

STUDY OF EFFICIENCY OF WORKING CAPITAL MANAGEMENT PRACTICES AND THE EFFECT ON THE PROFITABILITY OF THE FIRM: A STUDY OF REAL ESTATE SECTOR OF INDIA

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ABSTRACT

Working capital is used to finance short term financial obligations of a firm. It becomes all the more important to study working capital in a real estate firm, as major part of their balance sheet constitutes the current assets and liabilities. It is important for these firms to have efficient working capital practices as a portion of funds is parked in inventories and accounts receivables which take a long time to convert into cash. This may lead to a shortage of cash and liquidity in times of need. Data for five big real estate firms' operational pan India was collected for five years from secondary sources and analyzed. Ratio analysis was done to study the working capital practices of these firms and it was found out that there was scope of improvement in the inventory and receivable turnover for all the companies. Pearson correlation coefficient was calculated and analyzed to find if there was a relationship between working capital ratios and profitability ratios. It was found out that for this sector profitability of the company was positively and significantly related to the current ratio and liquid ratios. Also linear regression analysis was done and it confirmed that the profitability of the firms increased with increase in liquid assets.

Key Words: working capital, real estate firms, profitability.

INTRODUCTION

Business requires capital i.e money invested in plant, machinery, land, inventories, accounts receivables etc. to run a firm efficiently. All these assets are not obtained at once but gradually accumulated over time. The cost of these assets constitutes the total capital requirement for the company which includes long term and short term financing. Short term financial planning is required because the company needs to meet its temporary demand for cash. This is the reason for studying working capital needs of the firm.

Researchers have been conducting studies on the topic of working capital management since a long time. The reason behind this is that management of working capital in a business

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

plays a pivotal role in the success of that business. For maintaining profitability, liquidity and solvency of the firm, working capital management becomes the top priority. Efficient working capital management practices can make a difference between the survival and bankruptcy of the firm.

Working capital alludes to the transient capital that the firm requires for its day by day operations. It comprises of organizations' present resources and current liabilities. The objective of working capital administration is to guarantee that a firm has the capacity proceed with its operations and that it has adequate capacity to fulfill both developing transient obligation and forthcoming operational costs. Working capital administration is the capacity to control viably and productively the present resources and current liabilities in a way that gives the firm greatest profit for its advantages and minimizes installments for its liabilities. The administration of working capital includes overseeing inventories, money due and payable, and money. The more noteworthy the extent of organizations' fluid resources like money, attractive securities, accounts receivables and stock, the lesser the danger of confronting a liquidity crunch.

Current resources are the advantages that arrival to trade shape in for spendable dough a typical course of business inside of a brief time of time, typically a year. The segments of working capital always show signs of change; like crude materials are changed over into completed products which are then sold and offer ascent to records receivables which on acknowledgment gets changed over into money. The parts of working capital change with the cycle for operations however the working capital stays same. This is the reason working capital gives a helpful outline of current resources and liabilities. Stock structures an essential piece of working capital as huge stock diminishes the danger of a stock out. A liberal exchange credit strategy is likewise useful for deals yet both these parts take up vital bit of money consequently influencing the liquidity of the firm.

Working capital administration effectiveness is particularly imperative for a land firm as a noteworthy bit of their stores is used in their progressing tasks, which may take quite a while to change over to money, because of which they may confront a lack of prompt money. It is very important for them to maintain an efficient working capital policy so that they can pay their current liabilities, which are a regular part of their business model, on time. Loads of funds are also parked in their accounts receivables due to which liquidity may be compromised.

LITERATURE REVIEW

Researchers have been studying working capital since a long time from different environments and different views. Following researches have been found to be extremely helpful in our research:

The study carried out by Deloof (2003) proved that when working capital is controlled in a specific manner, impacts the profitability of Belgian firms. This specifies that maintaining

of the certain amount of working capital enhances the profitability. This finding was supported by the results of the study of Lazaridis and Tryfonidis (2006), who found the relationship in firms listed in Athens Stock Exchange. They took indicators of working capital, which were cash conversion cycle, accounts receivables and accounts payables days and inventory days and then were regressed with gross operating profit.

