



# Effect of Working Capital Management on Profitability of Cement Sector Listed Companies

**Hassan Subhi AL-ABASS**

Dean at Hadbaa University College, E-mail: [hassn\\_subhee71@yahoo.com](mailto:hassn_subhee71@yahoo.com)

## Abstract

*This research is conducted in cement sector, textile sector and chemical sector to observe the effect of working capital management on the profitability of stock exchange registered corporations. The working capital management is extremely efficient and crucial to increase the return of the organization and business. The companies were analyzed through regression. The most important motive of this study is to measure the association among the profitability, measure by the return on equity, return on assets also by the components of working capital management that is days payable, days receivable, days inventory and cash conversion cycle. Sample size of 30 companies that is listed in the Pakistan stock exchange out of three sectors and the financial years is from 2001 to 2016 years. This study further indicates the significant results.*

## Key words

Return on Assets, Return on Equity, working capital management

Received: 28 Dec 2017

© The Authors 2018

Revised: 03 Feb 2018

Published by Human Resource Management Academic Research Society ([www.hrmars.com](http://www.hrmars.com))

Accepted: 11 Mar 2018

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: <http://creativecommons.org/licenses/by/4.0/legalcode>

Published Online: 05 Apr 2018

## 1. Introduction

Working capital exit a capital that is necessary and very important in every industry like cement industry, textile industry, automobile industry, personal care products industry, fertilizer industry and food industry that we work on it. Working capital comprises current assets and current liabilities. Current assets comprise of capital, cash at bank, inventory, and account receivable and marketable securities also on the other hand current liabilities include account payable, note payable, accrued expenses and interest payable.

Working capital management area unit is connected with the issues that coming back in making an attempt to manage the present assets and current liabilities of the business. The key goal of working capital management is that to check whether the present assets and current liabilities are fully utilize and give maximum profit.

Profitability is made up of two words profit and ability. Profit means that the total income or return from the business and ability means that the power that is used by the business to earn profit. It means that how efficiently management makes the profit with utilizing all the available resources.

The food and beverages industries have registered a high growth rate in comparison with the other industries. And because of increase in population and per capita income of the consumer, this industry is expectedly grown in the future.

The focus of this study is to determine the effects of working capital management on the profit of registered corporations of Pakistan. The problem is to recognize the impact of working capital management on the profit of the stock exchange listed firms of Pakistan. The profitability of the firm will be

decrease if the cash conversion cycle is increase. Or its risky for the company to reduce the cash conversion cycle but if they succeeded it they earn higher profit.

## 2. Literature review

Working capital means in which all short term assets utilized within the day to day requirements of companies. However also elaborated that working capital is differentiated the present assets and present liabilities. Working capital calculated the liquidity of companies by reviewing the sufficiency of short-term capital to meet the company's requirement. A company that' principally liquid once it's enough money to pay its liabilities while they appear. Argued that cash management of employees was influenced through the subsequent determinants: sales volumes. Companies continue present assets to fulfill the organizational needs that they are selling. Seasonal and cyclic elements: differs in desire for products and services among the changes. In economic terms, the necessity for spare capital maintenance is required. Modifies in technology and technology development impacts the preservation of working capital. If a company it produces a car that requests a huge quantities of products at each phase of manufacturing a lot of stock at all times. Company policy, a company may decide at one time to change the amount of working capital Hold in a moment. Hampton defined the receivables as asset accounts representing the amount of debt to the company as a outcome of selling products and services in normal trade. Administration at any spot in time should be considered consumers collect credit for the amount of credit they receive, pay time Risk reduction policies and measures related to non-fulfillment and, above all, discounts Should be presented. It is a financial operating area that covers all current corporate accounts and concerns itself with current asset management policies and commitments as well as technical measures to maximize Benefits of managing it (Ravindra and Sivasankar, 2014).

Working capital has earned a most important situation for the two entities is the liquidity and the profitability (Kumar, 2001) thus retaining a central position in a rapidly changing the environment of the business (Mawutor, 2014).

There are two kinds of working capital that is gross capital and net capital. Gross investment mentions to investing in all current assets. Pure work Capital is more than the sum of current assets in the total current debt. Need for working capital of the company it depends largely on the company's operating cycle. The operating cycle is the start time of Preparing goods or raw materials and ending sales. Working capital management includes the steps and strategies needed to organize work Capital. It might be prominent that the profit of the company is depend on the decision of the investment of the company (Singh-Guest).

