC has a coefficient of −1.079, which means that with 1% change in CCC, the RONW changes by 107.9% in a negative direction; it is statistically insignificant at 5% level. From the table, it is also clear that R squared is 0.8219, whereas adjusted R squared is 0.7506; this implies that 75.06% of changes in return on net-worth is attributed to the joint effect of DTR, ITR, CTR, and CCC. The F-statistics of the estimation is 11.538, with a probability of 0.000915; this signifies that the joint effect of independent variables on the dependent variable is statistically significant.

Table 4: Descriptive Statistics

	RONW	DTR	ITR	CTR	CCC
Mean	43.38867	20.84	9.581333	7.806432	9.464671
Median	41.28	18.35	9.93	6.970094	−0.49804
Maximum	68.01	37.25	12	14.55239	62.07398
Minimum	17.06	9.03	7.31	5.318292	−14.4486
Std. Dev.	14.56776	8.255502	1.530816	2.472553	22.75506
Skewness	−0.1535	0.658091	0.042973	1.858222	1.351837
Kurtosis	2.242437	2.672558	1.76839	5.373857	3.721194
Jarque-Bera	0.417591	1.149722	0.952657	12.15447	4.893737
Probability	0.811561	0.562783	0.62106	0.002295	0.086564
Sum	650.83	312.6	143.72	117.0965	141.9701
Sum Sq. Dev.	2971.076	954.1464	32.80757	85.58923	7249.102
Observations	15	15	15	15	15

Table 5: Unit Root Test

Variables	Signif. Levels	ADF @ Level			ADF @ 1st Diff.		
		ADF Test Value	Critical Value	P-Value	ADF Test Value	Critical Value	P-Value
RONW	1%	−0.306777	−4.004425	0.9010	−2.521726	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.1329
DTR	1%	−0.930764	−4.004425	0.7464	−1.977200	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.2916
ITR	1%		−4.004425	0.7012	−2.229969	−4.057910	0.2058
	5%		−3.098896			−3.119910	
	10%	−1.056447	−2.690439			−2.701103	
CTR	1%		−4.004425	0.9958	−2.490898	−4.057910	0.1394
	5%		−3.098896			−3.119910	
	10%	1.173099	−2.690439			−2.701103	
CCC	1%	0.319217	−4.004425	0.9701	−2.435735	−4.057910	0.1516
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	

Table 6: Estimation

Dependent Variable: RONW				
Method: Least Squares				
Date: 05/26/20 Time: 23:48				
Sample: 1 15				
Included observations: 15				
Variable	**Coefficient**	**Std. Error**	**T-Statistic**	**Prob.**
C	29.92326	22.89204	1.307147	0.2204
DTR	0.022217	0.553742	0.040122	0.9688
ITR	−1.317478	4.322533	−0.304793	0.7668
CTR	4.591087	5.021328	0.914317	0.3821
CCC	−1.079215	0.778656	−1.385997	0.1959
R-squared	0.821916	Mean dependent var.		43.38867
Adjusted R-squared	0.750683	S.D. dependent var.		14.56776
S.E. of regression	7.273929	Akaike info criterion		7.067672
Sum squared resid.	529.1004	Schwarz criterion		7.303688
Log likelihood	−48.00754	Hannan-Quinn criter.		7.065158
F-statistic	11.53834	Durbin-Watson stat.		0.836927
Prob(F-statistic)	0.000915			

In Table 7, the descriptive statistics of Godrej shows that the mean value of RONW, DTR, ITR, CTR, and CCC are 84.670, 55.045, 11.079, 6.820, and −11.573, respectively. The Jarque-Bera statistics depicted that all the variables are normally distributed; the P value of RONW is 0.417, DTR is 0.356, ITR is 0.151, CTR is 0.369, and CCC is 0.505.

For stationarity test (i.e. statistical property which does not vary with time), we used Augmented Dickey-Fuller test. In this study, we considered level and 1st difference test. From Table 8, it is clear that all the variables of Godrej selected in this study – the statistics t_x value (ADF test value) – are greater than critical values at 1%, 5%, and 10% level of significance. So all the variables are not stationary at all levels; however, a few of them are stationary at 1st difference.

Table 9 depicts that the coefficient of DTR is 1.985, which means that a 1% change in DTR leads to a 198.55% positive

change in RONW; it is statistically significant at 5% level. Similarly, ITR has a coefficient of 3.046, which means that 1% change in ITR leads to 304.65% change in RONW in a positive direction; however, it is statistically insignificant at 5% level. CTR has a coefficient of 0.7668, which means that with 1% change in CTR, the RONW changes in a positive direction by 76.68%; it is statistically significant at 5% level. CCC has a coefficient of −1.985, which means that with 1% change in CCC, the RONW changes by 198.5% in a negative direction; however, it is statistically insignificant at 5% level. From the table, it is also clear that R squared is 0.5747, whereas adjusted R squared is only 0.4046; this implies that 40.46% of changes in return on net-worth is attributed to the joint effect of DTR, ITR, CTR, and CCC. The F-statistics of the estimation is 3.378, with a probability of 0.0538, which signifies that the joint effect of independent variables on the dependent variable is statistically insignificant.