Another purview was brought by the study of Jeng-Ren et al (2006), where the relationship between the debt ratio and working capital of the firm. Further it was found that efficient working capital policy influence the firm's value positively (Padachi, 2006). Using the regression analysis, they found that when inventories were increased, profitability is lessened. They also used the inventories days, accounts receivables days, accounts payable days and cash conversion cycle. Infact, it was revealed that working capital financing is increasing. The study of Teruel and Solano (2007) examined the relationship between inventory period and cash conversion cycle and found the same to be significant. Rahemn (2007) investigated the relationship between working capital management and liquidity and profitability, in firms listed at KSE. The interesting point in the study is that they took Debt ratio, size of the firm (measured in terms of natural logarithm of sales) and financial assets to total assets ratio as control variables. When the average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio on the Net operating profitability of Pakistani firms were regressed using GLS, the results revealed the existence of the strong negative relationship between variables of the working capital management and profitability of the firm. It was also found that a negative relationship existed between obligations used and profitability of the firm. Siddiquee and Khan (2009), has watched that, organizations which are better at overseeing working capital are discovered to have the capacity to make counter cyclical moves to assemble upper hand. What's more, they are likewise better at producing store inside furthermore confronting lesser inconvenience while looking for outside wellsprings of financing.

The study carried out by Hayajneh and Yassine (2011); Quayyum (2011) revealed that when inventories, receivable and payables and cash are not managed at certain optimum level, then the profitability of the firm is hampered.

A strong positive relationship was observed when a firm uses 'conservative investment policy', whereas it was found to be negative when 'aggressive financing policy', between the value and profitability of the firm (Al-Mwalla, 2012). He used Tobin'Q as the measure of value of the firm and compared it with the economic growth, firm's size and sales growth.

Arshad (2013); Makori, Jagongo (2013); Nnzioki et al (2013); Almazari (2013) established a positive relationship between current ratio and net current assets to total assets with profitability. An increase in quick ratio affects it negatively while profitability increases with lengthening of account receivable and inventory period. Furthermore, the study of

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

Naser, Nuseibeh, Hadeya (2013) utilized the Non monetary organizations recorded on the exchange were masterminded into six business dares to be particular administration, land, imperativeness, trades, purchaser staples and collecting. They investigated six variables which were beforehand utilized as a part of different explores to dissect working capital. These components were industry type, sales growth, operating cash flows, return on equity, leverage and size. They utilized regression model way to deal with investigate the different variables. They likewise utilized Pearson's correlation coefficient to study the level of correlation between the variables. Cash conversion cycle was considered as the intermediary for working capital management and the relation of these six variables was examined with this only. They concluded that the size, leverage and sales growth affected the working capital management of an organization. The sales growth and aggregate resources demonstrated a huge and negative association with cash conversion cycle. They concluded that expansive organizations have better negotiation control over their clients and suppliers and they can accomplish sales growth superior to anything little organizations. The work of Toby (2014) used the Loveday Likelihood Test to find the correlation between net current assets ratio (NCAR), return on assets (ROA) and net profit margin (NPM) in the Nigerian context. On the normal all the segments embraced a forceful working capital management technique by depending vigorously on current liabilities for financing their working capital needs. It was additionally found that the adoption of this procedure delivered negative productivity in the greater part of the areas. The outcomes likewise demonstrate strong positive correlation in the middle of NCAR and chose measures of benefit. It is suggested that organizations would boost benefit and include esteem by embracing the conservative working capital management procedure (i.e putting all the more in current resources) if the operating environment and money markets are powerful.

OBJECTIVES

- 1) To study the working capital management practices of the selected firms in the sample.
- 2) To establish whether profitability of a firm is dependent on its working capital management.

DATA COLLECTION

Secondary data has been collected for the purpose of this study. Out of all the real estate firms operational in the country, six listed real estate firms, constituting the major portion of the market, have been selected. These firms are DLF, Unitech Ltd, Godrej properties, Omaxe Ltd, Purvankara Ltd and SPML Ltd. The data was mainly collected from the annual reports of the companies and financial websites like moneycontrol.com for five years 2009-2013.

