# IMPACT OF PROFITABILITY ON WORING CAPITAL MANAGEMENT OF SELECTED PHARMACEUTICAL COMPANIES IN INDIA

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## Abstract

Under this study is panel test the impact of working capital management on profitability. To investigate this relationship between these two, the author collected secondary data from selected pharmaceutical companies in India registered in securities exchange broad India for the periods from 2002-2004 to 2012-2013. For this purpose, in this study use dependent variable of return on assets to measure the profitability of company and independent variable of working capital turnover ratio, current assets to total assets ratio, current liabilities to total assets ratio, current ratio, debt- equity ratio, cash to current liability ratio, leverage and size of the companies as working capital management criteria. The results of the research show that there is a significant impact of the profitability on working capital management of the company. So, the result indicates that through proper working capital management the company can increase its profitability. This study will benefit the selected pharmaceutical companies in India in the management of their working capital in such an efficient and effcetive manner so that they can improve their profitability.

**Key Words:** Return on Assets ,Working Capital Turnover Ratio, Current Assets to Total Assets Ratio, Current Liabilities to Total Assets Ratio, Current Ratio, Debt to Equity Ratio, Cash to Current Liabilities Ratio, Leverage and Size of the Companies, Business and Pharmaceutical Companies.

## Introduction

Working Capital mainly represents the current assets of a firm which is the portion of financial resources of business that changes from one type of resources to another during the day-to-day execution of business. Current assets mainly comprise of cash, prepaid expenses, short-term investments, accounts receivable, inventory and other current assets. Net working capital can be measured by deducting current liabilities of a firm from its current assets. If the value of current assets is less than that of current liabilities then net working capital would have a negative value showing a deficit working capital. When a business entity takes the decisions regarding its current assets and current liabilities then it can be termed as working capital management. The management of working capital can be defined as an accounting approach that emphasize on maintaining proper levels of both current assets and current liabilities. It provides enough cash to meet the short-term obligations of a firm. Profitability can also be termed as the rate of return on investment. If there will be an unjustifiable over investment in current assets then this would negatively affect the rate of return on investment. The basic purpose of managing working capital is controlling of current financial resources of a firm in such a way that a balance is created between profitability of the firm and risk associated with that profitability.

## Review of Literature

**Sarbapria Rai(2011)[1].** Therefore, according to this study, there is a positive relationship between working capital management and profitability of the company; hence for this purpose, the author took sample of 311 Indian manufacturing firms of 14 years from 1996-2010 and studied the impacts of working capital management on profitability, and including the debtors turnover ratio, inventory turnover ratio, debt ratio and many other ratios for measuring the working capital and return on assets and others for measuring profitability of Indian manufacturing firms. After analyzing the results, it was proved that there is a significant relationship between working capital management and the profitability of company.

**Ahmed Arif Almazari (2012)[2]** this study attempts basically to measure the financial performance of the Jordanian Arab commercial bank for the period 2000-2009 by using the DuPont system of financial analysis which is based on analysis of return on equity model and return on investment model. The return on equity model disaggregates performance into three components: net profit margin, total asset turnover, and the equity multiplier. It was found that the financial performance of Arab Bank is relatively steady and reflects minimal volatility in the return on equity. Net profit margin and total asset turnover exhibit relative stability for the period from 2001 to 2009.The equity multiplier also show almost stable indicators for the period from2001-2005 and the ratios declined from 2006-2009 which indicates that the Arab bank had less financial leverage in the recent years, which means the bank is relying less on debt to finance its assets.

**Farhan Shehzad et.al. (2012)[3]** examined the working capital management efficiency of the textile companies of Pakistan for the period of 2004 to 2009. Three index variables that were performance index, utilization index and efficiency index were constructed along with Financial Debt Ratio (FDR) and Fixed Financial Asset Ratio (FFAR) which acts as control variables for measuring the efficiency of working capital management. This study also tested the pace of accomplishing that target level of efficiency by an individual firm during the period of study. Findings of the study were suggested that overall performance of textile industry was satisfactory, but contrary to this the performance of individual firms fluctuated very much during the considered time span. To apprise the relations among WCM Efficiency and EBIT in selected firms of Pakistan's Textile industry regression analysis was used. FDR and FFAR which acts as control variables were also used for measuring the efficiency of WCM. These control variables showed significant and negative relation with EBIT. Regression results also show the significant relationship of WCM efficiency and earnings before interest and tax. PI, UI & EI showed the positive relationship among EBIT its mean if the company manage WC efficiently it might lead towards increase the earnings/ income. FDR & FFAR ratio showed negative relation with EBIT and company/ firm could increase earnings through reducing the debt and fixed financial resources.

