TREND IN WORKING CAPITAL MANAGEMENT AND ITS IMPACT ON FIRMS PERFORMANCE: A CASE OF PSX-100 INDEX

By

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This thesis has been read by me and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and thus fulfils the qualitative requirements of this study. It is ready for submission to the Faculty of Advanced Integrated Studies and Research for internal and external evaluation.

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DEDICATION

I dedicate this research to my parents and specially to my father who is a real source of motivation and inspiration to me not because, he is my father rather because of his conduct honesty, dedication towards his profession and way of living . No doubt due to special blessing of ALLAH and prayers of my parents today I am able to complete this study.

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ABSTRACT

Title: Trend in Working Capital Management and its Impact on Firm performance: A of Case of PSX- 100 index.

The intention to investigate the trends in working capital management and the association of managing working capital with the firm's performance usually expressed by profitability is the main objective of the study. The differences among different industries are identified by investigating the profitability and working capital trends. A $Return\ on\ Total\ assets$ is the proxy to measure the firm's performance and its association with the variables representing the WCM is inspected for a sample of 54 firms for the period 2004-2010. The variables like $invdays$ and $ardays$ show a considerable affect on the firm's earning capability. The study proved a direct and considerable affiliation among the firm liquid position with its performance. Profitability and the firm' size have a prominent positive association. The association amid debts ratio and the firm's performance is inverse but this association is insignificant. Similarly the results show insignificant relation exists between the profitability of the firm and the cash gap (ccc) and accounts payables in days ($apdays$). The results show that there is an imperative role of better managing firm working capital with the performance of the company. The organization can craft worth for the company by utilizing the elements of working capital in an efficient way and thus increase the efficiency and performance of the firm.

Keywords: Working capital management, Cash conversion cycle, Account receivable, Account payable, inventory, regression analysis.

Table of Contents

List of Tables

List of Figures

LIST OF ABBREVIATIONS

HR	Human Resource
ICAW	Interpersonal Conflict Scale
JB	Jarque-bera
SMEs	Small and medium size enterprises
WC	Working Capital

CHAPTER 1

Introduction

1.1 Background of the study

Working Capital Management (WCM) plays a central role in the field of corporate finance. It is the deduction of current liabilities from the current assets. It is important in a sense that it affects the liquidity of the firm on one side and the firm performance on the other side. The effective working capital management leads to the efficient performance and thus has high profitability. Firm may not capable to fulfill its debts in short term in on time and this will create problems for the company and if not tackle with due consideration finally leads to insolvency and bankruptcy of the firm. For manufacturing company's current asset covers almost 50 percent of the total assets employed, while for other firms like distribution companies it contribution is even more than that of manufacturing companies. working capital should be managed in such a way that yields maximum profitability on one side with the liquidity of the firm should not be affected on the other side (Van Horne & Wachowicz, 2000). Different components of working capital were approached by different researchers. Marquardt and Marcus (2017) elucidated the effect of inventory management on the firm earning and found the optimal level of inventory. Marquardt and Marcus (2017) identified that management of working capital has a prominent effect on the company's success and the company can maximize their return by keeping an optimum level of working capital. Howorth and Westhead (2003) stated that the firms with cash management policy are larger have low cash sales and thus have more cash problems. Small firms were focused on stock management, while the firms with low profit focused on credit management. Bricker et al. (2007) concluded that high growth firms generally avoid the credit policy to its customers. These firms invest heavily in inventory and this will establish better relationship with the suppliers and thus

the firms divert the benefits of this financial cost to their clients on one side and on the other side to avoid larger financing investment in the assets. Miranda (2013) suggested in his study the efforts of finance manager in the firms are to carry out a tradeoff between the current liabilities and assets at an optimal level, so the determination of the optimal volume of investment and identifying the most effective and important asset for investment is very crucial for successful achievement of its objective.

This process will shape the financing and investment decision of the concerned firms. Different sectors and company type has different requirement of working capital. Similarly working capital management is affected by the size of the firm, cash flow and growth opportunity in an industry. The ascertainment of these factors is so vital that in its absence the firm may route to the state of insolvency or bankruptcy. Wilner (2000)concluded in his study that the firm use trade credit without knowing its cost and mostly the rate of interest commonly increased to 18%. The study explored that the trade credit of the US firms in 1993 is 1.5 trillion dollars, which is alarming and affect the cash inflows of the firms. The prime concern of a firm is to maintain the working capital at such a level that will maximize their value of the firm. If a company applies a policy of maintaining large quantity of inventory and establish a liberal trade policy, this action will result an increase in sale, because the large inventory will reduced the risk of stock out. Similarly credit policy will attract new customers. Credit policy will attract customers at on side but on the other side this policy will cautious the customers to access the products before paying for it (Deloof & Jegers, 1996). This study investigated the factors affecting the success of the firm. Firm's achievement depends significantly on the ability of the financial manager to handle the current assets and debts.Behrendt et al. (2009) state that in these days of global economies, the importance of better working Capital Management increases and if the firm make efforts to increase profitability by delaying its paying of obligation and keep the cash, this will decrease the activities of the firm and so the cash flow will affect and thus the firm may face the higher liquidity risk. Cash conversion cycle (CCC) is the time gap among the outflow made for the acquisition of raw material and the inflow from the sale to the customers.

Concluded that the larger this time gap will leads the firm to invest more in working capital in order to fulfill this cash gap. The larger cash conversion cycle led to the greater profitability as it leads to the greater sale by adopting the credit policy. Cash conversion cycle is disadvantageous on the other hand, because it will lead to higher

investment. If costs of high investment are high than the benefits associated with holding stock and extending flexible trade policy, the profitability of the firm affected. Working capital management is used as a method to measure the Return on total asset in Pakistan in various sectors but food sector is not much study available many other sector have a lot of research on it and use the working capital management to check the performance. For example the food sector or industry working capital management is very important, so the aim of this study is to determine working capital management is the main portion of corporate management.Vishnani and Shah (2007) did some investigation on Indian National Fertilizer Limited, for the period 1990-91 to 1999-2000. He finds that profitability and working capital management have negative impact on positive relationship. He also determines proof that the rate of increase in firm's profitability is less than from decrease in working capital. Shin and Soenen (1998) discusses industrial problems in India and says that, even though the development in industrial production, investment levels have collapsed. He finds many factors in this regard net working capital often exceeds from the liabilities of the company. It regulates the power of the industry and its liquidity state shows excess the working capital excess the liquidity of the company.

Now days, management of working capital is the most relevant thing in the industry domain that distinguishes one firm from another. Cash, one of the very vital components of current assets, is stated as the main key of industry, but profitability of enlisted pharmaceutical firms in Dhaka Stock Exchange (DSE). Most of the companies proves to be inefficient in managing cash properly. Working Capital Management contacts with the management of current assets and current liabilities along with the measures to finance them efficiently. Usually, a company owns half of its total asset as current assets. Both too much and too less current assets are detrimental for the profitability of the firms. Again, the firms face struggle in managing business operations competently because of inadequate current assets. Basing on these concepts, two types of working capital are there i.e. gross working capital and net working capital. Gross working capital is the total amount of current asset whereas net Working Capital is the surplus current asset that is the net of current liabilities. Howorth and Westhead (2003) state that the firms with cash management policy are larger, have low cash sales and thus have more cash problems. Small firms were focused on stock management; while the firms with low profit focused on credit management. Temporary working capital has two variants i.e. seasonal and special working Capital. Efficient working capital refers to maintaining the optimum level

of current assets and current liabilities to ensure maximum profit for the organizations. In the post-independence period of Bangladesh, the pharmaceutical industry had a limited number of multinational companies. However, the industry has been expanded 65 times and has reached from an export volume of BDT 1730 million to BDT 113 billion. Nowadays, people have become increasingly aware of the health issues that have increased the demand of the pharmaceutical products made in Bangladesh.

In 2000, there were only 173 licensed allopathic drug-manufacturing companies, but now it has turned into a total of 300. Currently, the pharmaceutical companies of Bangladesh produce around 1500 different types of medications under 22,000 different brands of drugs. It has become a self-sufficient industry that can meet 98% of the local demand. This industry has put significant contribution in reducing unemployment problem in Bangladesh by employing 1, 15,000 workers during 2013-14 with a growth rate of around 11.37%. IMS Health Report has estimated a local market of BDT 160 billion by 2018. However, the industry is still importing raw materials from other countries. In this situation, efficient management of working capital can promote this industry's profitability. Therefore, this study aims to identify the association between working capital management and enterprises (SMEs) of Pakistan by incorporating 55 SMEs for 2006-12. They considered return on assets is known as profitability sign and number of days account receivable, cash conversion cycle, number of day's inventory and number of days account payable were called as working capital management indicator. According to the regression analysis, researchers found that account payable has a direct connection with profitability whereas Average Collection Period, inventory, and cash conversion cycle have negative relationships. In India, Singhania et al. (2008) by studying 82 firms listed with Bombay Stock Exchange for 2005-12 concluded a indirect connection among cash conversion cycle and profitability measures i.e. Return on Total Asset, Net Operating Period, and gross operating period. In another work, (Hoang) studied the relationship by incorporating 98 manufacturing companies enlisted with Ho Chi Minh City Stock Exchange for 2009-14. By applying Pearson's correlation and fixed effects multiple regression analysis, he concluded important indirect connection among cash conversion cycle, net trade cycle, average collection time, average inventory time, average payment time, and return on total asset. In (Gumbochuma et al., 2013) In perspective of South Africa explored the working capital management and return on total asset connection by incorporating 17 companies of the general retail sector listed with Johannesburg Stock exchange (JSE).

They have used cash conversion cycle as a representative of working capital and operating period margin as a degree of return on total asset and found a indirect connection among working capital and return on total asset. Deloof (2003) also studied this relationship for 110 manufacturing companies of Istanbul for and identified a strong negative connection of return on total asset measured by operating profit margin with cash conversion cycle, average time of collection and days of inventory outstanding. But, a strong positive connection is found with average time payment. Mbawuni (2015) incorporated 5 petroleum retail firms of Ghana and concluded that return on asset has strong connection with average days payable but insignificant relationship with cash conversion cycle, average days inventory and average days receivables. Deloof (2003) studied the association for 69 manufacturing firms of South Africa for 2007-16 and concluded an indirect strong connection among the average time of collection, average time of payment, and return on total asset but a direct statistically strong connection with the number of days in inventory. In Malaysia, Tinggi et al. (2011) examined the association among working capital management and return on total asset based on 164 manufacturing companies for the period of 2007-11. Through discriminatory panel regression and Pearson correlation, they found strong direct connection between average time collection, inventory conversion cycle and profitability i.e. return on assets (ROA) but cash conversion cycle is found to be insignificantly and indirectly associated with return on total asset. Vural, Sökmen, and Çetenak (2012) studied 18 cement companies listed with Karachi Stocks Exchange (KSE) for. They have used return on total asset as profitability indicator it can be understood that the endeavor to examine the connection among working capital management and return on total asset measured by return on total asset, return on equity and earnings per share is new and exclusive in the context of Bangladesh. In addition, a few researches are available on the connection among working capital management and return on total asset in the pharmaceutical sector. For this, the focus of this study has been fixed in determining the connection among working capital management and return on total asset which would help the financial management to prioritize their efforts in managing working capital well. The topic of working capital has been investigated by a lot investigator with diverse view and in diverse circumstances. Some of the researches which are valuable for my study are given below. Eljilly (2004) in his study elucidated the connection among the company's and return on total asset and liquidity. Using current ratio to calculate the association, it is evident that the relation is inverse and significant. This study was conducted on joint stock companies listed in Saudi

Arabia. The study explicated the relationship between liquidity and profitability. The firms with long cash gap and high current ratio have more apparent relationship. The study also shows that cash gap has a strong impact on the relationship than the liquidity i.e. current ratio. Profitability of the firm as well as industry is proportional to the firm's size. In his study suggested that most of the firm has invested large amount of cash to fulfill its need of working capital. If this working capital is administered efficiently, it will bring a considerable affect in the profitability of the firm. The study conducted on the Belgium firms conclude that if the management may able to reduce the number of days sales outstanding and inventories to lower stat, this will leads to the better performance and thus shareholder wealth gain values.

The association among account payable and return on total asset indicates that in order to pay their due amounts, less profitable firms wait longer. Using traditional analysis of regression and correlation the study illustrates that generous amount of short-term payables is used as a financing source. This study investigates the relation between the firm performance in term of profitability and working capital management. The study conducted on enlisted firms of the Athens stock exchange (ASE). The research used gross operating profit as proxy of performance. The conclusion illustrates a considerable association among the return on total asset and the cash gap. The inverse correlation between the receivables inflow and profitability indicate that firms with less profit should adopt a strategy to receive their outstanding more quickly in order to shorten the cash gap. Similarly the connection between performance of corporation and number of days an inventory takes to change to sales suggest that the mismanagement of inventory causes sudden drop in sales and thus the company will secure up the required surplus resources at the cost of some profitable operations. The result of the study further strengthens the outcome of the previous research of (Deloof, 2003) and (Shin & Soenen, 1998). This study investigated the food sector in Greece in order to investigate the cash gap (C.C.C) as a liquidity proxy and its relation with other liquidity ratios like current ratio, acid test ratio, profit and leverage. It tested the impact of the change in sales bring change in the working capital indicators. Similarly the managerial decisions bring unpredictable change in the profitability and liquidity ratios regarding change in working capital. The study differs from other study in a sense that the study shows a direct and significant relationship of cash conversion cycle with the liquidity ratios (crandqar), to the accounts receivables and inventory turnover period.