METHODOLOGY

For the first objective ratio analysis was studied for each company over the time period of five years. All the important working capital ratios were found out and studied individually.

For the second objective correlation analysis was done and Pearson's correlation coefficient was determined and its significance was studied. This helped in understanding whether there was any correlation between the dependant profitability ratios and independent working capital ratios. After this regression analysis was done in order to find out the degree of variation of dependant variable due to independent variable. For this purpose regression equations were formed taking return on assets and net profit margin as the dependant variables separately.

ANALYSIS AND FINDINGS

Ratio analysis

To study the working capital practices of the companies, detailed analysis of working capital ratios and other ratios which are related to the working capital, was done with the data for five years from 2009 to 2013. The main ratios calculated were as under:

- i. **Current Ratio:** This ratio establishes a relationship between current assets and current liabilities. It is an indicator of the firm's ability to promptly meet its short term liabilities. Normally a higher current ratio is considered as a sign of financial strength, but an abnormally high ratio means that the current assets of the firm are being financed by long term sources of funds. We find out that current ratio for Purvankara Ltd and Godrej Ltd is much higher than the mean value. The mean current ratio for all the firms is also high as compared to the normal industry standard. This is probably because of high level of inventories that constitute a major portion of the current assets. Current assets constitute almost 80% of the total assets for most of the companies whereas current liabilities contribute to only about 26% to total assets.(Table No:1)

Table 1 : Current Ratio Statistics

Current Ratio	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	8	5	7	4	5	6
Omaxe Ltd	2	2	3	4	5	3
Spml Ltd	2	2	2	2	2	2
Godrej prop	4	7	7	7	9	7
Dlf Ltd	2	3	4	5	6	4
Unitech Ltd	3	3	1	1	1	2
MEAN	4	4	4	4	5	4

Source: Moneycontrol.com

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

- ii. **Liquid Ratio:** This ratio is a better indicator of a firm's liquidity position as it takes into consideration only the liquid assets like cash and debtors leaving aside the inventories. Liquid ratio for Godrej Ltd is abnormally high which is due to high investment in current assets. Overall in this sector it has been seen after the ratio analysis that investment in current assets is very high and they constitute a major portion of the total assets whereas the corresponding current liabilities are not proportionate. The reason might be a greater amount of funding from long term sources which is not healthy. (Table No:2)

Table 2 : Liquid Ratio Statistics

Liquid ratio	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	4	2	2	2	1	2
Omaxe Ltd	1	1	1	1	2	1
Spml Ltd	2	2	2	2	2	2
Godrej prop	3	6	6	6	8	6
Dlf Ltd	1	2	2	4	4	3
Unitech Ltd	3	3	1	1	1	2
MEAN	2	3	2	3	3	3

Source: Moneycontrol.com

- iii. **Current assets to Total assets Ratio:** This ratio helps in ascertaining the extent of total funds utilized for meeting working capital requirements. The investment in current assets is very high in most of the companies reaching to 90% for Godrej Properties and Omaxe Ltd. For Unitech Ltd this ratio almost doubled from 2011 to 2012. The reason for the same is the increase in inventory level from 2011 to 2012 and 2013. The capital work in progress of the company has decreased from 2011 to 2012 and had resulted in an increase in inventories. This means that many projects of the company had been completed during this time period and were ready for sales. (Table No:3)

Table 3 : Current assets to Total assets Ratio Statistics

CA to TA %	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	96	96	60	51	96	80
Omaxe Ltd	91	93	92	92	92	92
Spml Ltd	81	82	86	84	88	84
Godrej prop	92	89	95	82	92	90
Dlf Ltd	69	69	69	65	74	69
Unitech Ltd	82	85	43	43	37	58
MEAN	85	86	74	70	80	79