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[1] Dr. Sarbapriya Ray (2011), Evaluating the Impact of Working Capital Management Components on Corporate Profitability: Evidence from Indian Manufacturing Firms, International Journal of Economic Practices and Theories (IJEPT) ISSN: 2247 – 7225.

[2] Dr Ahmed Arif Almazari (2012) "Performance management –multidisciplinary perspectives", Plagrave MacMillan, New York, 2012, pp. 163.

[3] Farhan Shehzad, Kamran Ahmed, Saba Sehrish, Faiza Saleem and Muhammad Yasir, "The Relationship between Working Capital Management Efficiency and EBIT: Evidence from Textile sector of Pakistan", Interdisciplinary Journal of Contemporary Research in Business, Vol. 4, No.5, September 2012, pp: 211-224.

**Khan et.al (2012)[4]** analysed the effect of working capital management on firms' profitability in Pakistan between the period of 2004 and 2009 using textile, chemical, engineering and sugar & allied sectors i.e. the annual cross sectional data for those years were used. The variables of the study were Net Operating Profit (NOP), Inventory Turnover in Days (ITID), and Average Payment Period (APP), and Current Ratio (CR), firm size in terms of Natural Logarithm of Sales (LOS), Average Collection Period (ACP), and Debt Ratio (DR). CR and LOS were the control variables. The data were analysed using regression model and sensitivity analysis performed to test the robustness of the result. In the textile sector, the result of the analyses showed that ITID had a significant negative relationship with NOP; APP, CR and LOS had positive significant relationship NOP. ACP and DR had an inverse relationship with NOP which was not even significant and as such, they were dropped from the model. For engineering and chemical sectors, the results were the same except that in the engineering sector, DR had a significant negative relationship with NOP. The results were also similar in the sugar and allied sector except that ACP was highly significantly related with NOP in a positive manner while APP had a negative and an insignificant impact on NOP. Based on these, therefore, they exerted that every sector had its own dynamics since working capital variables reacted differently with profitability in each sector. Thus, they suggested that sufficient level of working capital had essential impact on net operating profitability and liquidity of the firms. However, if the sectors should manage their working capital in a more efficient manner, their profitability would be strengthened. Hence, there was a significant, positive relationship between working capital and firms' profitability.

**Saranga Phani (2012)[5]** has found out that there is evidence to prove that there is appears to a direct relationship between internal efficiencies and higher growth. He has concluded that irrespective of the growth strategies adopted by the individual firms, internal efficiencies will have a higher probability of survival and growth. Thus the internal efficiencies would help firms in the Indian Pharma Industry to overcome any new challenges arising out of the change in patent process from the year 2005.

**Debdas Rakshid and Chanchal Chatterjee (2012)[6]** their study observed that working capital management practice of four selected Indian Pharmaceutical Companies.  For this purpose the working capital utilization index has been used and the appropriate rise in sales is more than the proportionate increase in current assets over a particular period of time. The study reveals that angle of overall efficiency in WCM, Novartis India and Abbott India have registered satisfactory performance over the study period. The result of Efficiency Index values shows that wide fluctuations and more than unity value only for four years and also proves that improper utilization of the current assets.

**Abbasali Pouraghajan and Milad Emamgholipourarchi (2012)[7]** empirically tested the impact of working capital management on profitability and Market evaluation of the Tehran Stock Exchange

[4] Khan et al (2012): "Working Capital Management and Firm's Profitability in Pakistan: A Disaggregated Analysis"; *African Journal of Business Management*, 6/9, pp: 3253-3261.

[5] Sarangaphani(2012), "The Indian Pharmaceutical Industry-An overview of cost efficiency using DEA" , 2010, pp:89-102.

[6] Debdas Rakshit and Chanchal Chatterjee(2012), "An Empirical study on working capital management practice of selected Indian Pharmaceutical companies", The Management Accountant, September 2012. pp: 1067-1073.