The cash gap has linear and positive association only with return on investment and net profit margin. The liquidity ratio i.e. cr andqar has an inverse association with leverage ratio (debt to equity) while a direct relation with interest covering ratio was observed. Waweru and Ngugi (2014) in this study explicated the affiliation of firm's performance and working capital management The research was conducted on the SMEs of Mauritius. The study explores the indirect association between the company's return on total asset and high financing in stock and receivables. The study was conducted on different sectors of the SME and shows the behavior of different factors of working capital and how the firm performance is affected by these factors. The results show an increasing short term trend in different components of working capital. Paper and printing sector is referred as "Hidden Champions" and show that how it achieve high gains on the various constituents of working capital and how the profitability of the firm positively impacted by these factors. Afeef (2011) in his study elucidated the association of working capital management with the liquidity and return on total asset of the company. The study sample contains the Pakistani companies listed on Pakistan Stock Exchange (PSX). Net income gain was used as a substitution for the firm's performance, whereas working capital was represented by the variables stock or inventory turnover, Day's sale outstanding account receivable, day's payables outstanding and cash gap i.e. (CCC). The study illustrates a significant inverse (-ive) tie among these variables. The results suggest that the managers should try to condense the process of inventory turnover to sales and tightening the receivables collection policy to put these variables to the minimum level in order to make value for its valuable shareholders. The result also indicates that less profitable firm may waits longer to pay their outstanding debts as evident by the inverse relation between the profitability and day's payables outstanding. The study further strengthens the studies of (Eljelly, 2004) in their research showed the relation among the substitutes used to represents working capital as well as performance and risk of the firms. The results show that as the firm adopts more aggressive policy concerning investment in working capital the return on total asset of the company decline. The variable Tobin's q is used to measure the association between the firm performance and working capital as well as the classical approach of regression and correlation analysis. Both these techniques end with almost the same results. Otieno (2015) also incorrigible the findings of about the aggressive approach or the conservativeness policies of the firm regarding working capital and their financial and operating risk. Eda and Mehmet (2009) also carry out the study on the behavior of working capital management with the size and sector of the firm by taking quarterly data

of 49 ISE (Istanbul stock exchange) enlisted firms for the duration of 15 years. The results explored that if the firm is capable to manage its working capital in an efficient way, the company may be able to decrease its financial needs and with applying fewer resources the company can achieve the same results. The size and sector of the firm may leads to affect the change in working capital in a positive manner when the account receivables and current liabilities are managed effectively. Baños-Caballero, García-Teruel, and Martínez-Solano (2010) in his research expounded the relationship of working capital management efficiency and association return on total asset. The results were partially consistent with the previous studies, which imply that while analyzing the working capital requirement of the firm, the heterogeneity of firms are very crucial. The results show that the older and firms with greater cash flow maintained longer cash conversion cycle whereas firms with larger leverage, more growth opening and return on total asset sustain more belligerent working capital strategy, which show that cost of financing has an indirect impact on company's cash conversion cycle . This paper also indicates that if the access to the capital market is easy, the investment in working capital increases.Lazaridis and Tryfonidis (2006) performed the study on the firm listed on VSE (Vietnam Stock Exchange) to uncover the bond exists among with working capital management that of the company's liquidity. The research supports the previous work of significant negative relation of profitability with efficient working capital requirement of the firm. Karaduman et al. (2010) findings are also supported by them which show the positive association between the payment of accounts due and profitability, similarly negative association between gross operating profit and accounts receivables and inventory turnover days indicate that the management can boost its company worth for their shareholders by lowering its value to the optimum minimum as explored by the previous researches. The research also illustrates that high profitable firms wait longer to forfeit their invoice.

According to Raheman et al. (2010) conducted study on Malaysian firms and concluded a strong indirect relation among the return on total asset and cash gap (C.C,C) of the sampled firms. The researcher described that best level working capital is achieved with the tradeoff of liquidity and profitability in different sectors. The best level of profitability is achieved with the expense of liquidity and vice versa. Raheman et al. (2010) carried out a research study on US corporations to identify the association among the factors of working capital and corporate performance. The result demonstrates that US firms on average invest more in short term assets in expectation of future sales expansion. Mostly it is observed that further investment in short term capital is coupled

with the decrease in the worth of the firm. The factors that affect the working capital are explored in the study and investigate that the firm's size is directly correlated with the inefficiency of the management to properly handle the working capital. Similarly industry's concentration not related with the working capital requirement of the company. It is also evident from the study that working capital management performance is positively related to the number of outsiders in the board and the CEO compensation, however the relation is inverse with the CEO`s share in the ownership of firm and corporate charter.Raheman et al. (2010) in his study show the same connection among the effectiveness of the firm and the components of working capital management as evident by the previous studies conducted in various time and with various factors of working capital. The result shows that the firm can achieve a competitive position by utilizing the available resources in an efficient and effective manner and to reduce the cash gap to the minimum level. Raheman et al. (2010) carried out a study on SMEs of Spain. The study explain that as the SMEs are concerned, the importance of short term capital increases in a sense because these have more heavily depend on the short term financing and the most of their assets is of short duration. The study show a substantial negative association of SME's performance and working capital management, but accounts payable days effects on return on total asset was not conformed as this relation loss its significance when the possible endogeneity problems have been controlled. Falope and performed a study to explore the association of working capital management and the return on total asset of a corporation by taking a panel data of Nigerian firms. The net operating profit is taken as a profitability proxy while working capital management is represented by the traditional proxies like$ardays$,$invdays$, $apdays$ and ccc or cash gap. The study shows no evidence of firm effect on its profitability. The finding show an increasing trend in the working capital in Nigerian economy as the investment in short term financing is large for most of the firms. Likely the result of the research is the conformation of the previous studies of (Deloof, 2003) and other about the relationship. Raheman et al. (2010)in his study show that on one hand the cash gap has a good impact on the company performance because by lowering its value the firm becomes more profitable. On the other hand it has alarming sign for the firms; as if the firm reduced their average collection period then it is possible that the firm may lose its valuable credit customers. Similarly if the reduced its inventory turnover days, then the firm may face the inventory shortage and will thus affect its operation. Similarly if the firms lengthen the payment of its obligation, this may cause the reduction of its credit worthiness in the

supplier's minds. The firm must achieve the optimal level of all the three variables affecting the cash conversion cycle so that the firm may be able to maximize its sales and hence profitability, which may leads to improve the market worth of the firm.

This study explored the association between the profitability and working capital management by taking the firms registered on the capital markets of the five Latin American countries like Brazil, Argentina, Mexico and Chile. The study show that the industry cash conversion cycle, the market share of the company, the future growth of the company and the country risk are the features which affect the management of working capital in this region with significant difference among different countries. The result indicates that the cash conversion cycle is inversely related with the company size but positively related with the industry concentration index which means that the Latin American companies using their market power to affect their cash conversion cycle. Similarly if companies anticipate future sale growth, it invests more in working capital or when a company expects a minimum country risk in the future.Raheman et al. (2010) conducted the study on the listed companies on stock exchange of Istanbul employing regression analysis. The results indicate the same trend as the previous researches. Conducted a study and made an endeavor to show the effectiveness of working capital management including cement industry of India as a sample. Beside the normal indicators of working capital management, the research also include the overall efficiency indices and setting the industry standard as performance utilization criteria for the individual firm. The consequences of the study explore that this sector does not perform outstandingly well during this period.Smith (2003)elucidated the study on the registered companies in Johannesburg Stock Exchange (JSE).

The question to be investigated in the study is whether the new concepts of managing working capital i.e. comprehensive liquidity index have improved association among the performance of the company as compared to the traditional indicators like current and quick ratio. Using stepwise regression, the outcomes of the study does not show a major difference between the two approaches. The ratio of total current liability and funds flow is mostly responsible for the inconsistency in return on investment and had explored a considerable relationship with return on investment. The traditional liquidity ratios like current ratio and acid test ratios show insignificant association with the dependent variable, whereas the only new concept of working capital i.e. the complete liquidity index, show statistically considerable relation with Return on Investment.Ganesan (2007) in his study show that the firms operating in an industry with

less competition concentrate greatly on cash lag through curtailing credit inflow. Similarly the firm operating in competitive industry usually has high degree of credit inflow. Samiloglu and Demirgunes (2008) shows that accounts receivables and inventory period negatively affects profitability in Turkish manufacturing firm, which recommend that performance can be enhanced by shortening the inflow from receivables as well as stock conversion period.The cash gap is a valuable way of evaluating the firm's cash flow since it measures the time between the accounts received by the firm and accounts payment to the suppliers and the conversion of these materials into refined or finished products.

It is more influential and more complete measure of liquidity as compare to the conventional liquidity indicators like the current ratio and the acid test ratio which spotlight on static balance sheet values. The cash gap on the other hand includes the time aspect of liquidity which measures the overall cash management ability of firms(Moss & Stine, 1993). As we know the firm financial managements is mainly depends on firm working capital management, ultimately the firms which are focusing on this important factors of management they got very a position which is sound and vigorous from both financial and management point of views. (Biggam et al., 2011). It is the duty of the management of the firm to device trade-off among projected revenues and risk, proceeding to building a choice on the quantity of current asset investment of the firms. Two basic means was found to manage working capital for example by lowering the capital investment or by changing the complete plane for enhancing sales volumes. Taking the best policies for example reduction in the investment policy can bring the positive effect on the company profitability indicates the better decrease in the inventory of the corporation and customers leverage requirements can decrease sale volumes, but the percentage given to the suppliers is decrease. So due to this policy the opportunity cost increase ranging to the 20%, this opportunity cost is totally depends on the given years and discounted percentage. On the other side these conventional theories, assuming conventional policies towards company working capitals which further emerge the financial benefits. If companies have large number of inventory that company can decrease the cost of production during the process lost the business occurs due to the limitation of products and cost of supply, fluctuation in the price of the products may also be the cause of loss for the firm. The organization can be supported by giving the credits to the customer to many ways. This study said giving products on credit is the effective

mean for the company which provides profits to the customers as the can demand the products any times.

This policy may be able to provide the customers the approved quantity and quality. Smith (2003) suggested that there should be long term relationships between the customers and the organization. Although it should be kept in mind that short term investment should be done carefully to prevent decrease in profitability must give proper attention. To increase financial strength the empirical research should be adopted because it encourages the aggressive policies for working capital. Some empirical evidence was seen in the listed companies of United States by adopting the aggressive working capital policies for increasing working capital polices. Shin and Soenen (1998) indicate the a very strong direct effect of trade credit reduction on companies profitability he took US firm from the period 1974 to 1993 as sample for the said study, but against it at the level of industries this connection seems to be very weak. Studied the average age of account receivable and financial position of the firm he took periods ranging from 1992 to 1996 to examine the connection among these two variables, it has been proved that in the decrease of average age of account receivable increase company's profitability. Furthermore it has been also proved the outstanding claims need more time to increase the firm profitability. However, this study proved that the short term cash conversion cycle is far better for the firm profitability for this study he took a list of the Taiwanese and Japanese companies and period ranging from 1985 to 1996. Hawawini, Viallet, and Vora (1986) said that, It has been theoretically identified that the organization should maintain a benchmark for the designing or implement working capital policies to enhance organization profitability.

To adopt this strategy the firm can enhance profitability by the reduction of inventories and account receivables to minimum level as the benchmark has been set. Hawawini et al. (1986) said that the management should adopt the policy that to speed up the collection period and decrease the payment period as soon as possible. By applying this strategy the period of cash conversion cycle has been shortened which further enhance the organization long term profits.

Though several researches have previously been bright to assess the effect of working capital management on the company financial capability, few of the experiential results are deliberated here to launch the study breaches and goals,Samiloglu and Demirgunes (2008) inspected the effect of company working capital on their productivity from Turkish working capital market by taking a sample.

The purpose of the research was to hidden the strength of arithmetical interrelation amongst elements of firm`s profitability and cash conversion cycle. In this way to find out practical answers, research agreed sample for the period starting from 1998 to 2007. MLRA (Multiple Linear Regression Analysis) validates the inverse comportment of AR, inventory period and leverage, while the direct boldness of trade enhancement toward company productivity. Juan García-Teruel and Martinez-Solano (2007) used Pooled OLS, fixed result panel regression models in order to gauge the performance of the working capital management in the market stocks of Kenya. The studies examined the period series from 1993 to 2008 and have taken sample of 30 different firms. Regression results designated the inverse association company return on total asset and normal time length is needed to change stock into cash. Additionally, there is found direct relationship amongst average time company essential to get their financial responsibilities. Akinlo and Olufisayo (2011) discover the effect of on the working capital management return on total asset different enlisted firms of NS (Nigerian stocks), the panel data has been taken and used arithmetic methods. In total 8 years data was taken from the Nigerian stocks for the period ranging from 1999 to 2007. Conclusion verified direct relationship between company financial performance and sales growing. Furthermore, there happens inverse agreement among company profitability leverage. Furthermore, company average account receivable and account payable also showed direct performance for one another during the period. Pakistan textile sector was considered in a way to examine the effect of on the working capital management company return on total asset. Average time period obligatory to change stock into cash of the firms, average days for working capital and cash conversion cycle were nominated as independent variables to examine and study the effectiveness of company working capital structure, while profit on equity, profit on asset, profit gains and financial worth accompaniments were preferred as company productivity signs. In total the data was taken of six years of one hundred and sixty different fabric companies for the duration starting from 2000 to 2005 was selected as a model to reach experimental results. Conventional LS (least square) and FE (fixed effect) regression method were realistic for examination and clarification of selected data sets for the period mentioned above.

The finding shows important and positive connection between average age of accounts receivables, There is direct and strong association originate among return on total asset and the average period of inventory. Smith (2003)said that there is positive connection existed between return on total assets and cash conversion cycle the fabric

industry was taken for this study. Akinlo and Olufisayo (2011) examine the Indian listed companies to originate the impact of working capital management and performance of the listed companies. In this research OLS regression analysis was used to identify the clear result prove the hypothesis connection. And at the last he proved that positive connection has been found among the working capital management in the Indian listed companies. It has been also found that there was positive relation established among the profitability and average period of return on total assets on the hand it was should negative relation among the inventory and account payable and return on total asset. The result of this research indicated by expanding the cash conversion cycle and the time of return on total assets enhanced the Indian listed organization profitability. it has been also indicated that the firm economic performance and have working capital management direct relationship on each other.