Source: Moneycontrol.com

- iv. **Current Liabilities to Total assets Ratio:** For Unitech Ltd, this ratio has remained almost stable but the amount of current assets have increased considerably due to increase in inventory level.. For Omaxe Ltd, this ratio has increased substantially from 2011 to 2012. For DLF and Godrej this value is very less although it has increased significantly over the last 2 years. (Table No:4)

Table 4 : CL to TA% Statistics

CL to TA%	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	12	19	9	13	18	14
Omaxe Ltd	47	47	27	22	19	32
Spml Ltd	43	42	44	41	47	43
Godrej prop	23	13	14	11	11	14
DLf Ltd	30	27	18	12	13	20
Unitech Ltd	27	28	35	35	39	33
MEAN	30	29	25	22	24	26

Source: Moneycontrol.com

- v. **Debtors Turnover Ratio:** Debtors turnover is found by dividing credit sales by average debtors. When a company makes its sale on credit, debtors or accounts receivables are formed. Debtors Turnover indicates the number of times debtors turnover each year. Generally, the higher the value of debtors turnover, the more efficient the management of the company. For SPML and Unitech Ltd this ratio is very low and as a result their collection period is much higher. This means that they have a higher portion of credit sales which should be reduced. For other companies also this ratio is much lower than is acceptable. The companies need to improve their lending policies in order to increase the cash inflow in the business. (Table No:5)

Table 5 : Debtors Turnover Statistics

Debtors turnover	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	5	5	5	5	5	5
Omaxe Ltd	3	3	4	7	14	6
Spml Ltd	2	2	2	3	2	2
Godrej prop	5	2	2	1	1	2
DLf Ltd	5	9	7	6	5	6
Unitech Ltd	1	1	1	2	2	1
MEAN	3	4	3	4	5	4

Source: Moneycontrol.com

- vi. **Collection Period:** This is found out by dividing 365 by the debtors turnover ratio and it gives information about the time taken to realize cash from the debtors. The collection period for all the companies is very high because they have a low debtor turnover which is a fact to be concerned about. (Table No:6)

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

Table 6 : Collection Period Statistics

Collection period	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	79	73	77	78	81	78
Omaxe Ltd	136	123	81	52	26	84
Spml Ltd	165	232	160	131	150	167
Godrej prop	73	152	209	323	653	282
Dlf Ltd	78	41	55	65	74	63
Unitech Ltd	500	472	366	178	158	335
MEAN	172	182	158	138	190	168

Source: Moneycontrol.com

- vii. Debtors to Current Assets Ratio:** This ratio indicates the amount of debtors that constitute the current assets of the firm. This ratio is almost 40% for SPML Ltd which means that most of their sales are on credit, although this trend is decreasing over the years. For companies like DLF Ltd, this value is very low at almost 2% which means that they are doing most of their sales on cash basis and thereby resulting in low debtors. This policy might hurt the sales of an average size company as the buyers are more keen to buy on credit. This is seen from the sales value of DLF Ltd which is fluctuating along the same values over the years. The sales might increase with a lenient credit policy. (Table No:7)

Table 7 : Debtors to CA% Statistics

Debtor to CA%	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	6	5	4	8	5	6
Omaxe Ltd	11	14	10	5	2	9
Spml Ltd	36	43	47	40	43	42
Godrej prop	2	4	11	12	15	9
Dlf Ltd	2	2	1	3	1	2
Unitech Ltd	9	12	17	12	12	12
MEAN	11	13	15	13	13	13

Source: Moneycontrol.com

- viii. Inventory Turnover Ratio:** Inventory turnover is calculated by dividing the cost of goods sold by the average inventory. This ratio indicates the efficiency of the firm in producing and selling its product, by indicating the number of times the inventory has been converted into sales during the period. For SPML Ltd this ratio is much better than other companies and as a result they have an optimum inventory turnover period of an average of 35 days. For Unitech Ltd the inventory turnover was much higher from 2009-2011, but has decreased abnormally in 2012 & 2013. The reason is completion of various projects during this time and hence capital work in progress

was converted into inventories which were ready for sales. For all the other companies this ratio is very less, due to which the inventory holding period is very high. This means the companies have not been able to convert their inventories into sales effectively. (Table No:8)