Catalogues are a complete of products or materials inside the warehouse at any minute. They are maintained by companies to meet the daily needs of buyers and manufacturers. The cost of storage, finance costs, and the opportunity cost for the allocation of funds, will reduce the amount of available inventory to management. Inventory management means that in which all the activities involved in the maintenance and management of inventory levels of raw materials, semi- finished materials, finished and also finished work, so that sufficient resources are accessible and cost more or less below stock (Kotler, 2015).

When financial managers of the company are able to efficiently and effectively manage the account receivables, account payable and inventory then it creates a very good impact on the condition of the business (Filbeck and Krueger, 2005).

If the company invested insufficient capital in form of cash, trade receivables or in inventories, then it is very difficult for the company to carry out the operations of the business that it is important for the business (Nazir and Afza, 2009).

Suggested that some techniques are used to manage inventory. Following are the techniques are as under: Future Demand Forecast: The actual forecast of the variation in the demands and supply of the products and servings besides the concerned prices of the inventory should be guaranteed by administration. Atrill considered working capital is a company's present assets subtracted by present liabilities (Atrill and McLaney, 2009).

Financial ratios: The average inventory period is determined to determine an appropriate period to keep them. This is by as; Average payout period for payment of account payable Average trade payables /

credit purchase \* 365 (Atrill and McLaney, 2009) as average inventory held/cost of sales \* 365. Displaying and resetting methods, maintains the sound structure for accomplishing and exiting Inventory should be maintained. The time in which you reorder the inventory may also be observed as well.

Business credit comes from the specifically that most companies purchase their products and services in credit. That's Impact, commercial business loan suppliers, interest free, in the short term. Account payables are the different side of the coin from the account assets. A business overdue is a further business that can be received, in conjunction a special deal of commercial debt is the key origin of finance for many companies. It is narrates as a head itself, because they incline to rises the level of action Gained by firm. Commercial credit is vastly recognized as a independent financial origin and so is a good object for corporation to utilize.

To help monitor the level of business credit, management can calculate the average trading period for account payable provided by as; Average payout period for payment of account payable Average trade payables/credit purchase \* 365 (Atrill and McLaney, 2009).

According to, The cash conversion cycle refers on the time across the payments made for materials also additional payments received from revenues (Mensah, 2015).

The cash conversion cycle is therefore given as an inventory conversion period is accompanied by receivable collection periods, less receivable repayment periods. When the cash conversion cycle is longer than the earnings is achieved higher through the sales of the firm. Profitability However, the company is reduced when the value of investing more in labor capital at a rate quicker than benefits of keeping more inventory or giving a lot of credit to the client (Raheman and Nasr, 2007).

The cash conversion cycle by studying and calculating proves to change credit policies buy and sell Credit. Standard payment to buy credit or receive cash from our debtors it can change based on cash-cycle conversion reports. If it's better to explain cash liquidity, the condition of previous credit terms can be preserved. Compares surplus as the capability to produce profits depend on a comparison. For example, receivables turnover in days, payables turnover in days, and inventory in days. These earnings of the business is affected by management, employee's commitment about the systematic utilization of assets to improve profits (Weetman, 2006).

Operating profit margin is attained by dividing revenue by total Assets. Ratios are used to analyses administrations capability to generate income from income foundations in the organization. The profitableness quantitative relation measure the overall performance of corporations. Profit of the firm depends on revenue and investment (Sari, 2007).

### **3. Objectives**

To gain the major aim of this study, these specific objectives should be attained.

1. Establish the link between money conversion cycle and earnings of stock exchange listed corporations.
2. Establish the association among receivable turnover in days and profitableness of listed commercialism corporations.
3. Establish the relationship between payable turnover in days and profitableness of listed commercialism corporations.
4. Establish the correlation across inventory turnover in days and profitableness of listed commercialism corporations.

### **4. Theoretical Framework**

Following theoretical frame work is developed in which two dependent variables such as return on assets and return on equity and the independent variable is receivable turnover in days, payable turnover in days, and inventory turnover in days and cash conversion cycle.