As the said by the Abuzayed (2012) the panel data has been taken from the Amman stock exchange ranging from 2000 to 2008 for this study and indicated the statistical relation in Jordan. All the stake holders want the well profit margin in their investment therefore both the marketing and financial policies were adopted. It was better to adopt the modern methods for the analization and interpretation panel data set for example random effect, fixed effect and generalized movement method. By adopting these methods it has been find out that there has been suggested equilibrium between profitability and liquidity by this way the affairs of business will run effectively and efficiently. Vural et al. (2012) took five regression mode to investigate the connection between performance and ISE (Istanbul stock exchange) listed stocks and 75 traded working capital management stock were taken for the examination and seven years data has been taken ranging from 2002 to 2009 as a sample. To calculate the Istanbul stock performance operating profit and Tobin Q model was taken as indicators. When it was regressed showed insignificant connection among return on total asset and on working capital management the other hand the cash conversion showed the with average collection period for profitability.

Key points of this study is to generate, are the determinants of effect working capital management the return on total asset of company , due to the global financial crises many of issues was arisen in the study of in the working capital management past that has been forcing companies . Consistently the business failure is due because the mismanagement of the working capital management. In order to achieve permanent profitability in a long way the working capital management should manage in effective

and efficient manner (Kim & Lee, 2012). The excess of pressure on the less amount of capital due to a lot of expansion of enterprises boundaries and tangible infrastructure shows 29 times short up of gearing ratios (GR) of banks capitals in 5 years. So in this situation it is resulted that overexpansion takes prices that effect the working capital management of a corporation. The reputation is not been effected only by over trading it is also due to the massive turnover .Because the und was not invested in a place where it is necessary in noncurrent asset (NCA) and current assets (CA) to enhance successful marketing campaign. Some of the organization that claims that the over trading is the beneficial for the companies but it is not true because of mismanagement. The banks withdraw and tighten their credit condition that is why the car manufacturer companies in a German gone to bankruptcy (Juan García-Teruel & Martinez-Solano, 2007).It is stated that a lot of corporations have not so much and metrics for the evaluation of the effectiveness of their working capital strategy. That is why many businesses crash easily because of the lack of information (Raheman et al., 2010).further it is difficult for a lot of stake holder to manage and enhance working capital.

They are seeing these in different dimensions. It means that that the understanding of the effect of working capital on the return on total asset is very difficult for every firm. The most important elements for the working capital management(1)account payable (2) account receivable and (3) Inventories (Akinlo & Olufisayo, 2011).Van Horne and Wachowicz (2000) written that the reduction in the current asset reduces the profitability however the shortage of current asset increase the profitability of bankruptcy. Shin and Soenen (1998), highlighted that inverse connection found between 1. INT Turnover, 2. Account payable and 3.cash conversion cycle with company return on total asset. While,Lazaridis and Tryfonidis (2006) highlights positive connection among the above said variables. Furthermore,Afeef (2011) found direct relationship between profitability, liquidity and working capital. Thus, Padachi (2006) described that by the execution of worthy strategies for Managers of working capital may leads to the success on company price Inventory control and receivable control management is very working capital management essential for a company to maintain its performance As it affects the profitability of firm. Working capital management clearly affects together the return on total asset and state of chosen liquidity of enterprise. Working capital may be defining as the deduction of CA (current asset) CL (current liabilities). current assets comprise the term cash, PE (prepaid expense), MS (marketable securities), STI (short term investments) etc. and CL (current liabilities) consist of the STL (short term loan), OE

(outstanding expenses) etc, if current assets are exceeds than the current liabilities then working capital management is most important portion of firm's short-term financial matters. Firms of all sizes have to strictly manage its working capital regarding their profitability. The working capital management play dynamic role to recover the financial performance of the firm, through the working capital the firms obtain the benefits of opportunities. Results involving to working capital and STF (short term financing) are suggested to as working capital management.

Working capital management protects a firm which has enough income in order to achieve its obligation in short term, duties and OE (operating expenses) Long et al. (1993) studied the aim of managing working capital as a supervisory factor of current financial resources of a company in such a manner that equilibrium is established among return on total asset of the company and threat linked with that return on total asset working capital is the need of each corporation it is an significant portion of commerce investment to run the operation of business. Gill, Biger, and Mathur (2010) explored the importance of managing working capital of a enterprises ably cannot be opposed working capital management clear influence together the profitability and level of chosen liquidity of a trade Furthermore the company will have to bear the cost of keeping inventory for lengthier periods as well as the cost of treatment too much inventory. Working capital management is used as an instrument to measure the return on total asset in Pakistan in various sectors but food sector is not much study available many other sector have a lot of research on it and use the working capital management to check the performance. For example the food sector or industry working capital management is very essential, so the purpose of this research is to regulate working capital is the main part of business management.

The main aim of managing working capital is governing of CFR of a company in a manner that a equilibrium is shaped among return on total asset of the company and risk linked with that return on total asset.Eljelly (2004);Lazaridis and Tryfonidis (2006)conducted a research on working capital as it is need of every business; it is an significant portion of business investment to run the operations of business. The significance of handling working capital of a business capably cannot be opposed.

The return on total asset along with suitable state of liquidity is essential to be retained for the existence of a enterprise. The arena of working capital management is needed great care by investigators due to its regular relevance and importance to the achievement of a going concern. To support this statement declares that a enterprise is as

resilient as its imaginative capital base, as liquid as its working capital capacity, and as energetic and feasible as its executive choices, working capital is the midpoint of present of any enterprise.Samiloglu and Demirgunes (2008) andVishnani and Shah (2007) did some research on Indian National Fertilizer Limited, for the period 1990- 91 to 1999-2000. He finds that profitability and working capital management have negative impact on positive relationship. He also determines proof that the rate of increase in firm's profitability is less than from decrease in working capital.Azam and Haider (2011) conducted research on the effect of working capital management and company's performance along with liquidity in India.

For the reasons of their investigation other food sector have been selected and taken the data from 2006 to 2010 of 18 companies which is listed on PSX 100 index. For this reason they study the impact of various elements of working capital management just like over turn on total assets (account receivable), average AP(account payable), INV turnover in days, cash conversion cycle, current liability to current asset ratio, return on total asset ratio, current ratio and net operating return on total asset. Kaddumi and Ramadan (2012) was eager in his study to examine the impact of working capital management on the performance in Jordanian industrial sector which is enlisted at ASE. They examined that there is an inverse association between average account receivable, of inventory turnover in days with return on total asset. This also suggests that by reducing debtor the collection period which further increases the profitability. On the other side average payment period and profitability shows the positive relationship which further involves that increase on payment date which further increase the profitability which shows the significant the positive impact on firm's liquidity. Shin and Soenen (1998) debates industrial issues in India and discusses that, although the development in business production, investment state has decrease. He recognizes several aspects in this respect when current asset exceeds over the current liabilities then it is known as net working capital of a company. net working capital shows the liquidity position and strength of the business for example if the working capital increase the liquidity of the firm will also increase. Working capital management can be stable or unstable; the said is the quantity of current asset firm should retain for the longer time of period to balance its current liabilities although later is the surplus of current asset to encounter periodic current liabilities (Van Horn, 2005). The rest of this research is ordered as under: Section 2 defines problem definition, Section 3, proposes model with results and analysis of this research. Section 4, conclusion, contains discussion and future research directions.

Working Capital Management is stated the critical factor in FM (financial management). In general working capital management is linked with the proper arrangement of current asset and the current liabilities, Generally working capital can be changed into cash within one year (Lazaridis & Tryfonidis, 2006). Current liabilities contains account payable. net profit, A,E (accrued expenses) and some part of LTD (Bernstein & Wild, 1998). return on total assets, account payable, inventories and cash are main constituents of working capital (Abuzayed, 2012); Lazaridis and Tryfonidis (2006) shows that the return on total asset and liquidity are the main basic components in managing working capital. Here, liquidity is positively connected to the capability of a company to meet short-term loans. Bagchi and Khamreei (2012) show that in the financial management working capital management is the significant element irrespective of size of the firm profit-orientation and nature of the business all companies needs best state of working capital management. Inadequacy of working capital management may lead the company into bankruptcy (Niresh 2012). Ideal working capital management directly pays to the formation of company worth. Here liquidity cost gets severe threats to the profitability (Lazaridis & Tryfonidis, 2006). On the other side, a company survival is very difficult without enough liquidity because company can face the issues of bankruptcy. It is therefore needed equilibrium among the return on total asset and liquidity. Padachi (2006) highlighted that working capital management should be designed and executed in such a way which expected to establish direct value to the company. Different relationship has been recognized in the literature among profitability and working capital management. (Deloof, 2003);Gill et al. (2010) identified inverse relationship among working capital management and return on total assets. Furthermore they exposed a inverse association among liquidity and return on total assets. In the Sri Lankan contest there are some studies found there is no harmony of the result (Nimalat hasan, 2010; (Wilner, 2000). Gumbochuma et al. (2013)explored the working capital management and profitability connection by incorporating 17 companies of the general retail sector listed with Johannesburg Stock exchange (JSE) for 2004-13. They have used cash conversion cycle as a representative of working capital and operating income verge as a scale of return on total asset and originate a negative association among working capital and success. Gilbert et al. (2014)also studied this relationship for 110 manufacturing companies of Istanbul for 2005-14 and originate an important negative association of return on total asset measured by operating income margin with cash conversion cycle, average account receivable and days of inventory turnover in days. But, an important

positive association is found with average account payable period. Mbawuni (2015) incorporated 5 petroleum retail firms of Ghana for 2008-13 and concluded that ROA has important connection with average days payable but insignificant relationship with cash conversion cycle, inventory outstanding and average collection period. Deloof (2003)studied the association for 69 manufacturing firms of South Africa for 2007-16 and concluded a inverse important connection among the average account receivable, average account payable period, and profitability but a direct statistically important connection with the number of days in inventory. Tinggi et al. (2011) in Malaysia analyzed the association among working capital management and return on total asset based on 164 manufacturing firms for the period of 2007-11. Through discriminatory panel regression and Pearson correlation, they found important direct association among average account receivable period, inventory conversion period and profitability i.e. return on assets (R.O.A) but cash conversion cycle is found to be insignificantly and inverse associated with return on total asset. Vural et al. (2012) studied 18 cement companies listed with Karachi Stocks Exchange (KSE) for 2007-11. They have used return on total assets as profitability indicator it can be understood that the endeavor to explore the connection among working capital management and return on total asset calculated by return on total assets, R.O.E and (EPS) is new and exclusive in the context of Bangladesh. In addition, a few researches are available on the association among working capital management and return on total assets in the pharmaceutical sector. For this, the focus of this study has been fixed in determining the association among working capital management and return on total asset which would help the financial management to prioritize their efforts in managing working capital well.

1.2 Problem statement

Working capital management plays very important role in in the firm performance (Raheman et al., 2010). In developed economies, the management focus on the effective management of the companies account receivables, inventories and account payables in order to reap the association benefits.

The earlier researchers conducted had a bland of conclusion, Indicating positive as well as negative relationship. Shin and Soenen (1998); Afeef (2011) found that there is an inverse association among inventories turnover, account receivable turnover and cash

conversion cycle with firm's profitability. Lazaridis and Tryfonidis (2006) founds a positive relationship between account payable turnover and firm's profitability.

In developing economy like Pakistan, The nature of business has totally different and thus a need arise to judge the relationship among these variables.

1.3 Research Questions

Based on research problem, following are the research questions of the study.

1. What is the effect of account receivable in days on profitability?
2. What is the effect of account payable in days on profitability?
3. What is the effect of inventory turnover in days on profitability?
4. What is the effect of the liquidity on the profitability of the firms?
5. What is the effect of debt own firm on the profitability of the firm?
6. What are the effect of firm size and the profitability of the firm?

1.4 Objective of the study

Based on research question, following are the research objectives of the study.

i. To explore the relationship of account receivable in days on profitability.
ii. To explore the relationship of account payable in days on profitability.
iii. To explore the relationship of inventory turnover in days on the Profitability.
iv. To identify the impact of liquidity on the profitability of the firm.
v. To evaluate the performance of the debt own firms.
vi. To evaluate the dependency between the size of the firm and profitability on each other.

1.5 Significance of the study

This research is essential for the finance management in creation in business decision among their working capital management and company performance. The research shows the way to make the development up to the point that how quickly they can enhance their profitability. By this research the corporation will be able to control an set a benchmark for the control of account receivable, account payable and inventory turnover in days. Furthermore, the research is also useful to the future

researcher to know the association among working capital management and return on total asset. In upcoming days, the investigator will investigate the results of this research. Further, research will be extended to the working capital components including cash and marketable securities etc.

CHAPTER 2

Literature Review

The topic of Working Capital has been explored by several researchers with various views and in various circumstances. Some of the researches which are valuable for my study are given below. (Addae & Nyarko-Baasi, 2013) in his study elucidated the association amongst the company return on total asset and liquidity. Using current ratio to calculate the association, it is evident that the relation is inverse and significant. This study was conducted on joint stock companies listed in Saudi Arabia. The study explicated the connection among liquidity and return on total asset. The company with long cash gap and high current ratio has more apparent relationship. The study also shows that cash gap has a strong impact on the relationship than the liquidity i.e. current ratio. Profitability of the firm as well as industry is proportional to the firm's size.

Deloof (2003) in his study suggested that most of the firm has invested large amount of cash to fulfill its need of working capital.