Table 8 : Inventory Turnover Ratio Statistics

Inventory turnover ratio	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	0	0	0	0	0	0
Omaxe Ltd	1	1	0	0	0	0
Spml Ltd	18	10	12	10	6	11
Godrej prop	1	1	1	1	2	1
Dlf Ltd	0	0	0	0	0	0
Unitech Ltd	1	2	143	141	63	70
MEAN	3	2	26	26	12	14

Source: Moneycontrol.com

- ix. **Inventory to Current assets Ratio:** This ratio indicates the portion of inventory in the current assets. Inventories form almost 50% of the current assets for Purvankara Ltd and Omaxe Ltd. This value was very low for Unitech and SPML. This is probably because of a good inventory turnover ratio for them which means they are holding only that much inventory which they can sell. (Table No:9)

Table 9 : Inventory to CA% Ratio Statistics

Inventory to CA%	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	53	54	69	55	78	62
Omaxe Ltd	47	48	61	66	62	56
Spml Ltd	3	6	7	9	11	7
Godrej prop	26	10	10	12	7	13
Dlf Ltd	35	33	35	34	35	34
Unitech Ltd	8	8	0	0	0	3
MEAN	29	26	30	30	32	29

Source: Moneycontrol.com

- x. **Working Capital Turnover Ratio:** Both excessive and inadequate working capital for the firm is harmful. Excessive working capital means the company is holding excess idle funds which earn add no value to the firm. Inadequate working capital means not lower funds available to meet operational needs of the firm. This ratio is very low for all the companies which mean that there is considerable scope for improvement in the working capital practices of the companies and efficiency of their working capital is questionable. (Table No:10)

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

Table 10 : WC Turnover Ratio Statistic

WC turnover	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	0	0	0	0	0	0
Omaxe Ltd	1	1	0	0	0	0
Spml Ltd	2	1	2	2	2	2
Godrej prop	0	0	0	0	0	0
Dlf Ltd	0	0	0	0	0	0
Unitech Ltd	0	0	1	2	1	1
MEAN	0	0	1	1	1	1

Source: Moneycontrol.com

- xi. Cash to sales ratio:** This ratio is found out to get an idea if the company is enjoying any benefit out of holding any cash. (Table No:11)

Table 11 : Cash to Sales Ratio Statistics

Cash to sales%	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	25	11	10	6	3	11
Omaxe Ltd	15	10	4	8	2	8
Spml Ltd	6	5	1	1	2	3
Godrej prop	11	1	4	13	8	7
Dlf Ltd	18	10	5	2	2	7
Unitech Ltd	15	12	13	7	4	10
MEAN	15	8	6	6	3	8

Source: Moneycontrol.com

- xii. Return on Total assets:** This ratio is found out by dividing net profit by total assets of the company. The period of 2010-2013 has seen a considerable decrease in ROA for all the companies as the net profit for the companies has been decreasing in this period. Though there has been seen a bit of revival in terms of ROA in 2013, companies like DLF and UNitech has seen a dip in ROA. This is mainly due to decrease in net profit for the company which is because of decrease in sales for the companies. (Table No:12)

Table 12 : Return on Total assets Ratio Statistics

Return on assets%	2013	2012	2011	2010	2009	MEAN
Purvankara Ltd	3	2	3	5	5	4
Omaxe Ltd	2	2	2	2	2	2
Spml Ltd	1	0	2	4	4	2
Godrej prop	4	3	5	8	9	6
Dlf Ltd	1	3	4	3	6	3
Unitech Ltd	1	2	2	3	4	2
MEAN	2	2	3	4	5	3

Source: Moneycontrol.com

Pearson's Correlation coefficient

To fulfill the second objective of the study this method was used. This statistical tool helps in finding out whether there is any correlation between two variables. Our purpose was to find out if profitability of a firm is dependent on the working capital policy of the firm. For the purpose of this study profitability ratios namely Return on Assets(ROA) and Net profit margin (NPM) were taken as the dependant variables and current ratio(CR), liquid ratio(LR), current assets to total assets(CATA), current liabilities to total assets(CLTA), debtor turnover ratio(DTR), inventory turnover ratio(ITR), working capital turnover ratio(WCTR) and cash to sales ratio(CTS) were taken as the independent variables.