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listed companies. Keeping in mind this objective, they studied a sample of companies during the years 2006 to 2010 registered in Tehran Stock Exchange and analyzed them. Also, they used various variables to measure these two factors. The estimated result of the research shows that there is a significant positive relationship between the effective working capital management and profitability of company. Also, the results of the study show that management can enhance the profitability of company through minimizing cash conversion cycle and the total debts to total assets ratio.

**Al-Mwalla (2012)[8]** investigated the impact of working capital management policies (aggressive and conservative policies) on the firms' profitability and value. Using annual data for 57 industrial firms listed in Amman Stocks Market for the period of 2001 to 2 009, the results showed that following a conservative investment policy has a positive impact on a firm's profitability and value. However following the aggressive financing policy has a negative impact on the firm's profitability and value. Finally, this study finds that firm Size, firm Growth and GDP Growth has a positive impact on the firm's profitability and value with no effect of financial leverage.

**Islam and Mili (2012)[9]** attempted to study the financial health, strength and weakness of Pharmaceutical industry of Bangladesh by measuring financial performance and risks. The study observed that the liquidity, profitability and solvency position of most of the selected pharmaceuticals are in average position. The factors behind this position were unsound financial management, inadequate working capital, slow conversion of receivables and inventory into cash, lower position of sales, higher amount of debt, no professional distribution house, restrictions on patent right, fixed mark-up system, contrary policy of the government, vulnerability of environmental risk and increased cost of production.

**Kieschnick, Laplante and Moussawi (2012)[10]** empirically studied the relationship between corporate working capital management and shareholder wealth. Examining U.S. corporations from 1990 through 2006, the authors evidence that a dollar invested in net operating capital is worth less on average than a dollar held in cash. The authors also found that the value of an additional dollar invested in net operating working is significantly influenced by a firm's future sales expectations, its debt load, its financial constraints, its bankruptcy risk, and future inflationary expectations. Also, additional investments in extending credit to one's customers exercise a greater effect than additional investments in inventories on shareholder wealth.

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[8] Al-Mwalla, Mona., (2012), ''The Impact of Working Capital Management Policies on Firm's Profitability and Value: The Case of Jordan'', International Research Journal of Finance and Economics, 85 , pp: 147-153.

[9] Islam, Md. Nazrul. , Mili, Shamem Ara., (2012), ''Financial Diagnosis of Selected Listed Pharmaceutical Companies in Bangladesh,'' European Journal of Business and Management, 4 (4 ), pp: 70-88.

[10] Kieschnick, Robert L., Laplante, Mark and Moussawi, Rabih(2012), Working Capital Management and Shareholder Wealth (April 7, 2011). Available at SSRN: http://ssrn.com/abstract=1431165 or http://dx.doi.org/10.2139/ssrn.1431165.

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**Farhan Shehzad et.al. (2012)**[11] examines the working capital management efficiency of the textile companies of Pakistan for the period of 2004 to 2009. Three index variables that are performance index, utilization index and efficiency index are constructed along with Financial Debt Ratio (FDR) and Fixed Financial Asset Ratio (FFAR) which acts as control variables for measuring the efficiency of working capital management. This study also tests the pace of accomplishing that target level of efficiency by an individual firm during the period of study. Finding of the study suggests that overall performance of textile industry was satisfactory, but contrary to this the performance of individual firms fluctuated very much during the considered time span. To apprise the relations among WCM Efficiency and EBIT in selected firms of Pakistan's Textile industry regression analysis is used. FDR and FFAR which acts as control variables are also use for measuring the efficiency of WCM. These control variables shows significant and negative relation with EBIT. Regression results also show the significant relationship of WCM efficiency and earnings before interest and tax. PI, UI & EI shows the positive relationship among EBIT its mean if the company manage WC efficiently it may lead towards increase the earnings/ income. FDR & FFAR ratio shows negative relation with EBIT and company/ firm can increase earnings through reducing the debt and fixed financial resources.

**Kulkanya Napompech(2012)**[12] reviewed the impact of working capital management on profitability .The primary objective of this research was to test the effects of working capital management on profitability. The regression analysis was calculated on a panel sample of 255 companies listed on the Stock Exchange of Thailand from 2007 to 2009. Therefore, the results showed an inverse relationship between the operating profits and inventory conversion period and the receivables collection period. However, there are no effects on profitability by extending the payables deferral period. The findings also demonstrated that industry characteristics have an impact on gross operating profits.