If this working capital is administered efficiently, it will bring a considerable affect in the profitability of the firm. The study conducted on the Belgium firms conclude that if the management may able to reduce the number of days sales outstanding and inventories to a lower level, this will leads to the better performance and thus shareholder wealth gain values. The association among AP (account payable) and return on total asset indicates that in order to pay their due amounts, less profitable firms wait longer. Using traditional analysis of regression and correlation the study illustrates that generous amount of short-term payables is used as a financing source.

Lazaridis and Tryfonidis (2005) conducted the study to investigate the relation between the firm performance in term of profitability and working capital management. The study conducted on enlisted firms of the Athens stock exchange (ASE). The research used gross operating profit as proxy of performance. The results illustrate a considerable relationship

between the profitability and the cash gap. The inverse correlation between the receivables inflow and profitability indicate that firms with less profit should adopt a strategy to receive their outstanding more quickly in order to shorten the cash gap.

Similarly the connection between performance of corporation and number of days an inventory takes to transform to sales suggest that the mismanagement of inventory causes sudden drop in sales and thus the company will secure up the required surplus resources at the cost of some profitable operations. The result of the study further strengthens the outcome of the previous studies. Gill et al. (2010) in his study investigated the foodstuff sector in Greece in order to investigate the cash gap (C.C.C) as a liquidity proxy and its relation with other liquidity ratios like current ratio, acid test ratio, profit and leverage. It tested the impact of the change in sales bring change in the working capital indicators. Similarly the managerial decisions bring unpredictable change in the profitability and liquidity ratios regarding change in working capital. The study differs from other study in a sense that the study shows a direct and significant relationship of cash conversion cycle with the liquidity ratios (crandqar), to the accounts receivables and inventory turnover period. The cash gap has linear and positive association only with return on investment and net profit margin (NPM). The liquidity ratio i.e. cr andqar has an inverse association with leverage ratio while a positive (direct) relation with interest covering ratio was observed. Padachi (2006) conducted the study explicated the affiliation of firm's performance and working capital management. The research was conducted on the SMEs of Mauritius. The study explores the inverse connection among the company return on total asset and high financing in stock and receivables.

The study was conducted on different sectors of the SME and shows the behavior of different factors of working capital and how the firm success is affected by these factors. The results show an increasing short term trend in different components of working capital. Paper and printing sector is referred as "Hidden Champions" and show that how it achieve high gains on the various constituents of working capital and how the profitability of the firm positively impacted by these factors. (Afeef, 2011)in his study elucidated the association of working capital management with the liquidity and return on total asset of the company. The study sample contains the Pakistani companies enlisted on Pakistan stock exchange (PSX). NPM (net profit margin) was applying as a substitute for the firm's performance, whereas working capital was represented by the variables stock or inventory turnover, Day's sale outstanding (ACP), day's payables outstanding

and cash gap i.e. cash conversion cycle. The study illustrates a significant inverse (-ve) tie among these variables. The results suggest that the managers should try to condense the process of inventory turnover to sales and tightening the receivables collection policy to put these variables to the minimum level in order to make value for its valuable shareholders. The result also indicates that less profitable firm may waits longer to pay their outstanding debts as evident by the inverse relation between the profitability and day's payables outstanding. Raheman et al. (2010) in his study explained the relation among the substitutes used to represents working capital as well as performance and risk of the firms.

The results show that as the firm adopts more aggressive policy concerning investment in working capital the return on total asset of the company decline. The variable Tobin's q is used to measure the association among the firm performance and Working Capital as well as the classical approach of regression and correlation analysis. Both these techniques end with almost the same results. The study also incorrigible the findings of (Otieno, 2015) about the aggressive approach or the conservativeness policies of the firm regarding working capital and their financial and operating risk.Eda and Mehmet (2009) carried out the study on the behavior of working capital management with the size and sector of the firm by taking quarterly data of 49 Istanbul stock exchange (ISE) enlisted firms for the duration of 15 years. The results explored that if the firm is capable to accomplish its working capital in an efficient way, the company may be able to decrease its financial needs and with applying fewer resources the company can achieve the same results. The size and sector of the firm may leads to affect the change in working capital in a positive manner when the account receivables and current liabilities are managed effectively.Baños-Caballero et al. (2010) in his research expounded the relationship of Working Capital Management efficiency and associated return on total asset. The results were partially consistent with the previous studies, which imply that while analyzing the working capital requirement of the firm, the heterogeneity of firms are very crucial. The results show that the older and firms with greater cash flow maintained longer cash conversion cycle , whereas firms with larger leverage, more growth opening and return on total asset retain more belligerent working capital strategy, which show that expense of financing has a inverse effect on company's cash conversion cycle. This paper also illustrate that if the access to the capital market is easy, the investment in working capital increases. The research performed by Lazaridis and Tryfonidis (2006) conducted the study on the firm enlisted on Vietnam Stock Exchange

to uncover the bond exists among working capital management with that of the business's liquidity. The research supports the previous work of significant negative relation of profitability with efficient working capital requirement of the firm. It also supports the findings of (Lazaridis & Tryfonidis, 2005), which show the positive association between the payment of accounts due and profitability, similarly negative association between gross operating profit and accounts receivables and inventory turnover days indicate that the management can boost its company worth for their shareholders by lowering its value to the optimum minimum as explored by the previous researches. The research also illustrates that high profitable firms wait longer to forfeit their invoice.Mujahith and Munas (2016) conducted study on Malaysian firms and concluded a strong indirect relation among the return on total asset and cash lag (CCC) of the sampled firms. The authors described that best level working capital is achieved with the tradeoff of liquidity and profitability in different sectors. The best level of profitability is achieved with the expense of liquidity and vice versa.

Carried out the research study on US corporations to explore the association among the factors of working capital and corporate performance. The result demonstrates that US firms on average invest more in short term assets in expectation of future sales expansion. Mostly it is observed that extra investment in short term capital is coupled with the reduction in the value of the firm. The factors that affect the working capital are explored in the study and investigate that the firm's size is directly correlated with the inefficiency of the management to properly handle the working capital. Similarly industry's concentration not related with the working capital requirement of the company. It is also evident from the study that working capital management performance is positively related to the number of outsiders in the board and the CEO compensation, however the relation is inverse with the CEO`s share in the ownership of firm and corporate charter.Juan García-Teruel and Martinez-Solano (2007)in his study show the same connection among the effectiveness of the firm and the components of working capital management as evident by the previous studies conducted in various time and with various factors of working capital. The result show that the firm can achieve a competitive position by utilizing the available resources in an efficient and effective manner and to reduce the cash gap to the minimum level. Mujahith and Munas (2016) carried out a study on SMEs of Spain. The study explain that as the SMEs are concerned, the importance of short term capital increases in a sense because these have more heavily depend on the short term financing and the most of their assets is of short duration. The

study show a substantial negative association of SME's performance and working capital management, but accounts payable days effects on return on total assets was not conformed as this relation loss its significance when the possible endogeneity problems have been controlled. He performed a research to explore the connection of working capital management and the return on total asset of a corporation by taking a panel data of Nigerian firms. The net operating profit is taken as a profitability proxy while working capital management is represented by the traditional proxies like$ardays$,$invdays$, $apdays$ and ccc or cash gap. The study shows no evidence of firm effect on its profitability. The finding show an increasing trend in the working capital in Nigerian economy as the investment in short term financing is large for most of the firms. Likely the result of the research is the conformation of the previous studies of (Deloof, 2003), (Eljelly, 2004) and other about the relationship. in his study show that on one hand the cash gap has a good impact on the company success because by lowering its value the firm becomes more profitable.

On the other hand it has alarming sign for the firms; as if the firm reduced their average collection period then it is possible that the firm may lose its valuable credit customers. Similarly if the reduced its inventory turnover days, then the firm may face the inventory shortage and will thus affect its operation. Similarly if the firms lengthen the payment of its obligation, this may cause the reduction of its credit worthiness in the supplier's minds. The firm must achieve the optimal level of all the three variables affecting the cash conversion cycle, so that the firm may be able to maximize its sales and hence profitability, which may leads to improve the market worth of the firm. In this his study explored the association between the profitability and working capital management by taking the firms registered on the capital markets of the five Latin American countries like Brazil, Argentina, Mexico and Chile. The study show that the industry cash conversion cycle, the market share of the company, the future growth of the company and the country risk are the features which affect the management of working capital in this region with significant difference among different countries. The result indicates that the cash conversion cycle is inversely related with the company size but positively related with the industry concentration index which means that the Latin American companies using their market power to affect their cash conversion cycle. Similarly if companies anticipate future sale growth, it invests more in working capital or when a company expects a minimum country risk in the future. Mujahith and Munas (2016) conducted the study on the listed companies on stock exchange of Istanbul

employing regression analysis. The results indicate the same trend as the previous researches. Inun Jariya (2013) conducted the study to made an endeavor to discover the effectiveness of working capital management including cement industry of India as a sample. Beside the normal indicators of working capital management, the research also include the overall efficiency indices and setting the industry standard as performance utilization criteria for the individual firm. The consequences of the study explore that this sector does not perform outstandingly well during this period. Smith (2003)elucidated the study on the registered companies in Johannesburg Stock Exchange (JSE).

The question to be investigated in the study is whether the new concepts of managing working capital i.e. comprehensive liquidity index have improved association among the performance of the company as compared to the traditional indicators like current and quick ratio. Using stepwise regression, the outcomes of the study does not show a major difference between the two approaches. The ratio of total current liability and funds flow is mostly responsible for the inconsistency in return on investment and had showed a considerable association with return on investment. The traditional liquidity ratios like current ratio and acid test ratios show insignificant association with the dependent variable, whereas the only new concept of working capital i.e. the complete liquidity index, show statistically considerable relation with Return on Investment. Ganesan (2007) show in his study that the firms operating in an industry with less competition concentrate greatly on cash lag through curtailing credit inflow. Similarly the firm operating in competitive industry usually has high degree of credit inflow.Samiloglu and Demirgunes (2008) shows that accounts receivables and inventory period negatively affects profitability in Turkish manufacturing firm, which recommend that performance can be enhanced by shortening the inflow from receivables as well as stock conversion period.

The cash gap is a valuable way of evaluating the firm's cash flow since it measures the time between the accounts received by the firm and accounts payment to the suppliers and the conversion of these materials into refined or finished products. It is more influential and more complete measure of liquidity as compare to the conventional liquidity indicators like the current ratio and the acid test ratio which spotlight on static balance sheet values. The cash gap on the other hand includes the time aspect of liquidity which measures the overall cash management ability of firms(Moss & Stine, 1993). As we know the firm financial managements is mainly depends on firm working capital management, ultimately the firms which are focusing on this important factors of

management they got very a position which is sound and vigorous from both financial and management point of views. (Shin & Soenen, 1998). It is the duty of the management of the firm to device trade-off among projected revenues and risk, proceeding to building a choice on the quantity of current asset investment of the firms. Two basic means was found to manage working capital for example by lowering the capital investment or by changing the complete plane for enhancing sales volumes. Taking the best policies for example reduction in the investment policy can bring the positive effect on the company profitability. This study indicates the better decrease in the inventory of the corporation and customers leverage requirements can decrease sale volumes, but the percentage given to the suppliers is decrease. So due to this policy the opportunity cost increase ranging to the 20%, this opportunity cost is totally depends on the given years and discounted percentage. On the other side these conventional theories, assuming conventional policies towards company working capitals which further emerge the financial benefits. If a company have large number of inventory that company can decrease the cost of production during the process lost the business occurs due to the limitation of products and cost of supply, fluctuation in the price of the products may also be the cause of loss for the firm .Working capital management shows a central role in the field of corporate finance. It is the deduction of current liabilities from the current assets. It is important in a sense that it affects the liquidity of the firm on one side and the firm performance on the hand. The effective working capital management leads to the efficient performance and thus has high profitability. Firm may not be able to fulfill its short term obligation in due time and this will create problems for the company and if not tackle with due consideration finally leads to insolvency and bankruptcy of the firm. For manufacturing company current asset covers almost 50 percent of the total assets employed, while for other firms like distribution companies it contribution is even more than that of manufacturing companies. Working Capital must be managed in such a way that yields maximum profitability on one side with the liquidity of the firm should not be affected on the other side (Van Horne & Wachowicz, 2000). Different components of working capital were approached by different researchers. The study of (Besley & Meyer, 1987), elucidated the effect of inventory management on the firm earning and found the optimal level of inventory.

The study of (Deloof, 2003), concluded that management of working capital has a prominent effect on the company's success and the firm can enhance their return by keeping an optimum state of working capital. West head & confirm the firms with cash

management policy are larger, have low cash sales and thus have more cash problems. Small firms were focused on stock management, while the firms with low profit focused on credit management.Bricker et al. (2007) concluded that high growth firms generally avoid the credit policy to its customers. These firms invest heavily in inventory and this will establish better relationship with the suppliers and thus the firms divert the benefits of this financial cost to their clients. Efficient working capital management is the procedure of setting and monitoring its current asset and current liabilities in such a way that the firm may be able to fulfill its short term debt on one side and on the other side to circumvent larger financing investment in the assets (Eljelly, 2004). Addae and Nyarko-Baasi (2013) in his study suggested the efforts of finance manager in the firms are to carry out a tradeoff between the current liabilities and assets at an optimal level, so the determination of the optimal volume of investment and identifying the most effective and important asset for investment is very crucial for successful achievement of its objective. This process will shape the financing and investment decision of the concerned firms. Different sectors and company type has different requirement of working capital. Similarly working capital management is affected by the size of the firm, cash flow and growth opportunity in an industry.