The calculations indicate that ROA is positively and highly correlated to Current asset ratio with a r-value of 0.89 which is significant at 5 % level of significance and Liquid ratio with a r-value of 0.96 with a significant p value of 0.02 whereas it is negatively correlated to Current liabilities to total assets ratio with a r-value of -0.80 but this relationship is not significant. This proves that the ROA will increase with increase in current and liquid assets but decrease with the increase in current liabilities. Net profit margin is positively correlated to liquid ratio and negatively correlated to current liabilities to total asset ratio. This implies that the profit situation of the company is dependent on the investment in liquid assets and net profit margin decreases with the increase in current liabilities of the companies. Net profit margin is also positively correlated to current ratio. All the other results have been found out to be insignificant. (Table No:13)

Table 13 : Pearson Correlation Coefficient

ROA	NPM	CR	LR	CATA	CLTA	DTR	ITR	WCTR
1								
0.778	1							
0.889 (0.018)*	0.571	1						
0.959 (0.002)*	0.747	0.758	1					
0.249	-0.315	0.428	0.298	1				
-0.803	-0.73	-0.912 (0.011)*	-0.621	-0.061	1			
-0.201	-0.156	0.168	-0.315	0.249	-0.257	1		
-0.317	0.097	-0.579	-0.264	-0.761	0.382	-0.63	1	
-0.542	-0.666	-0.704	-0.379	0.019	0.876 (0.020)*	-0.501	0.271	1
0.181	0.405	0.319	-0.027	-0.419	-0.575	0.111	0.327	-0.698

p values that are significant at 0.05% are shown in parentheses below correlation coefficient values.

Regression Analysis

Linear Regression analysis was also performed and the dependency of ROA and NPM was studied separately with each working capital ratio. Linear regression was performed because almost negligible multicollinearity was found out among the variables. The following

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

regression equations were formed and respective variables were found out. First ROA was considered as the dependant variable with working capital ratios as the independent variables. The study has followed the methodology of Garcia-Teruel et al (2007).

Total 14 : Regression Statistics

For Y as ROA	CR	LR	CATA	CLTA	DTR	ITR	WCTR	CTS
Y intercept a	0.006	0.01	0.009	0.06	0.038	0.035	0.039	0.025
Regression coefficient β	0.007	0.009	0.029	-0.104	-0.001	0	-0.013	0.095
Multiple R	0.889	0.959	0.249	0.803	0.201	0.317	0.542	0.181
R Square	0.791	0.919	0.062	0.645	0.04	0.101	0.294	0.033
Adjusted R Square	0.739	0.899	-0.172	0.557	-0.2	-0.124	0.117	-0.209
Standard Error	0.008	0.005	0.016	0.01	0.017	0.016	0.014	0.017
t stat	3.891	6.741	0.514	-2.699	-0.41	-0.67	-1.289	0.369
p value	0.018*	0.003*	0.634	0.054	0.703	0.54	0.267	0.731

*p values that are significant at 5% level of significance.

In the table (Table No:14) we have found out the values of regression coefficients for all the equations. The following regression equations were derived.

- (I) ROA= 0.006+0.007 CR (Current Ratio)
- (II) ROA= 0.010+0.009 LR (Liquid Ratio)
- (III) ROA= 0.009+0.029 CATA (Current Assets to total assets)
- (IV) ROA= 0.060-0.104 CLTA (Current Liabilities to total assets)
- (V) ROA= 0.038-0.001 DTR (Debtor turnover ratio)
- (VI) ROA= 0.035+0.000 ITR (Inventory turnover ratio)
- (VII) ROA= 0.039-0.013 WCTR (Working capital turnover ratio)
- (VIII) ROA= 0.025+0.095CTS (Cash to sales ratio)

It can be seen that current ratio and liquid ratio clearly and strongly affect ROA positively and from the table also it can be seen that the result is statistically significant at 5% level of significance. The coefficient of determination also says that 79% variability in ROA can be explained by change in CR. Similarly 92% variation can be explained by LR. Although R square is 64% for CLTA, the result is not significant.