Table 7: Descriptive Statistics

	RONW	DTR	ITR	CTR	CCC
Mean	84.67067	55.04533	11.07933	6.820058	−11.573
Median	47	37.4	8.78	6.251308	−20.1568
Maximum	192.38	118.28	33.97	11.32119	17.60317
Minimum	19.34	24.38	6.51	4.360822	−37.1657
Std. Dev.	66.84904	31.35338	6.725317	2.299782	17.84032
Skewness	0.388262	0.823693	2.872259	0.858692	0.269578
Kurtosis	1.518188	2.235654	10.32472	2.515512	1.623511
Jarque-Bera	1.749223	2.061316	54.15687	1.990085	1.365882
Probability	0.417024	0.356772	0	0.369708	0.505129
Sum	1270.06	825.68	166.19	102.3009	−173.595
Sum Sq. Dev.	62563.12	13762.49	633.2185	74.04595	4455.88
Observations	15	15	15	15	15

Table 8: Unit Root Test

Variables	Signif. Levels	ADF @ Level			ADF @ 1st Diff		
		ADF Test Value	Critical Value	P-Value	ADF Test Value	Critical Value	P-Value
RONW	1%	−0.734556	−4.004425	0.8063	−2.393134	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.1617
DTR	1%	−1.634090	−4.004425	0.4404	−2.786280	−4.057910	
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	0.0870
ITR	1%		−4.004425	1.0000	0.946071	−4.057910	0.9924
	5%		−3.098896			−3.119910	
	10%	3.981323	−2.690439			−2.701103	
CTR	1%		−4.004425	0.1497	−4.314367	−4.057910	0.0065
	5%		−3.098896			−3.119910	
	10%	−2.438598	−2.690439			−2.701103	
CCC	1%	−1.573208	−4.004425	0.4692	−4.000838	−4.057910	0.0110
	5%		−3.098896			−3.119910	
	10%		−2.690439			−2.701103	

Table 9: Estimation

Dependent Variable: RONW				
Method: Least Squares				
Date: 05/27/20 Time: 00:09				
Sample: 1 15				
Included observations: 15				
Variable	**Coefficient**	**Std. Error**	**T-Statistic**	**Prob.**
C	−86.58458	122.8521	−0.704787	0.4970
DTR	1.985575	0.668703	2.969293	0.0141
ITR	3.046578	3.589259	0.848804	0.4158
CTR	0.766833	18.69845	0.041011	0.9681
CCC	−1.985200	2.614126	−0.759413	0.4651
R-squared	0.574730	Mean dependent var.		84.67067
Adjusted R-squared	0.404622	S.D. dependent var.		66.84904
S.E. of regression	51.58123	Akaike info criterion		10.98539
Sum squared resid.	26606.24	Schwarz criterion		11.22141
Log likelihood	−77.39046	Hannan-Quinn criter.		10.98288
F-statistic	3.378614	Durbin-Watson stat.		0.959553
Prob(F-statistic)	0.053882			

From the above findings, it is clear that the selected variables have an impact on profitability. So, H_0, that is, the null hypothesis, is rejected and we accept the alternative hypothesis H_1.

CONCLUSION

In this study, we investigated the effect of working capital management on the profitability of the firm. The return on net-worth and working capital management, represented by debtors' turnover ratio, is found to be positive and statistically significant for all the companies selected in the study.

The association between RONW and ITR is found to be positive and statistically significant for most of the companies selected in the study.

The relationship between RONW and CTR is found to be positive and statistically insignificant for most of the companies under study. It does not follow the theory.

Finally, the association between RONW and CCC is found to be negative and statistically significant for most of the companies in the study.

For stationarity, ADF unit root test and normality Jarque-Bera statistics have been used. The overall equation is statistically significant for the selected companies. From R^2, adjusted R^2, and F-statistics, we can say that the joint effect of selected variables is statistically significant. Hence, finally, we can conclude that effective working capital management has an impact on profitability of the firm.

RECOMMENDATION

There is need to review the debtors, creditors, and inventory periodically. Sales, purchase, and inventory departments are to work together as a united team, so that optimum inventory level can be maintained and profitability can be increased. For better results of generalisation of the results, more companies can be included; however, for simplicity and lack of time, in this study only three companies have been considered.

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