The ascertainment of these factors is so vital that in its absence the firm may route to the state of insolvency or bankruptcy (Appuhami, 2008) and (Ramachandran & Janakiraman, 2009). Wilner (2000) in his study concluded that the firm use trade credit without knowing its cost and mostly the rate of interest commonly increased to 18%. The study explored that the trade credit of the US firms in 1993 is 1.5 trillion dollars, which is alarming and affect the cash inflows of the firms. The prime concern of a firm is to maintain the working capital at such a level that will maximize their value of the firm. If a company applies a policy of maintaining large quantity of inventory and establish a liberal trade policy, this action will result an increase in sale, because the large inventory will reduced the risk of stock out. Similarly credit policy will attract new customers. Credit policy will attract customers at on side but on the other side this policy will cautious the customers to access the products before paying for it (Long et al., 1993) and (Deloof & Jegers, 1996). The study of (Filbeck & Krueger, 2005), investigated the factors affecting the success of the firm. Firm's success depends significantly on the capability of the financial manager to handle the current assets and liabilities.Behrendt et al. (2009), state that in these days of global economies, the importance of better working capital management increases and if the firm make efforts to increase profitability by

delaying its paying of obligation and keep the cash, this will decrease the activities of the firm and so the cash flow will affect and thus the firm may face the higher liquidity risk. Cash conversion cycle (CCC) is the time gap between the outflow made for the acquisition of raw material and the inflow from the sale to the customers. Deloof (2003) concluded that the larger this time gap will leads the firm to invest more in working capital in order to fulfill this cash gap. The larger cash conversion cycle led to the greater profitability as it leads to the greater sale by adopting the credit policy. Cash conversion cycle is disadvantageous on the other hand, because it will lead to higher investment. If costs of high investment are high than the benefits associated with holding stock and extending flexible trade policy, the profitability of the firm affected. The main alteration among LTD (long term debts) and STD (short term debts) loan is the time to receive or pay the cash. it is very important for the company and it is the need of the company in which cash flow is needed which take the time less than a one year duration. Gross working capital means all the current asset which the company has and the variance among current Asset and current liabilities represent in the net working capital of the company.

The basic aim of the working capital management is to manage the cash, monitor the account receivable, and payment period and keeping the inventory properly. Balance working capital management affects liquidity and return on total asset, and improves the worth of the company (Bagchi & Khamrui, 2012). There are many of definition of the working capital management.(Naser, 2013) defines working capital management that the management of cash, receivable, inventories and payment period.Ganesan (2007) define working capital management as it is the STL (short term loan) that required for a company. Requirement of working capital defends on the kind of trade and industries. However, the constituents of working capital usually includes cash, borrowers, collection period, inventories, M.S (marketable securities) and R.M (redeemable futures) (Appuhami, 2008). The management of account receivable is very essential for any company for the reason that it is positively associated to the sale.Bieniasz and Gołaś (2011) explained the word receivable as it is the defined the word receivables as the no. of days from the time of trade (issuing of invoice) until getting of the cash. There should be reasonable credit period for credit sale for their customer because it increase account receivable. It true that credit sale increase the sales volume of the firm but there is danger associated with this because it enhance the BD (bad debts). Bhattacharya, Daouk, and Welker (2003). Therefore, it is necessary for company to introduce appropriate account

receivable strategy. Improve ave account receivable policy usually reveals week collection struggles; postpone the client not pay and client's financial suffering (Bernstein & Wild, 1998). Commonly, inventories are another major asset in a production company. Three types of inventories are there, i.e., 1. RM (raw materials), 2.WP (work-in process), and 3. FG (finished goods). Inventory may cause the numerous expenses like storing expense, protection and obsolescence cost. Moreover, if a company does not retain an appropriate investment stat in inventories, a disturbance of the manufacturing and reduction in the sales can arise.Juan García-Teruel and Martinez-Solano (2007)explain the time taken by the conversion of inventory into the sale is called inventory conversion period. With the increase of the raw material into finished good the cost of inventory also increase. Therefore, the aim of inventory management is to reduce these types of expenses without affecting disturbance in the manufacturing (Bhattacharya & Sen, 2004). Cash is the most liquid asset of any company. Naser (2013) have recognized the management cash as the procedure of certifying that sufficient cash is in hand to fulfill the organization costs. The company for most goals is to reduce the holding cost of the cash. Cash conversion cycle begins with the acquisitions of raw ingredients. Then, the company begins manufacturing procedure throughout which these raw supplies are transformed into products. Then the products are sold. The inventory duration is when the raw material is purchased convert it into finished good is called inventory period. Then, the collection period is when the product is prepared from the raw materials and then it is sold and collect the payment from the borrowers is known the collection period. Furthermore, it is the time duration when the raw materials are purchased on debt and pay the dues after some time it is known the payment period. Operating cycle means when the raw material purchased and then collect cash from the borrowers, but cash cycle is the process when the raw materials is purchased and then collects the cash and deduct the payment period from the operating cycle. Account payable comprises business debts and accrued expenses which both deliver cash to the smooth running of an enterprise on an continuing basis (Bhattacharya et al., 2003). On one hand account payable expose the current liability of the firm but on the other side account the management of cash and receivable characterize the current asset of the selected firm. Similarly the payment duration of account payable shows how much time the surplus will be paid to the concern authorities. Any Increase in period in which the paid, it may reason in loss of well-intentioned suppliers of the firms.

So, company should hold healthier connection with their suppliers and try to hold best working capital management always. Varied penalties of literature can be originated in assorted financial circumstances of the country economic situation. Lazaridis and Tryfonidis (2006) had a frustrated to explore the linking among cash conversion cycle period and profitability in registered listed stock companies in VSM (Vietnam stock market). Outcomes of the research indicate the significant inverse connection among the cash conversion cycle and Profitability. This demonstrates that the cash conversion cycle upsurges, it will result to reduce the return on total asset of the form. Bagchi and Khamrui (2012) inspected the connection among working capital management and company return on total asset in the Indian market and assumption of their research displays that cash conversion cycle and liability are inversely connected with company's return on total assets. Lazaridis and Tryfonidis (2006) have examined the association among company return on total asset and working capital management in the Athens Stock Exchange market. The conclusion of study indicate inverse connection among return on total asset and working capital gages like days of payment period cash conversion cycle and account receivable. They brief that firm can generate incomes by successfully control each element of the cash conversion cycle.

Sandeep BHATTACHARYA (2002) has discovered the effect of working capital management essentials on return on total asset in the NSE. His assumption indicates that inverse association has institute among account receivable and return on total asset of the company. Furthermore, there is a direct relationship among the raw material into finished good duration and return on total asset of firm and also between average AP and return on total asset. (Mohamad & Saad, 2010) inspected that the impact working capital management and the success of Malaysian registered companies. They invent that current asset to return asset ratio indicates direct association. Cash conversion cycle, current debt to total assets ratio and current assets to current debt ratio and indicates the inverse relationship. (Kaddumi & Ramadan, 2012) proficient a research to measure the impact of working capital management on the success in Jordanian business firms enlisted at ASE. They clarified that the indirect collection of average account receivable duration, average of inventory with return on total asset. This also suggests that management appropriate inventory and reducing the borrower's collection duration will enhance the profitability. On the other side the direct connection of average payable time with the return on total assets comprise that to enhance the duration of account payable will enhance the benefit. Bilal, Naveed, and Taliv (2011) indicated the effect of working capital management on

profitability of the firms enlisted at Pakistan Stock Exchange. Findings show a direct connection among working capital management and benefits. Azam and Haider (2011) explored the effect of working capital management on companies' performance for non-financial organizations enlisted in Pakistan Stock Exchange. The results indicates that working capital management has an effect on companies' performance and show that managers of the companies may give worth to their customers by decreasing inventory mass, cash conversion cycle and net business cycle. Furthermore, with the enhancement suppliers payment days increase the overall performance of the company. Furthermore , Bieniasz and Gołaś (2011) have lead a study to investigate the effect of working capital management on the foodstuff industrial businesses benefit in Poland and associated states in the Eurozone. The study results that food stuff corporation with the lowest working capital cycles supports to attain the greater price of profitability. Furthermore findings show that the sequences of inventory, account receivable and current liabilities were indirectly associated with the profitability. Some research have been bright out in (Jayarathne, 2014) has completed a research using the production firms in C.S.E to recognize the result of working capital management on profitability. The said researcher has carried out a indirect association among cash conversion cycle and return on total assets; and found a direct connection among profitability and inventory conversion cycle. Niresh (2012) has questionable results. Earlier researches relating the working capital management have carried out diverse relationships between the elements of working capital management and profitability timing of cash is the main alteration among short term and long term financing. The short-term financing reveals the working capital requires of the company and includes cash flows inside a less than a year of cycle. Gross working capital shows all current asset and the alteration among current assets and current liabilities signify the net working capital of a company. Working capital management is busy with organizing cash, observing account receivable and A.

Prevents and accurate retaining of inventory. Best working capital management affects liquidity and return on total assets, and improves the worth of the company (Bagchi & Khamrui, 2012). There are many meanings of working capital management are there. Naser (2013) said working capital management is the management of cash, collection, inventories and payment. Ganesan (2007) has clarified working capital management as short-term financing need of a company. Requirements of working capital depend on the kind of enterprises and sector. Though, the element working capital, usually, contains cash, borrowers, receivables, inventories, marketable securities

and redeemable futures (Appuhami, 2008). Handling account receivables significant for any company because it is positively related to the sales. Bieniasz and Gołaś (2011) examined that, in position of their incomes, the companies in the first set were highly vigorous to alter in income state and fever vigorous to sudden alterations (direct/indirect) in the WCA (working capital accruals); in the other set the earning level to change is highly sensitive and less sensitive to the sudden alteration (direct/indirect) in the WCA (working capital accruals) as well as size of the firm: and lastly, in the third group earning level is highly vigorous to alteration and less vigorous to company size. Ganesan (2007), establishes that the working capital management efficacy is indirectly related to the return on total assets and liquidity. By enhancing and decreasing days of the working capital efficiency there is some return on total assets of the company in Telecommunication Company in term of benefit edge. Patrick Mohamad and Saad (2010) perceived by put on paramount exercise of working capital management also indicate by putting worth concerned management of compromises among net working capital and FA (fixed assets),and among NWC and expenses.

The separate action of individual controls has its margins and, hence, all components of tied-up capital through the balance sheet (fixed assets, inventories, receivables, payables, and cash) have to be measured as a full. Alzoubi, Saleem, and Selamat (2012) determined that companies which have sufficient working capital in connection to their working size are achieved well than those companies which have fewer than the requisite working capital in connection to their working size. If companies real working capital is less than necessary working capital in relation to their operational size, companies are required to manufacture beneath their ideal scale and this generate difficulties to continue routine activities easily, so this lead companies to create small yield on their investment. Examines the significance working capital financial debtors on the companies' financial performance is highlighted in this research to carry consideration of enterprises leaders to the clear but mostly ignored. In the second phase the activities of top performing firms should be observed. What working capital management policies may be executed to reduce investment in current assets, same at that time increase use of financial debts at the company's suitable financial threat craving and decided that violent working capital management strategy revealed in small investments in current asset effects net revenue directly. Raheman et al. (2010) create no important connection among working capital management strategy and financial enhancement between the 208 public limited firms enlisted in the Pakistan Stock Exchange. They

calculated violent working capital investment strategy in shape of lower state of investment in current asset as fraction of total assets. On the next hand of the range are firms with great level of investments in current assets vis- à- vis total assets, which they categorized as supporting conventional working capital management strategy. Mujahith and Munas (2016) examine 37 enlisted firms in the OMX Stockholm Stock Exchange presented no important correlation among return on total asset and working capital management strategy when assembled as violent, protective or conventional based on cash conversion cycle.

The ratio of current asset to T.A of the connection in this research was the other potential substitution component for Working Capital Management, but the statistics mis carried the trials of normality. Due of this drawback, false variables were used in place of to indicate the result of working capital management strategy on return on total asset. Mujahith and Munas (2016) confirmed in his research the significance of working capital management to business benefit particularly between small and medium business by giving practical indication on the impact of working capital management on the benefit of 8,872 SMEs Spanish companies. They revealed in his research in what way management can increase benefits by lowering the cash conversion cycle by inventory decline and decrease in the outstanding sum of day's receivables. Padachi (2006) the various examination have recognized severe managerial exercises and are likely to expect to support management in recognizing regions where they may increase the financial enhancement of their activities.

The findings have delivered owner-management with information about the fundamental financial management activities adopted by their friends and their colleague's behavior against these activities. The working capital requires of an firm alteration through period as does its inner cash enhancement degree. As such, the small companies should confirm a decent organization of its assets and debts. Deloof (2003) have originated a robust important connection among the calculating of working capital management and company success. Their results propose that management can enhance productivity by decreasing the sum of day's account receivable and inventories. This is mainly significant for low rising companies that require enhancing the finance by increasing the number of debtors.Raheman et al. (2010) the cash conversion cycle and Net business Cycle propose easy and valuable track to look working capital management effectively. For worth generation of customers, companies should attempt to retain these sums of days to lowest state. a lot of research have been established on the investigation

of working capital management and profitability relationship. Deloof (2003) conducted a study on Belgian non-financial firms for analyzing the connection among working capital management (WCM) and benefits.