## Determinations of variables

The study attempts to elaborate the effect of various policies used for working capital management on financial performance. To achieve this aim variables are selected by analysis of previous studies discussed in the section of literature. All the selected variables are used for developing and testing the hypothesis. These variables include dependent, independent and control variables. Return on assets (ROA) is used as a dependent variable. Working Capital Turnover Ratio (WCRR), Current Assets to Total Assets Ratio (CATAR), Current Liabilities to Total Assets Ratio (CLTAR), Current Ratio(CR), Debt to Equity Ratio(DER), Cash to Current Liabilities Ratio(CCLR), Leverage(LEV) and Size of the Companies(SI) are used as an independent variable.

## Objectives of the study

The study is designed to achieve the following objectives:

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[11] Farhan Shehzad, Kamran Ahmed, Saba Sehrish, Faiza Saleem and Muhammad Yasir, "The Relationship between Working Capital Management Efficiecy and EBIT: Evidance from Textile sector of Pakistan", Interdisciplinary Journal of Contemporary Research in Business, Vol. 4, No.5, September 2012, pp: 211-224.

[12] Kulkanya Napompech (2012), Effects of Working Capital Management on the Profitability of Thai Listed Firms, International Journal of Trade, Economics and Finance, Vol. 3, No. 3.

1. To assess the relationship between accounts receivables days, inventories days, accounts payable days and cash conversion cycle on financial performance.
2. To investigate the impact of Working Capital Management on Profitability of selected Indian Pharmaceutical companies.

## Methodology

As the data selected for the study consists of observations in a time series manner so, analytical method is used in this study. As the complete source list of all the Pharmaceutical Companies is 174 listed companies as per the latest Balance Sheet available, the data for this study is selected based on convenience sampling method. The criteria while selecting the Pharmaceutical companies' Total Assets (Rs in Cr.) is an appropriate factor to determine the Financial Performance of the company. The companies which hold Total Assets of more than of Rs 5,000 Cr. is categorized as Large Scale Pharmaceutical Companies which are Piramal Enterprises, Dr.Reddys Labs, Cipla, Sun Pharma and Ranbaxy Labs. The companies which hold Total Assets of more than of Rs 2,500 Cr. and less than of Rs 5,000 Cr. is categorized as Medium Scale Pharmaceutical Companies such as Jubilant Life, Cadila Health, Glenmark, Orchid Chemical and Divis Labs. The study period is confined only 10 years from 2003-2004 to 2012-2013. The financial and statistical tools used for the study were Ratio Analysis, Descriptive Statistics and Indices. In this study four variables are used utilization index, operating profit index, performance index, efficiency index and regression.

## Limitation of the study

1. The study is restricted and limited to sample size of 10 selected pharmaceutical companies in India.
2. The effect of inflation has not been considered in the present study.
3. The result of analysis is subject to the same constraints as are applicable to statistical tool.
4. The study period is confined only 10 years from 2003-2004 to 2012-2013.

## Theoretical Model Framework

### Correlation Analysis

Pearson's Correlation analysis has been used to found the relationship between working capital management and profitability. If efficient working capital management increases profitability, one should expect a negative relationship between the measures of working capital management and profitability variable and vice versa.

### Regression Analysis

The following regression models have been used for this study to determine the variable affected between working capital management and profitability.

$$ROA_{it} = \beta 0 + \beta 1(WCTR_{it}) + \beta 2(CATAR_{it}) + \beta 3(CLTAR_{it}) + \beta 4(CR_{it}) +$$

$$\beta 5(DER_{it}) + \beta 5(CCLR_{it}) + \beta 5(LEV_{it}) + \beta 5(SI_{it}) + \pounds$$

Where:

ROA = Return on Assets (Dependent Variable)

WCTR = Working Capital Turnover Ratio (Independent Variable)

CATAR= Current Assets to Total Assets Ratio (Independent Variable)

CCLR = Cash to Current Liability Ratio (Independent Variable)

CLTAR= Current Liabilities to Total Assets Ratio (Independent Variable)

LEV = Leverage (Independent Variable)

CR= Current Ratio (Independent Variable)

SI= Size of the Companies (Independent Variable)

DER = Debt-Equity Ratio (Independent Variable)

£= Error

## 1.1. Descriptive Statistics and Correlation of Large Scale Pharmaceutical Companies (Dependent Variable: Return on Assets)

The table 1.1 provides the descriptive statistics and correlation analysis of large scale pharmaceutical companies for all the variables. It shows the number of observations of all variables, their average value and their standard deviation.