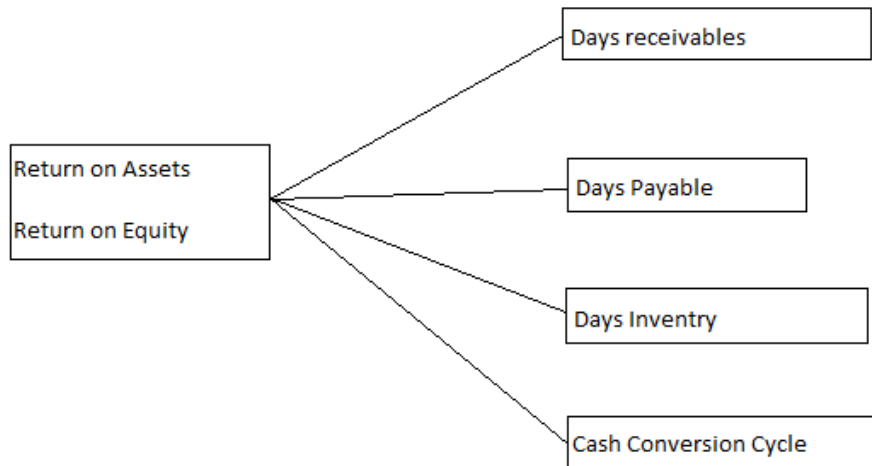


Figure 1. Theoretical framework

### 5. Methodology of research

Sample size of 30 companies from manufacturing sector listed companies of three sectors are used and criterion of selection of the company on the basis of their performance in their particular sectors. Our research is based on secondary data that's why collected data from years 2001 to 2016. We chose 4 independent variables and 2 dependent variables in our research. There are two dependent variables return on assets (ROA) and return on equity (ROE) and the independent variable is days receivable, days payable, days inventory and cash conversion cycle. Statistical measure which is used is Stata. This is panel data. And applied different methods of regression. First is simple regression second is fixed effect and third one is random effect and houseman test.

### 6. Results and analysis

#### Return on asset (ROA)

Table 1. Simple Regression

ROA	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0078701	.0083555	0.94	0.0346	-.0085064	.0242466
DP	.0280841	.00739	3.80	0.000	.0135999	.0425682
DI	.0198605	.0077989	2.55	0.011	.0045748	.0351461
CCC	-.0088711	.0079005	-1.12	0.0262	-.0243557	.0066136
Cons.	15.82068	6.689228	2.37	0.018	2.710037	28.93133

Table 2. Fixed Effect

ROA	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0099303	.0084878	1.17	0.243	-.0067508	.0266113
DP	.0292985	.007487	3.91	0.000	.0145842	.0440127
DI	.0440127	.0079636	2.46	0.014	.0039599	.0352616
CCC	-.0074878	.0081012	-0.92	0.356	-.0234092	.0084335
Cons.	14.99323	6.13073	2.45	0.015	2.944527	27.04194

Table 3. Random Effect

ROA	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0078701	.0083555	0.94	0.346	-.0085064	.0242466
DP	.0280841	.00739	3.80	0.000	.0135999	.0425682
DI	.0198605	.0077989	2.55	0.011	.0045748	.0351461
CCC	-.0088711	.0079005	-1.12	0.262	-.0243557	.0066136
Cons.	15.82068	6.689228	2.37	0.018	2.710037	28.93133

We applied Housman test to choose either fixed or random. So the result of Housman test is Prob>chi2 = 0.5595. This value is greater than 0.05. It shows insignificant results. So we choose random effect.

Table 4. Random Effect

ROA	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0078701	.0083555	0.94	0.346	-.0085064	.0242466
DP	.0280841	.00739	3.80	0.000	.0135999	.0425682
DI	.0198605	.0077989	2.55	0.011	.0045748	.0351461
CCC	-.0088711	.0079005	-1.12	0.262	-.0243557	.0066136
Cons.	15.82068	6.689228	2.37	0.018	2.710037	28.93133

Then we applied Breusch and Pagan Lagrangian multiplier test for random effects to choose either simple regression or random effect regression. So the result of Breusch and Pagan Lagrangian multiplier test for random effects is 0.0000. This value is less than 0.05. It shows significant results. So we choose random effect Regression.

*Return on Equity (ROE)*

Table 5. Simple Regression

ROE	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0188818	.0134507	1.40	0.160	-.0074812	.0452448
DP	-.0108061	.0118885	-0.91	0.363	-.0341071	.0124948
DI	.0343581	.012571	2.73	0.006	.0097194	.0589969
<b>CCC</b>	.0120155	.0127482	0.94	0.0346	-.0129706	.0370015
Cons.	41.29185	11.1609	3.70	0.000	19.41688	63.16681

Table 6. Fixed Effect

ROE	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.021867	.0135662	1.61	0.108	-.0047946	.0485285
DP	-.0083671	.0119666	-0.70	0.485	-.0318851	.0151509
DI	.0359251	.0127284	2.82	0.005	.0109101	.0609401
CCC	.0108732	.0129483	0.84	0.402	-.0145741	.0363205
Cons.	39.34578	9.79883	4.02	0.000	20.08817	58.60339