Through regression and correlation examination, he came to the conclusion that a negative association of gross operating profit with the sum of days of account receivables, inventories and accounts payables and concluded that profitability of non-financial firms of Belgium can be improved through decreasing the sum of days of account receivable and inventories. Padachi (2006) studied the trend of working capital and its effect on performance in Mauritian firms by analyzing 58 small manufacturing firms for 1998- 2003. He used (ROTA) as profitability measure and concluded the negative association of profitability with inventories days and accounts receivables.Raheman et al. (2010)analyzed 94 companies enlisted with Pakistan Stock Exchange (PSE) for 1999-2004. They used average account receivable, inventory turnover in days, account payable, cash conversion cycle and C.R as working capital management variables and net operating profitability as profitability variable and identified the existence of strong negative association among working capital management and return on total asset in Pakistani companies to explore working capital management and return on total asset relationship. Raheman et al. (2010) studied 50 non-financial companies of Nigeria for 1996-2005. They concluded important negative relationship between return on assets and average account receivables duration, inventory turnover in days, ave account payable and working capital management. They also included that Working Capital Management among larger and small companies has no significant variation. In another study, (Ali et al., 2010) explored this relationship by considering 148 firms for 1996-2006 and find out a significant indirect significant connection among cash conversion cycle and company benefit in Malaysia. Gill et al. (2010) considered 88 American companies enlisted with New York Stock Exchange (NSE) for the period of 2005-07. They used cash conversion cycle (CCC) as a substitute of working capital and gross operating profit as a measure of success and identified a strong direct connection among them. Therefore, they opined that it is possible to generate more profit by managing cash conversion cycle effectively. Ali and Hassan (2008) studied 37 Swedish companies listed with OMX Stockholm Stock Exchange for 2004-08. They used cash conversion cycle and gross profit as the measures of working capital policy and return on total asset respectively and found that there exists no association among working capital policy and return on total asset. Gul et al.(2012)

studied the dynamics of working capital management and performance for (SMEs) of Pakistan by incorporating 55 SMEs for 2006-12. They considered return on assets (ROA) as profitability indicator and number of days account receivable (ACP), cash conversion cycle (CCC), sum of day's inventory (INV) and sum of days account payable (APP)were used as working capital management indicator. Through regression analysis, they have found that APP has a direct association with profitability whereas average collection period, INV, and cash conversion cycle have negative relationships.Akinlo and Olufisayo (2011) in India by studying 82 firms listed with Bombay Stock Exchange for 2005-12 concluded an indirect connection among cash conversion cycle and profitability measures i.e. (return on total assets), (N.O.P), and (G.O.P).

In another work, (Hoang 2014) studied the relationship by incorporating 98 production companies enlisted with Ho Chi Minh City Stock Exchange for 2009-14. By using Pearson's correlation and fixed effects multiple regression investigation, he concluded strong indirect connection between cash conversion cycle , NTC, average account receivable duration , average inventory period, average account payable duration, and return on total assets in Vietnam. Gumbochuma et al. (2013) in South Africa explored the working capital management and return on total asset connection through incorporating 17 companies of the general retail sector listed with Johannesburg Stock exchange (JSE) for 2004-13. They have used cash conversion cycle as a representative of working capital and operating profit margin as a measure of return on total asset and identify an indirect connection between working capital and profitability.Gilbert et al. (2014) also studied this relationship for 110 manufacturing companies of Istanbul for 2005-14 and found a significant indirect connection of return on total asset measured by operating profit margin with cash conversion cycle, average collection period and days of inventory outstanding. But, a strong positive connection is found with average payment cycle. Previous research stated that working capital management might have a significant impact on the companies' return on total asset. Shin and Soenen (1998) and others, measured working capital with cash conversion cycle which comprises of stockholding period, borrowers' account receivable duration and creditors' account payable duration. These investigators propose that if the investment is increase in working capital (the lengthier the cash conversion cycle) leads to declining in the company's return on total asset. (Deloof, 2003) take an example of Belgian firms and find out that firm can enhance their return on total asset by decreasing the borrower's account receivable duration and the inventory conversion period. Summers and Wilson (2000) also specified that more

than 80% of the day-to-day business trade in the UK business industry is on borrowing basis.

As it can be observed from the aforesaid realistic indication, there are inadequate and unreliable findings with respect to the role of working capital management on firms' economic success. This is because the investigators may use the cash conversion cycle as it connects to the firm's return on total asset or they analyzed only portion of the element of the conversion cycle. (Lazaridis & Tryfonidis, 2005) stated that the firm' return on total asset and liquidity are impacted by working capital management in his examination. Pooled statistics are taken to find out the investigation for the era of 2006-2008 for evaluating the firm enlisted in stock market of Vietnam. He concentrated on the elements that comprise return on total asset, cash conversion cycle and its associated components and the association that it have among them. From his study it was originated that the connection between these elements are intensely inverse. This mean that decline in the return on total asset arise due to enhancement in Cash Conversion Cycle. It is also find out that if the sum of days of collection period and conversion of inventories are reduced then the profitability will enhance sum of days of accounts receivable and inventories. Hussain et al. (2017) did a lot of work on the creating relationship the performance of the firm and working capital management. The Malaysian enlisted companies have been selected for their analysis. They managed the perception of market evaluation and profitability.

They took all of 172 enlisted firms from the databases of Bloomberg. They haphazardly selected five year data (2003-2007). This study and just like of this type of studies cited before investigated the effect of the dimension of working capital elements for example cash conversion cycle, current ratio(CR),current asset to total asset ratio(C.A.T.A.R),current liabilities to total asset ratio (C.L.T.A.R) and debt to total asset ratio (D.T.A.R) in impact to the firm performance where by firms value dimensions has been taken as Tobin Q (TQ) and profitability for example return on asset and return on invested capital. Multiple regression and correlation has been taken as analyzing tool techniques for the data analyzing by them. They indicated that negative relationship has been found between working capital variables and the firm's performance. Saswata Chatterjee (2010) concentrated on the significance of the fixed and current assets in the smooth running of any business. It have positive effect on the profitability liquidity. There has been a situation seen in the organization that a lot of the firms increase the margin for the profits and losses because this act shrinks the size of working capital as

compare to sales. But if the firms want to enhance or improve its liquidity, then it has to enhance its working capital. In the reaction of this strategy the business has to less down its sales and hence the profitability will be affected due to this action. For this reason 30 United Kingdom based firms were selected which were enlisted in the London Stock exchange. The data has been taken of three years 2006-2008. They haphazardly selected five year data (2003-2007). This study likewise the investigates quoted before studied the effect of the dimensions of working capital element for example Cash Conversion Cycle, current ratio (C.R.), current asset to total asset ratio (C.A.T.A.R), current liabilities to total asset ratio (C.L.T.A.R.), and debt to asset ratio (D.T.A.R.) in impact to the organization's performance whereby organization's worth dimension was taken as Tobin Q (T.Q.) and Profitability i.e. return on asset (R.O.A.) and return on invested capital (R.O.I.C). They applied two dissimilar methods for investigating the data that are multiple regression and correlations. They indicated that indirect connection has been found between working capital components and the firm's performance. Saswata Chatterje (2010) concentrated on the reputation of the immovable and current assets in the smooth operation of any firm.

It has positive effects on the profitability and liquidity. Many times it is seen in the corporate phenomenon that many of the firms enhance the border for the profits and losses because this action decreases the size of working capital as compare to sales. l the working capital should be increased with the increase of firm liquidity. In the reaction of this plan the firm has to lower down its sales and thus the profitability will be enhanced due to this act. 30 firms have been taken from the London stock exchange and the data has been taken from 2006 to 2008 for this purpose. The five year data has been taken from 2003 to 2007 haphazardly. Like this research the previous researcher also explore the relationship between the dimension of working capital and its components for example cash conversion cycle , current ratio current asset to total asset ratio and debt to total asset ratio in impact to the firms however firm's worth aspect was selected as Tobin Q (T.Q.) and Profitability for example return on asset (R.O.A.) and return on invested capital (R.O.I.C). multiple regressing and correlating techniques has been applied to analyze the data. Inverse relation has been found between the variables of working capital and the firm's performance.Juan García-Teruel and Martinez-Solano (2007) explored the effect of working capital management on the performance. A sample of 30 listed firms has taken from the Nairobi stock exchange and the fifteen year data has been taken from 1993 to 3008. This research explores some results by applying the fixed effects

regression models. For the first time inverse relationship has been found between cash collection period for example collected from the customers and firms performance. This shows firms which is high profitable enjoying less time period to collect the cash from its customers relative to others which are less profitable. On other hand direct relation has been found between the inventories when they were brought in and the time period on which it are sold and the firm's profitability. The result shows that firms or the firm which have high time period to convert the inventories into sale means business is in loss due to the insufficiency of the goods. This phenomenon reduces the operational cost of the firm. The third statement of the study was the relationship among the average payment duration and profitability and the result was found positive ($p<0.01$).the profitability can be increased with the consumption more time taken by the borrowers. Eda and Mehmet (2009) checked out the relationship of working capital among the Istanbul stock exchange listed companies. They found negative relationship between the variables. His study shows the significance of the finance directors who act as moderators or catalysts to enhance the efficiency of the firm on the other perspective positive relationship is found the relationship among the variables. Juan García-Teruel and Martinez-Solano (2007) examined the pragmatic connection between both the variables. They selected the small and medium sized Spanish firm, 8872 firms has been taken as a sample from 1996 to 2002.

After the detail examination the positive relationship found among profitability of small and medium sized and the no. of days account receivable and days of inventories. But it shows the working capital and firm exact effect of number of days account payable impact and SME's return on Assets.Ganesan (2007) taken the equipment of telecommunication industry for the study to show the effectiveness of working capital management. 443 annual financial statements of 349 telecommunication equipment companies is taken as sample for this research study taken the time period from 2001 to 2007. The regression, correlation and variance of (ANOVA) is taken as statistical tools. The finding indicates that the working capital days inversely impact the profitability of these organizations but actually there is no effect of transportability of firm in the industry of telecommunication equipment. Takon and Atseye (2015) explained that the British American Tobacco management is extremely reasonable due to the positive cash inflows, the major components of working capital were designed by examining the data ranging from 1999-2000 to 2002-2003. Application of multi- dimensional modal of current assets mix may have positive influence on the continuous growth & development

of this international firm. in the structure of global word it also have connection on collaboration of the investors and business atmosphere. Filbeck and Krueger (2005) examined the data of 26 businesses which taking the data of 970 companies ranging from 1996 to 1999. The results of those organizations are able to decline financing expenses and/or augment the funds accessible for expansion by decrease the sum of funds linked to the existing assets.

They exposed that important change occur between businesses in working capital procedures across time. In this connection, we conclude that these procedures for working capital differ broadly with in sector with the passage of time. It is determined that inverse connection was also seen among profitability and liquidity of firms of United Kingdom. Irrespective of that a direct association was found among debt and firm's profitability. The researchers suggest that profitability can be enhanced by the management if the days of accounts receivable and inventories occurred are reduced. Therefore the firms whose profitability is less opt to take much lengthier time to pay their bills. The goal of this title is to debate on which researchers and scholars has done much work in diverse businesses and firm so as to expose the contents or the variables and in their magnitudes in detail.Charitou, Elfani, and Lois (2010) explained the impact of working capital management on company's profitability in an developing market financial performance in an developing market. We assume that working capital management leads to enhance profitability. The data was taken from Cyprus Stock Exchange ranging for the year 1998-2007. For this multivariate regression analysis was used and this hypothesis was supported. Particularly, results showed that the cash conversion cycle and all its main components; namely, days in inventory, days sales outstanding and creditors payment period – are connected with the company's profitability. Charitou et al. (2010) examined the outcomes of this research must be of great importance to management and key investors, such as investors, creditors, and financial experts, particularly after the current worldwide financial disaster and the present failures of massive firms worldwide. Padachi (2006) studied the trends in working capital management and its effect on companies' performance in Mauritian Small Manufacturing Firms.

The researcher said, the trend in working capital needs and the profitability of firm were inspected to find out the reasons for important variances among the industries. The sample size of 58 small manufacturing companies were taken for the investigation of the dependent variable, return on total asset as a proxy to measure profitability and the

connection between working capital management and corporate profitability taking panel data for the analysis and the period was taken from 1998-2003. The regression findings indicates that high investment in inventories and receivables was connected with low profitability. The main variables used in the study were inventories days, accounts receivables days, accounts payable days and cash conversion cycle.

It was observed that there is strong connection between working capital and management and profitability in past empirical study. There is significant changes shown in the liquidity, profitability, and operational efficiency when analyzed and these changes brought a high performance in the paper industries. The results also showed an growing trend in the short-term component of working capital financing. Raheman et al. (2010) examined the effect of working Capital Management on companies' performance for non-financial organizations listed in Pakistan Stock Exchange (KSE- 30) Index. A panel data analysis has been taken in this research for 21 PSX-30 Index listed companies and the period has been taken from 2001 to 2010. The outcomes were obtained by using Official Correlation Investigation for recognizing the association between working capital management and companies' performance. The results revealed that working capital management has important effect on companies' performance and it was determined that managers can rise worth of stockholder and return on asset by lowering their inventory size, cash conversion cycle and net trading cycle. The company's overall performance is linked with the increasing in liquidity and time period of Hussain et al. (2017) identifies the effect of working capital management (WCM) on the companies' performance by using the financial statement data of 253 non- financial firms listed in Karachi Stock Exchange (KSE). The Data was examined by Ordinary Least Square (OLS) logistic regression and Pearson's correlation. The outcome appears that current asset to total sales has inverse connection with profitability while, working capital management has a direct connection to the company's performance. Though, the logistic outcome provides the proposal that company profitability is extremely determined by the current ratio, assets to total asset & total sales ratio. Muhammad Hussain-Khaliq (2004) discovered the impact of working capital management on company's liquidity and profitability in the sense of 18 firms of additional food segment that are listed on PSX. 2006-2010 time periods had been taken for this study. pooled least regression And common effect model were used for the examination of this study. A direct connection is observed between working capital management on profitability and liquidity of companies. Furthermore, it has also been seen that the size of the company and cash

conversion cycle has a important direct impact though the financial asset to total asset ratio and the size of the company has a direct connection. Hussain et al. (2017) examined the effect of corporate social responsibility (CSR) on company's profitability, in the case of 10 companies of oil and gas sector that are enlisted on PSX. The research contained 8 years period ranging from 2006-2013.