**Descriptive Statistics and Correlation of Large Scale Pharmaceutical Companies (Dependent Variable: Return on Assets)**

| Variables | N | Mean | Std. Deviation | Correlation | P-Value | Relationship | Remarks |
|---|---|---|---|---|---|---|---|
| WCTR | 50 | 2.417 | 1.176 | 0.002 | 0.495 | Positive | Not Significant |
| CATAR | 50 | 0.643 | 0.198 | 0.302 | 0.017 | Positive | Significant |
| CLTAR | 50 | 0.176 | 0.094 | -0.117 | 0.209 | Negative | Not Significant |
| CR | 50 | 3.004 | 1.378 | 0.055 | 0.353 | Positive | Not Significant |
| DER | 50 | 0.429 | 0.570 | -0.292 | 0.020 | Negative | Significant |
| CCLR | 50 | 0.606 | 0.938 | -0.058 | 0.345 | Negative | Not Significant |
| LER | 50 | 0.219 | 0.193 | -0.340 | 0.008 | Negative | Significant |
| SI | 50 | 7.998 | 0.608 | -0.224 | 0.059 | Negative | Not Significant |

Source: Computed

The results of table 1.1, Descriptive Statistics and Correlation of Large Scale Pharmaceutical Companies (Dependent Variable: Return on Assets) showed that: There direct relationship between dependent variable( Return on Assets) with working capital turnover ratio, current assets to total assets ratio and current ratio, because the estimated coefficient correlation of these variables are positive relationship. These is a reverse relation between dependent variable (Total on Assets) with current liabilities to current assets ratio, debt-equity ratio, cash to current liability ratio, leverage and size of the companies, because the estimated coefficient correlation of these variables are negative relationship.

## 1.2 Regression Analysis of Large Scale Pharmaceutical Companies

The strength of the relationship between the dependent variable return on assets and all the independent variables taken together of selected large scale pharmaceutical companies and the impact of these independent variables on the profitability are given in table 1.2. Cash to current liability ratio has a direct relationship with return on assets. Its β coefficient is 0.004 and insignificant at 5% level of significance. An examination of the model summary in conjunction with ANOVA (F- Value) indicates that the model explains the most possible combination of predictor variables that could contribute to the relationship with the dependent variable. Model summary are significant at 5% level of significance. F Ratio is 5.719 and respective Significance F is 0.000 which is statistically significance at 5% level of significance.

### Regression Analysis of Large Scale Pharmaceutical Companies

| Models | Un standardized coefficient | | Standardized coefficient | t | Sig. |
|---|---|---|---|---|---|
| | β | Std. Error | Bata | | |
| (Constant) | 0.077 | 0.190 | - | 0.408 | 0.686 |
| Working capital turnover Ratio | 0.052 | 0.016 | 0.661 | 3.272 | 0.002 |
| Current Assets to Total Assets Ratio | 0.437 | 0.087 | 0.926 | 5.032 | 0.000 |
| Current Liabilities to Total Assets Ratio | -1.012 | 0.269 | -1.021 | -3.760 | 0.001 |
| Current Ratio | -0.008 | 0.019 | -0.113 | -0.408 | 0.686 |
| Debt- Equity Ratio | -0.014 | 0.047 | -0.088 | -0.305 | 0.762 |
| Cash to Current Liability Ratio | 0.004 | 0.023 | 0.041 | 0.179 | 0.859 |
| Leverage | -0.123 | 0.134 | -0.255 | -0.920 | 0.363 |
| Size of the companies | -0.016 | 0.021 | -0.104 | -0.772 | 0.445 |
| **Model Summary** | | | | | |
| Multiple R | 0.726 | Standard Error | 0.070 | Durban Watson | 1.148 |
| R Square | 0.527 | F-Ratio | 5.719 | | |
| Adjusted R2 | 0.435 | Sig.F | 0.000 | | |

Source: Computed

1.**3. Descriptive Statistics and Correlation of Medium Scale Pharmaceutical Companies (Dependent Variable: Return on Assets)**

Table 1.3 provides the descriptive statistics and correlation analysis of medium scale pharmaceutical companies for all the variables. It shows the number of observations of all variables, their average value and their standard deviation. The results of table 1.3, Descriptive Statistics and Correlation of Medium Scale Pharmaceutical Companies (Dependent Variable: Return on Assets) showed that:        There direct relationship between dependent variable( Return on Assets) with working capital turnover ratio, current assets to total assets ratio and current ratio, because the estimated coefficient correlation of these variables are positive relationship.        These is a reverse relation between dependent variable (Total on Assets) with current liabilities to current assets ratio, debt-equity ratio, cash to current liability ratio, leverage and size of the companies, because the estimated coefficient correlation of these variables are negative relationship.