For the second part of analysis NPM (net profit margin) is taken as the dependant variable and it's regressed against the working capital ratios. The following regression equations were derived:

- (I) NPM = 0.048+0.048 CR
- (II) NPM=0.044+0.073 LR
- (III) NPM=0.554-0.402 CATA

(IV) $NPM = 0.506 - 1.028 \text{ CLTA}$

(V) $NPM = 0.282 - 0.012 \text{ DTR}$

(VI) $NPM = 0.228 + 0.001 \text{ ITR}$

(VII) $NPM = 0.328 - 0.168 \text{ WCTR}$

(VIII) $NPM = 0.056 + 2.313 \text{ CTS}$

Table 15 : Regression Statistics

For Y as NPM	CR	LR	CATA	CLTA	DTR	ITR	WCTR	CTS
Y intercept	0.048	0.044	0.554	0.506	0.282	0.228	0.328	0.056
Regression coefficient	0.048	0.073	-0.402	-1.028	-0.012	0.001	-0.168	2.313
Multiple R	0.571	0.747	0.315	0.73	0.156	0.097	0.666	0.405
R Square	0.326	0.558	0.099	0.534	0.024	0.009	0.444	0.164
Adjusted R Square	0.158	0.447	-0.126	0.417	-0.219	-0.238	0.305	-0.045
Standard Error	0.152	0.123	0.176	0.127	0.183	0.185	0.139	0.17
t stat	1.391	2.247	-0.664	-2.139	-0.317	0.195	-1.786	0.885
p value	0.236	0.088*	0.543	0.099*	0.767	0.855	0.149	0.426

*p values that are significant at 5% level of significance.

From the table (Table No:15) and equations it can be seen that only LR and CLTA have an important influence on NPM. 55% of variation in NPM can be explained by LR which is positively related and 53% by CLTA which is negatively related and both these values are significant at 5% level of significant. This is consistent with the previous results saying that with more liquidity the profitability of firms in real estate sector increases. These companies have a major portion of their funds in assets like inventories and as soon as we deduct these inventories from current assets the ratio of liquid assets become significant to the NPM .CR explains 32% of the variability and WCTR explains 44% of variability but both these results are not significant. Also as the ratio of current liabilities to total assets decrease profitability increases which makes economic sense also.

CONCLUSIONS

Real estate sector is a very unorganized and unpredictable sector. The values of various variables fluctuate considerably over the years. Also this industry has a very high percentage of current assets and major portion of these assets are parked in the inventories.

We were able to conclude that the working capital practices of the firms in the real estate sector are not very efficient as there is a very heavy dependency on only one component of current assets. Also this is a sentiment driven sector. When the economy is having a positive outlook, investment in the real estate sector increases and hence the sales and profitability in the sector increases. The time period under study has seen a period of recession and revival also due to which the data is fluctuating over the five years in the companies.

Study of Efficiency of Working Capital Management Practices and the Effect on the Profitability of the Firm: A Study of Real Estate Sector of India

As mean values have been taken for all the companies, there is a distortion in the data due to which certain results are absurd.

The profitability of the company is related to the working capital of the company. In our study we find that profitability is significantly related to the current and liquid ratios. This is proved from the significant values of correlation coefficient. 79% variability in ROA can be explained by change in Current ratio and 92% variation can be explained by liquid ratio. The net profit margin is also negatively dependant on current liabilities to total assets ratios and 53% of the variation can be explained by this ratio only. This means that as the percentage of current liabilities decreases, the net profit margin increases. It proves that the companies, which are better at handling their liquidity against their current dues, are better able to optimize the use of their assets and generate more profit. This makes sense as the firms which make an efficient use of their liquid assets are more likely to be profitable.

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Sukhmani Bhatia & Navdeep Barwal

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