Moreover, correlation and regression analysis were taken as testing tools to examine the data. His examination indicate that there is an irrelevant effect of CSR deeds confirms profitability and inverse correlation between total asset and CSR moreover, it was proposed that a direct correlation between Net profit and CSR. Charitou et al. (2010) analyzed the impact of financial leverage on company's performance 110 Philippine companies was taken randomly from the top hundreds Philippine companies in the worldwide business, the data was taken from 2009 to examine this study and the Pearson correlation was used, ANOVA test, and multiple regressions. It was indicated in the research that there is a positive connection among the policy of working capital management of company's financial leverage and size with profitability. Furthermore, the research of the data indicates that company's size and working capital management has a direct impact on company's net profit, however net profit has a indirect impact on financial leverage and ROE has an weak direct impact on financial leverage. Tufail and Khan (2013) examines the efficacy and effectiveness of working capital management by retaining liquidity on Profitability.

Due to this purpose cement industry registered in a Dhaka stock exchange was nominated that examine the data ranging from 2005-2009 through person correlation model. The research indicates important connection between working capital management and Profitability as well as Liquidity indices. Juan García-Teruel and Martinez-Solano (2007) investigated the impact of R&D expenses on company's profitability and value of stock in Iran' capital market. The sample covers 86 firms from the stock exchange of Tehran that contain the 5 years period ranging from 2005-2008. To develop the result regression model was taken and it has been seen that if firm needs to get an extra benefit in future so, they must invest on R&D department in recent years. So, it shows that there is a positive association between R&D costs and profitability. Charitou et al. (2010) showed the effect of working capital management on the company's performance. 21 (PSX-30) listed non- financial institutions were taken and the data was selected from the year 2001-2010. The findings that are attained by applying Official Correlation indicates a direct effect of working capital management on company's

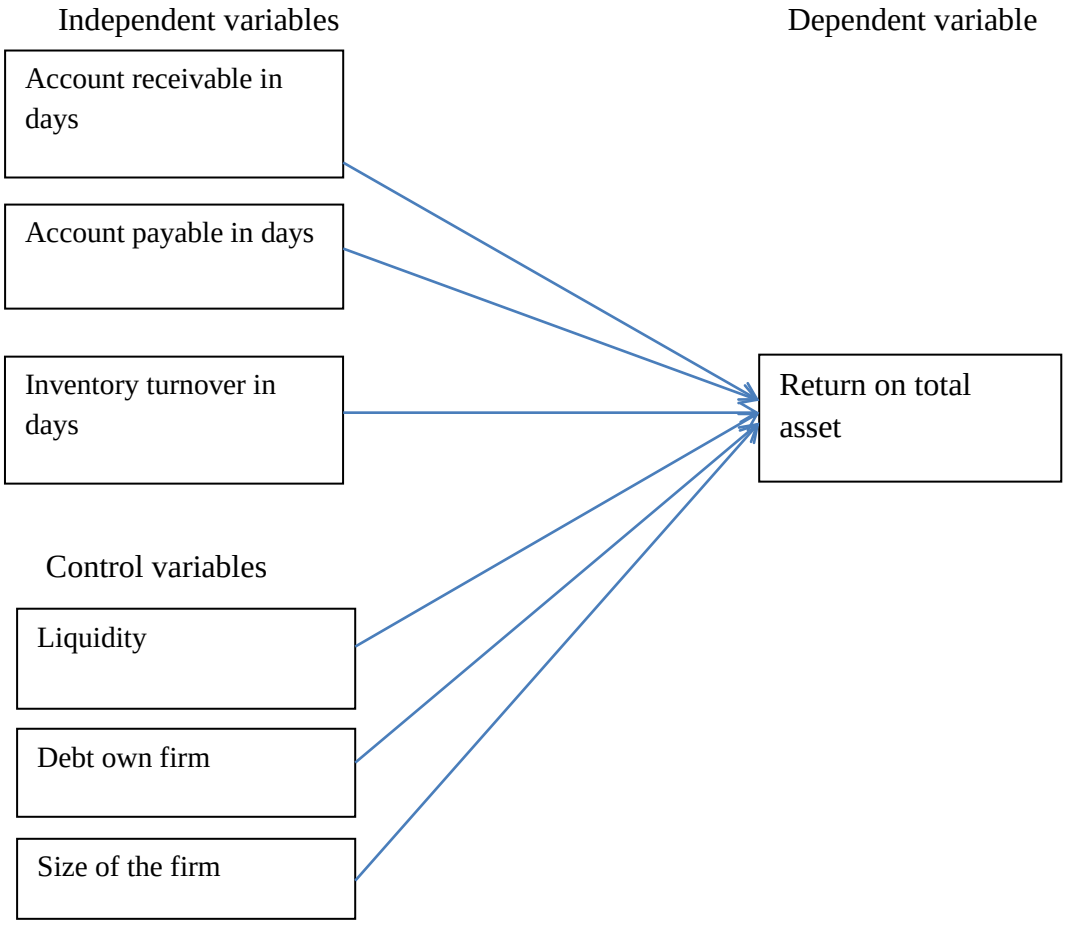
profitability and it was recommended that by decrease in inventory size, NTC, and cash conversion cycle management be capable to enhance the worth of stockholder. Tufail and Khan (2013) explored the effect of working capital Management policies on profitability. 117 textile companies were taken from PSX and the data was selected from the year 2005-2010. The finding that is originated by examining data through regression model indicates that strategy of working capital management are indirectly effecting on profitability.

Furthermore, the size and liquidity have a direct connection with company's profitability but a negative connected between debt to equity and profitability has been seen. Afeef (2011) showed an experimental research on the effect of assets management on company's profitability in a sense of Pakistani cement industries. The data was taken from financial reports from 2003-2008 of 10 sample firms. The results examine by correlation and regression techniques and it is seen that there is an reverse and direct relation between working capital management and company's performance. Haresh (2012) showed the connection between profitability and working capital management of manufacturing firms of Accra metropolis listed in Ghana Stock Exchange for the period of 2007-2011. It has been shown by the research that there is an important effect of cash conversion Cycle, inventory days and account payable on manufacturing firms profitability. The research proposed that a decent policy should be embraced by firms for managing constituents of working capital management. Haresh (2012) conducted an empirical research that shows the connection between the companies' profitability and the components of working capital. For this research, a sample of CNX pharmaceutical firms listed in National Stock Exchange of India was taken that contain the period of 5 years from 2005- 2010 data. This research indicates that inverse relationship found, between account receivable and corporate profitability and a direct relationship between account payable and profitability.

2.1 Theoretical Framework

Based on literature review, following is the theoretical framework of the study.

Figure 2.1: Theoretical Framework



2.2 Testable Hypothesis

The purpose of this study is to find out the affiliation of managing working capital effectively and its impact on the performance of the firm.

H_1: Account receivable in days is not related to the profitability of the firm.

H_2: Account payable in days is not related to the profitability of the firm.

H_3: inventory in days is not related to the profitability of the firm.

H_4: Liquidity is not related with the profitability of the firm.

H_5: Debt own by the firm and profitability are not interrelated.

H_6: Size of the firm and profitability are not interrelated.

CHAPTER 3

Methodology

3.1 Introduction

Working capital plays an imperative task in the financial performance of an organization. In financial decision making, especially in Pakistan management of working capital has not given equal importance as long term financing and activities. The affiliation between working capital management and the corporate performance will be investigated for the KSE-100 index companies listed on the Karachi stock market for the period of 2011 to 2017.

3.2 Data Set and Sample

As the study depends on the financial statements of the companies and data can be obtained from these statements. The data required for the study is acquired from the repository of KSE, the financial daily website as well as from the websites of the included firm in the sample. The sample duration is seven years ranging from 2011 to 2017. The main reason of this inclusion is the accessibility and availability of the required data. The sample size includes firms in KSE-100 index. The KSE-100 index on 30th June is taken as the reference date for the inclusion of firms in the study. The sample firms cover different sectors of the economy like Auto, Power, Construction, oil & Gas and Textile etc. The financial firms like Banks, Insurance companies, Leasing Corporation, and Rental services are excluded from the sample due to its different nature of operation. The exclusion of all the financial firms from the sample results the sample size includes 54 non-financial companies of the KSE-100 index on the reference date.

3.3 Variables

The variables included in this study are some of the ratios used to indicate that how is the firm performing and how better the firm manage its working capital.

The explanatory and controlling proxies employed in the study are explained below.

3.3.1 Explanatory variables

i. Accounts Receivables in Days ($ardays$) used as an explanatory variable and is used to represents the collection strategy of a firm and obtained by calculating the ratio of accounts receivables and sales and multiplying the result by 365 i.e. the number of days in a years.

ii. Inventory Turnover in Days ($ivndays$) used as an alternate for the policy of converting raw material into sales and is the ratio of stocks multiplied by 365 and divide by the cost of sales.

iii. Average Payable in Days ($apdays$) is the ratio of accounts payable multiply by 365 and divide the result by the cost of sale. The ratio represents the strategy of payment a firm can employed to its suppliers.

iv. Cash Conversion Cycle (ccc) computed as "$ardays + ivndays - apdays$" i.e. the addition of days sales outstanding with Inventory conversion time and deducing days payment outstanding and is used to represent management of short term capital comprehensively.

v. Returns on Total Assets ($rota$), is the proportion of Profit Before to Interest and Taxes (PBIT) and net sales. This variable is used as explained proxy and used to represent the firm's performance.

3.3.2 Control Variables

i. Assets Turnover ($turna$), obtained as a proportion of sales to the assets employed by the firm and is the indicator of how efficient the firm is in generating the sales in relation to employed assets of the firm.

ii. Gearing Ratio ($gear$) included in the study as a substitute for the firm's leverage and is obtained by dividing total debt by the total asset employed.

iii. Current ratio (cr) used to represents that how liquid the firm is and calculated by dividing the short term assets by the short term liabilities.

iv. Quick assets ratio (qar) used as a substitute for the liquidity of the company and is the proportion of short term assets minus stocks with the short term obligations. It is the ratio of more liquid assets to the current liabilities.

v. Current Assets to Total assets ($cata$) is the proportion of short term assets to total employed assets and used to show the trend of the firm about the short or long term planning.

vi. Current Liability to total Assets ($clta$) is the relation of short term obligations to total employed assets and shows the planning about the financing activity of the firm.

vii. Stocks to Current Assets ($skca$), is the ratio of stocks or inventory with the firm's short term assets. The ratio used to indicate the antagonism or conservativeness about the inventor management decision.

viii. Trade Debts to Current Assets ($tdca$), used to represent the policy of account receivables of the company and is the fraction of trade debts with the current assets.

ix. Size ($lnsales$), calculated as the log of the sales of the company used as a proxy for the firm's size

The variables above have the relationships that eventually influence the management of short term capital. As evident by the prior studies and the prior knowledge, an inverse relationship is expected between the proxies representing the performance and how the firm manages its working capital.

3.4 Theoretical Framework of the Model

As the data contain the combination of longitudinal as well as cross-sectional data, so panel data regression is used as a study model. As the number of cross sections is greater than the time series, so the problem of hetroskedasticity may arises. In order to encounter this problem the hetroskedasticity and autocorrelation, hetroskedasticity and autocorrelation corrected (HAC) pooled OLS model and weighted least square model are used for the study. The coefficients of variables are calculated with p value showing the level of significance. R squared is used to show that how the model used in the study better explained by the included variables. The common structure of the model is:

$$Y_{it} = \beta_0 + \sum_{it}^{n} \beta_{it} X_{it} + \varepsilon_t$$

Where Y_{it} $=rota$: Return on Total Assets for ith firm at t time period; i=1, 2, 3…54 firms and t=1, 2…7.

β_0 : Parameter known as intercept

β_i : Parameter known as slope of the variable

X_{it} : The specific explanatory variables used for WCM for ith firm at time t.

ε_t : The error term.

The study required the subsequent regression models.

y f (lnsales, gear, cr, clta, turna, ivndays) 3.2

$$yit = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 invdays_{it} + \varepsilon_t \quad 3.3$$

$$\text{yit} = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 ardays_{it} + \varepsilon_t \quad 3.4$$

$$yit = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 apdays_{it} + \varepsilon_t \quad 3.5$$

$$yit = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 ccc_{it} + \varepsilon_t \quad 3.6$$

CHAPTER 4

Analysis

This chapter reveals the finding of the statistical models applied in the study composed of 375 firm year observation of KSE 100 index for the period of 2011 to 2017.

4.1 Descriptive Analysis

The Table 4.1 represents the descriptive analysis of all the firms in KSE-100 index. The table contains the mean, standard deviation, median, kurtosis and skewness of 54 listed companies for the duration of seven years ranging from 2011 to 2017. The average value of ROTA is 12.59% with 13.89% as a value of standard deviation. As the median value of 9.68% is smaller than the average value, indicates that the data is not normal but positively skewed as evident by the skewness value of 1.4295. The value of kurtosis (4.773) shows that the distribution of ROTA is leptokurtic i.e. there is less variability in its distribution.

To investigate the effect of the firm size on the dependent variable $lnsales$ is used as a proxy to represent size of the firm. The outcome of this variable shows the mean for the sampled firms are 15.92 with a variation of 1.923. The skewness value of -3.1257 shows that the distribution of $lnsales$ is negative i.e. the majority of firms have small size. To find the variability in the distribution, the kurtosis value of 25.43 shows that the data has no greater variability for this variable. This means that most of the observations lie near the mean value.