**Descriptive Statistics and Correlation of Medium Scale Pharmaceutical Companies (Dependent Variable: Return on Assets)**

| Variables | N | Mean | Std. Deviation | Correlation | P-Value | Relationship | Remarks |
|---|---|---|---|---|---|---|---|
| WCTR | 50 | 2.888 | 1.744 | 0.021 | 0.443 | Positive | Not Significant |
| CATAR | 50 | 0.529 | 0.158 | 0.207 | 0.041 | Positive | Significant |
| CLTAR | 50 | 0.157 | 0.054 | -0.077 | 0.298 | Negative | Not Significant |
| CR | 50 | 2.948 | 1.676 | 0.025 | 0.433 | Positive | Not Significant |
| DER | 50 | 1.039 | 0.883 | -0.675 | 0.000 | Negative | Significant |
| CCLR | 50 | 0.180 | 0.263 | -0.287 | 0.022 | Negative | Not Significant |
| LER | 50 | 0.422 | 0.220 | -0.769 | 0.000 | Negative | Significant |
| SI | 50 | 7.065 | 0.581 | -0.043 | 0.384 | Negative | Not Significant |

Source: Computed

**1.4. Impact of Profitability on Working Capital Management of Medium Scale Companies- Regression Analysis (Dependent Variable: Return on Assets)**

The strength of the relationship between the dependent variable return on assets and all the independent variables taken together of selected medium  scale pharmaceutical companies and the impact of these independent variables on the profitability are given in table 1.4. Model summary are significant at 5% level of significance. F Ratio is 9.295 and respective Significance F is 0.000 which is statistically significance at 5% level of significance.

**Impact of Profitability on Working Capital Management of Medium Scale Companies-Regression Analysis (Dependent Variable: Return on Assets)**

| Models | Un standardized coefficient | | Standardized coefficient | t | Sig. |
|---|---|---|---|---|---|
| | β | Std. Error | Bata | | |
| (Constant) | 0.210 | 0.181 | - | 1.159 | 0.253 |
| Working capital turnover Ratio | 0.015 | 0.010 | 0.267 | 1.537 | 0.132 |
| Current Assets to Total Assets Ratio | 0.344 | 0.160 | 0.548 | 2.148 | 0.038 |
| Current Liabilities to Total Assets Ratio | -0.612 | 0.371 | -0.334 | -1.648 | 0.107 |
| Current Ratio | -0.017 | 0.013 | -0.290 | -1.299 | 0.201 |
| Debt- Equity Ratio | 0.034 | 0.030 | 0.308 | 1.165 | 0.251 |
| Cash to Current Liability Ratio | -0.032 | 0.041 | -0.084 | -0.778 | 0.441 |
| Leverage | -0.403 | 0.113 | -0.897 | -3.561 | 0.001 |
| Size of the companies | -0.004 | 0.022 | -0.024 | -0.189 | 0.851 |
| Model Summary | | | | | |
| Multiple R | 0.803 | Standard Error | 0.064 | Durban Watson | 1.148 |
| R Square | 0.645 | F-Ratio | 9.295 | | |
| Adjusted R2 | 0.575 | Sig.F | 0.000 | | |

Source: Computed

**1.5. Descriptive Statistics and Correlation of Overall Selected Pharmaceutical Companies (Dependent Variable: Return on Assets)**

Table 1.5 provides the descriptive statistics and correlation analysis of overall selected pharmaceutical companies for all the variables. It shows the number of observations of all variables, their average value and their standard deviation.