Table 7. Random Effect

ROE	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0188818	.0134507	1.40	0.160	-.0074812	.0452448
DP	-.0108061	.0118885	-0.91	0.363	-.0341071	.0124948
DI	.0343581	.012571	2.73	0.006	.0097194	.0589969
CCC	.0120155	.0127482	0.94	0.346	-.0129706	.0370015
Cons.	41.29185	11.1609	3.70	0.000	19.41688	63.16681

We applied Housman test to choose either fixed or random. So the result of Housman test is Prob>chi2 = 0.0509. This value is greater than 0.05. It shows insignificant results. So we choose random effect.

Table 8. Random Effect

ROE	coefficient	Std. err	Z	P> z	C.I [95%]	
DR	.0188818	.0134507	1.40	0.160	-.0074812	.0452448
DP	-.0108061	.0118885	-0.91	0.363	-.0341071	.0124948
DI	.0343581	.012571	2.73	0.006	.0097194	.0589969
CCC	.0120155	.0127482	0.94	0.346	-.0129706	.0370015
Cons.	41.29185	11.1609	3.70	0.000	19.41688	63.16681

Then we apply Breusch and Pagan Lagrangian multiplier test for random effects to choose either simple regression or random effect regression. So the result of Breusch and Pagan Lagrangian multiplier

test for random effects is 0.0000. This value is less than 0.05. It shows significant results. So we choose random effect Regression.

## 7. Conclusions

The cause of this research is to analyze the association among working capital management and profitability after controlling the variables like return on equity, return on assets and days payable, days receivable, days inventory and cash conversion cycle. Working capital is a capital that is necessary and very important in every industry like cement industry, textile industry, automobile industry, personal care products industry, fertilizer industry and food industry that we work on it. The aim of this study is to determine the effects of working capital management on the profitability of listed companies of Pakistan. Our objective is to check the relationship between independent variables and profitability. Our theoretical frame work is developed in which two dependent variables is the return on assets and return on equity and the Sample size of 30 companies from manufacturing listed companies of three sectors are used and criterion of selection of the company on the basis of their performance in their particular sectors. Our research is based on secondary data that's why I have collected data for five years from 2001 to 2016. We chose 4 independent variables and 2 dependent variables in our research. First we apply simple regression on our analysis. Then apply fixed and random effect. The results show significant results that the independent variable is impacted on the dependent variable.

## References

1. Atrill, P. and E. McLaney (2009). Management accounting for decision makers, Pearson Education.
2. Filbeck, G. and T. M. Krueger (2005). "An analysis of working capital management results across industries." *American Journal of Business* **20**(2): 11-20.
3. Kotler, P. (2015). Framework for marketing management, Pearson Education India.
4. Kumar, A. V. (2001). Working capital management, Northern book centre.
5. Mawutor, D. (2014). "Working Capital Management and Profitability of Firms: A Study of Listed Manufacturing Firms in Ghana." *Research Journal of Finance and Accounting* Vol **5**: 22.
6. Mensah, J. M. K. (2015). "Working Capital Management and Profitability of Firms: A Study of Listed Manufacturing Firms in Ghana." Browser Download This Paper.
7. Nazir, M. S. and T. Afza (2009). "Impact of aggressive working capital management policy on firms' profitability." *IUP Journal of Applied Finance* **15**(8): 19.
8. Raheman, A. and M. Nasr (2007). "Working capital management and profitability—case of Pakistani firms." *International review of business research papers* **3**(1): 279-300.
9. RAVINDRA, Y and P Sivasankar (2014). "Financial performance of inventory management: a study of select Cotton Mills in Chittoor District." *Journal of International Academic Research for Multidisciplinary* **2**: 156-162.
10. Sari, Y. N. (2007). The Effect of Current Ratio, Debt to Equity Ratio, and Total Assets Turn Over to Profitability Changes in Manufacturing Companies in Jakarta Stock Exchange.(Or) Pengaruh Current Ratio, Debt to Equity Ratio, dan Total Assets Turn Over Terhadap Perubahan Laba pada Perusahaan Manufaktur di Bursa Efek Jakarta, Thesis on Faculty of Economics, Universitas Negeri Semarang.
11. Singh-Guest, G. "Shyam Lal College: Department of Commerce; Odd Semester July-Nov 2016 (Academic Year 2016-17)."
12. Weetman, P. (2006). Financial accounting: an introduction, Pearson Education.