**Descriptive Statistics and Correlation of Overall Selected Pharmaceutical Companies**
**(Dependent Variable: Return on Assets)**

| Variables | N | Mean | Std. Deviation | Correlation | P-Value | Relationship | Remarks |
|---|---|---|---|---|---|---|---|
| WCTR | 100 | 2.653 | 1.499 | 0.008 | 0.467 | Positive | Not Significant |
| CATAR | 100 | 0.586 | 0.187 | 0.253 | 0.006 | Positive | Significant |
| CLTAR | 100 | 0.166 | 0.077 | -0.093 | 0.178 | Negative | Not Significant |
| CR | 100 | 2.976 | 1.527 | 0.038 | 0.353 | Positive | Not Significant |
| DER | 100 | 0.734 | 0.801 | -0.493 | 0.000 | Negative | Significant |
| CCLR | 100 | 0.393 | 0.718 | -0.082 | 0.210 | Negative | Not Significant |
| LER | 100 | 0.321 | 0.230 | -0.527 | 0.000 | Negative | Significant |
| SI | 100 | 7.532 | 0.755 | -0.086 | 0.198 | Negative | Not Significant |

Source: Computed

The results of table 1.5, Descriptive Statistics and Correlation of Overall Selected Pharmaceutical Companies (Dependent Variable: Return on Assets) showed that: There direct relationship between dependent variable( Return on Assets) with working capital turnover ratio, current assets to total assets ratio and current ratio, because the estimated coefficient correlation of these variables are positive relationship. These is a reverse relation between dependent variable (Total on Assets) with current liabilities to current assets ratio, debt-equity ratio, cash to current liability ratio, leverage and size of the companies, because the estimated coefficient correlation of these variables are negative relationship.

## 1.6. Impact of Profitability on Working Capital Management of Overall Selected Pharmaceutical Companies- Regression Analysis

The strength of the relationship between the dependent variable return on assets and all the independent variables taken together of overall selected pharmaceutical companies and the impact of these independent variables on the profitability are given in table 1.6. Model summary are significant at 5% level of significance. F Ratio is 11.861 and respective Significance F is 0.000 which is statistically significance at 5% level of significance.

**Impact of Profitability on Working Capital Management of Overall Selected Pharmaceutical Companies- Regression Analysis**

| Models | Un standardized coefficient | | Standardized coefficient | t | Sig. |
|---|---|---|---|---|---|
| | β | Std. Error | Bata | | |
| (Constant) | 0.365 | 0.095 | - | 3.857 | 0.000 |
| Working capital turnover Ratio | 0.028 | 0.007 | 0.445 | 3.965 | 0.000 |
| Current Assets to Total Assets Ratio | 0.361 | 0.072 | 0.706 | 5.049 | 0.000 |
| Current Liabilities to Total Assets Ratio | -0.770 | 0.193 | -0.619 | -3.994 | 0.000 |
| Current Ratio | -0.016 | 0.009 | -0.263 | -1.842 | 0.069 |
| Debt- Equity Ratio | 0.022 | 0.023 | 0.181 | 0.938 | 0.351 |
| Cash to Current Liability Ratio | -0.002 | 0.012 | -0.013 | -0.142 | 0.887 |
| Leverage | -0.271 | 0.084 | -0.652 | -3.246 | 0.002 |
| Size of the companies | -0.037 | 0.011 | -0.293 | -3.451 | 0.001 |
| **Model Summary** | | | | | |
| Multiple R | 0.714 | Standard Error | 0.467 | Durban Watson | 1.161 |
| R Square | 0.510 | F-Ratio | 11.861 | | |
| Adjusted R2 | 0.467 | Sig.F | 0.000 | | |

Source: Computed

## Conclusions and Recommendation

On basis of the above analysis a researcher may conclude that these results indicate that through proper working capital management, the company can increase its profitability. Debt-Equity Ratio is negatively related with return on assets. Such a company should increase their borrowings to get better result on return of their assets. Cash to current liability ratio were also not satisfactory with return on asset. All the companies should maintain sufficient cash reserve to meet it liabilities. It enables high yield on their assets. Leverage was also negatively related with return on assets. It implies low return to equity shareholder. Size of the companies should increase their borrowings with minimum financial burden results automatically increase in leverage will get high return on assets. Current liabilities to assets were also negatively relationship with return on assets. So such companies should increase current liabilities to get maximum benefit from return on assets. This above study will benefit and contribute to the body of knowledge by identifying how selected Pharmaceutical companies in India manage their working capital in the most effective and efficient manner in order to ultimately increase profitability of the companies.

## Reference

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