Table 4.1: Descriptive statistics

Descriptive Parameters	Mean	Median	Standard Deviation	Kurtosis	Skewness
Rota	0.126	0.097	0.139	4.773	1.429
Turna	1.025	0.773	0.901	7.461	2.318
Gear	0.452	0.436	0.252	1.764	0.674
Cr	1.59	1.201	1.494	22.26	3.797
Gar	1.244	0.883	1.187	9.219	2.632
Cata	0.415	0.376	0.238	0.809	0.613
Clta	0.329	0.303	0.209	2.742	1.169
Skca	0.2226	0.1525	0.2093	-0.394	0.8401
Tdca	0.2131	0.1518	0.2527	45.046	4.66
Invdays	-60.422	-31.721	99.7797	34.9285	-5.0084
Ardays	54.488	31.431	72.513	14.107	3.1804
Apdays	-159.187	-71.7006	466.2633	48.0303	-6.6627
Ccc	153.032	57.4408	480.958	51.6105	6.7449
Lnsales	15.919	15.746	1.9236	25.425	-3.1257

To confirm the effectiveness in managing the working capital of the firm, cash gap (ccc) is used as a substitute. The results of ccc show average value of 153 days with a variation of 481 days, while the skewness and kurtosis has the value of 6.7449 and 51.61 respectively. The above results show that the distribution of ccc is positively skewed and most of the observations lie near the average value as clear from the kurtosis value. The results of $apdays$ show value of 159 days and 466 days for the mean and standard deviation respectively for the whole sample. Similarly the kurtosis and skewness value for this variable is 48.03 and -6.6627 respectively and show that the data is leptokurtic and negatively skewed. This shows that most of the observations have less value than the mean value. The results show that the firms delay their payment of bills for about 159 days on average to their suppliers for raw materials.

Similarly the average and standard deviation value of $invdays$ for all the sample firms are 60 and 100 days respectively, which means that these firms take 60 days on average to convert the raw material into sales. The kurtosis value of 34.9285 shows that most of the observation lies near the average value. Similarly the skewness value of -5.0084 illustrate that the data for this variable is negatively skewed.

Firms collect cash from their sale within an average of 54 days with the variation of 73 days. The results demonstrate that data for this variable has a positive skewness and leptokurtic trend as evident by values of 3.1804 and 14.10 for skewness and kurtosis respectively.

To inspect the affiliation between the debt and the firm's profitability, the proxy of $gear$ is used as an auxiliary variable to represent the debt position of the company. The descriptive result shows the average value of 45.22% with the standard variation of 25.22%. The other results about this ratio show that the distribution of data is platykurtic and positively skewed as confirmed by the value of 1.764 and 0.674 respectively. The results show that the data has greater variability and most of the observation lies to the right side of mean.

In order to test the effect of liquidity on the firm performance, the liquidity ratio like cr and qar are employed as an auxiliary variable in the study. The domino effect of the ratios illustrate that the sampled firms in the study have an average value of 1.60 amid 0.90 as a standard variation value for current ratio, while the mean and standard deviation value for qar are 1.2442 and 1.1866 respectively. The kurtosis values for current ratio and quick acid ratio 22.26 and 9.21. This show that for both these ratios the distribution is leptokurtic in nature and demonstrate that most of the values lie near the mean value. Similarly the skewness values of 3.7973 and 2.6322 for cr and qar show that the data is positively skewed. The result shows that as a whole the sample firms has greater liquidity ratio and have greater resources to fulfill its current obligation.

4.1.1 Descriptive statistics analysis

Table 4. 2: Descriptive statistics of different sectors

Variables	Oil and gas	Chemical	Cement	Power	Auto	Communication	Sugar	Textile	Others
	70	**56**	**70**	**42**	**28**	**16**	**14**	**35**	**44**
$rota$	0.1860	0.1568	0.0760	0.0685	0.1957	0.1393	0.1206	0.1388	0.1249
	(0.1801)	(0.0864)	(0.0996)	(0.0976)	(0.1923)	(0.2427)	(0.0429)	(0.1102)	(0.0968)
$turna$	1.6739	0.9216	0.4130	0.6991	1.8613	0.4823	1.1060	1.0936	1.0122
	(1.4891)	(0.4737)	(0.2460)	(0.2963)	(0.6497)	(0.3709)	(0.3630)	(0.6076)	(0.5530)
$gear$	0.4708	0.4421	0.4036	0.6641	0.4777	0.3761	0.5806	0.4593	0.3251
	(0.2611)	(0.1801)	(0.1474)	(0.2353)	(0.3923)	(0.2575)	(0.3331)	(0.1646)	(0.2397)
cr	1.9985	1.2318	1.0577	0.9979	2.2495	1.3800	1.4487	1.5226	2.3427
	(1.5505)	(0.5472)	(0.6699)	(0.5004)	(1.8738)	(0.4916)	(0.8046)	(0.9917)	(2.8369)
qar	1.8457	0.9173	0.9279	0.8709	1.4072	1.3067	0.9765	0.8531	1.6857
	(1.5716)	(0.5165)	(0.6535)	(0.6425)	(1.2770)	(0.4465)	(0.7850)	(0.4274)	(1.9281)
$cata$	0.5739	0.3694	0.1971	0.3221	0.6958	0.3654	0.5394	0.4555	0.4373
	(0.2023)	(0.1732)	(0.1089)	(0.1711)	(0.2841)	(0.2244)	(0.0928)	(0.1716)	(0.2113)
$clta$	0.4250	0.3318	0.2106	0.3574	0.4442	0.2487	0.4509	0.3437	0.2746
	(0.2610)	(0.1667)	(0.0923)	(0.1722)	(0.3371)	(0.0937)	(0.2134)	(0.1067)	(0.1663)
$skca$	0.1183	0.2812	0.1358	0.1869	0.3695	0.0460	0.3665	0.3860	0.2631
	(0.1755)	(0.2259)	(0.1408)	(0.1748)	(0.1901)	(0.0409)	(0.1947)	(0.1932)	(0.2188)
$tdca$	0.3831	0.1105	0.0543	0.5146	0.1183	0.2705	0.1061	0.1457	0.1686
	(0.1811)	(0.1010)	(0.0762)	(0.5000)	(0.0792)	(0.1077)	(0.0681)	(0.1074)	(0.1900)
$invdays$	-48.9482	-61.1255	-43.7144	-32.4493	-67.4941	-19.6805	-82.1186	-93.6401	-108.3617
	(129.7895)	(77.7784)	(95.1470)	(36.6785)	(36.6053)	(17.8374)	(51.9211)	(65.3919)	(158.7345)
$ardays$	84.5572	21.6746	14.1957	98.0505	39.6673	140.0820	22.2465	44.0435	67.9143
	(78.9779)	(14.5736)	(15.6406)	(76.4346)	(48.7697)	(124.2868)	(14.4180)	(53.8372)	(97.3368)
$apdays$	-454.0435	-116.3859	-130.3716	-81.3620	-62.3310	-218.3329	-63.2646	-38.0547	-45.6084
	(966.6983)	(94.5162)	(321.2563)	(71.8619)	(90.5342)	(123.0881)	(23.3162)	(29.6413)	(49.1451)
ccc	489.6525	76.9349	100.8529	146.9633	34.5042	338.7344	3.3925	-11.5418	5.1610
	(976.8852)	(53.3761)	(292.0703)	(150.4757)	(106.3434)	(221.0909)	(59.0466)	(35.5598)	(104.5341)
$lnsales$	17.6590	16.2246	15.0564	16.3728	15.4020	16.3510	14.7271	15.4749	15.3885
	(1.2488)	(1.3193)	(1.1244)	(1.2943)	(1.3492)	(1.6927)	(0.5730)	(0.7764)	(1.0916)

Descriptive analysis for different sector of the economy is shown in Table 4.2. Different sectors are compared with mean and standard deviation for different ratios to gauge the performance and management of working capital. The means and standard deviations of different sector show that $rota$ of auto sector has the average value of 19.57% with a variation of 19.23%. This shows that the earning margin is high in the auto sector as compared to the other sectors of the economy.

Similarly the $lnsales$ for different sectors show that oil & gas is the sector with high sale volume with average and standard variation of 17.66 and 1.25 respectively, while the lowest sale volume is of sugar sector having an average value of 14.72 with the variation of 0.573.

Examining the cash conversion cycle for different sectors show the highest value for Oil & Gas sector with the average and variation value of 490 and 977 days respectively, whereas the lowest value is for Textile sector with the value of -12 and 36 days respectively.

Sector wise result of $apdays$ show that the Textile is the sector with the minimum value of 38 days as a mean value and 30 days as a standard deviation, whereas Oil & Gas has the values for the average and variation of 454 and 967 respectively.

Similarly the results of these parameters for the variable of $invdays$ for different sectors show that the average value of 108 days with 159 days as standard deviation are the estimates for the other sector which comprises of steel, paper and pharmaceutical sectors. The sector on the other extreme is the communication sector with the mean value of 20 days with the standard deviation value of 18 days. This show that communication companies convert its inventories (Services) into sales in just 20 days.

In sector wise analysis of $ardays$ for different sectors, the said variable has the highest value for communication sector with a mean value of 140 days with a value of 124 days as a standard deviation and the lowest value is for cement industry with the mean and standard deviation value of 14 and 16 days respectively. This shows that firms in cement industry wait less to receive payment for their sales in contrast to the other sectors of the economy.

The $gear$ ratio is used to inspect the liaison between the debt and the performance of the company for different sectors. The results show that power is the sector with the highest mean value for this ratio, with the value for its mean and standard deviation of 66.41% and 23.53% respectively, whereas other sector has the lowest value for the

gearing ratio with the average amount of 32.51% with a value of 23.97% for standard deviation. This shows that power sector has maximum financing to fulfill its operation and almost cover 50% of its total assets.

Examining the liquidity of different sectors, the results show that power sector have the minimum value of 0.9979, while the sector others have the maximum value of 2.3427 for the current ratio. The result shows that others is the more liquid sector of the economy and have greater resources to fulfill its current obligation as compared to the power sector with minimum liquidity. Similarly the minimum and maximum value for quick acid ratio is 0.8531 and 1.8457 for textile and oil and gas sector respectively.

4.1.2 Sector wise analysis.

Table 4. 3: Sector wise analysis.

	cr		*qar*		*skca*		*tdca*		*cata*		*clta*	
Industry	2011	2017	2011	2017	2011	2017	2011	2017	2011	2017	2011	2017
Oil & Gas	2.455	1.575	2.240	1.469	0.096	0.108	0.255	0.555	0.494	0.596	0.254	0.523
Chemical	1.191	1.217	0.994	0.922	0.224	0.276	0.078	0.122	0.302	0.375	0.282	0.331
Cement	1.444	0.617	1.325	0.501	0.082	0.165	0.045	0.072	0.255	0.189	0.175	0.316
Power	1.163	0.812	0.897	0.685	0.233	0.156	0.204	0.604	0.268	0.443	0.233	0.537
Auto	1.907	2.382	1.204	1.494	0.395	0.379	0.130	0.096	0.782	0.693	0.508	0.523
Communication	1.125	1.558	1.082	1.489	0.038	0.046	0.355	0.139	1.125	0.365	0.302	0.233
Sugar	0.989	1.513	0.670	1.019	0.313	0.410	0.152	0.077	0.487	0.502	0.553	0.331
Textile	1.832	1.303	0.862	0.636	0.399	0.519	0.157	0.240	0.572	0.473	0.339	0.433
Others	2.125	1.854	1.678	1.197	0.298	0.382	0.088	0.356	0.459	0.451	0.302	0.297

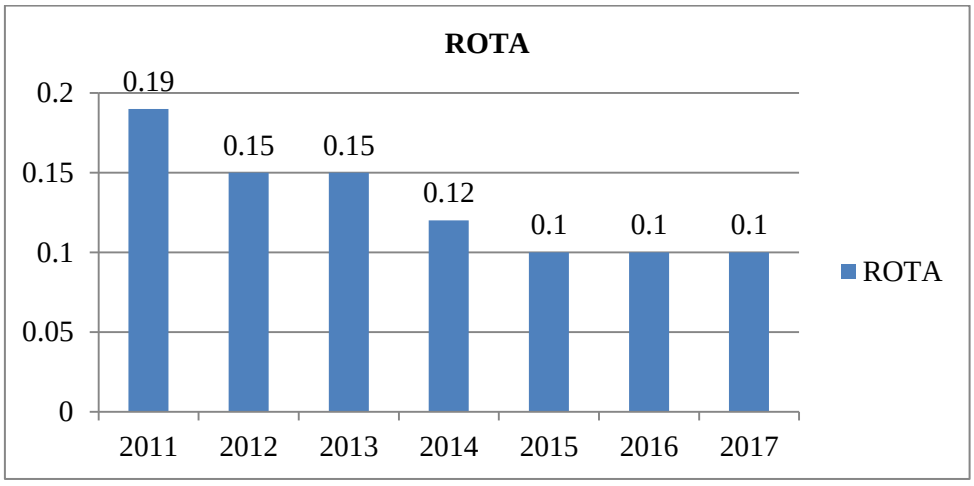
Assessment of different industries over the years is shown in Table 4.3. The result of different variables representing different indicators of liquidity, efficiency and performance shows different performance levels. Comparisons of stock/inventory composition among different industry over the years demonstrate only small development for the power industries, whereas the ratio of stock to current assets for the other industries increases, which show that inventory play an pivotal function in the efficiency

of firms. The portion of trade debtors in current assets show improvement in Auto, communication and sugar industries, which indicates that management of these sectors have monitored the accounts receivables in an efficient way to reduced its reliance on outside activities to fulfill its funds requirements and generates funds from the operating actions of the company.

Except for the Communication, Sugar and Others industries, the other sectors have a greater dependence on short-term funds. The results show that power sector of Pakistan financing 54% of its assets with current liabilities. The above three industries have improve its performance by improving the ratio, while the other industries further rely on external sources and this may be a threat for the survival of the industry. The current ratio an indicator of firm liquidity, Oil & Gas, Cement, Power, Textile and Others sectors have less liquid assets to fulfill its current obligation, which show the better utilization of current assets on the one side. On the other side if it turns out to be stable, it may influence the provisions of material and similarly the productive capacity of the firm. The fraction of most easy converting assets to cash with total employed assets for the Oil & Gas and Auto industry has the values almost above 60%, which show that these industries comprising less ventures in tangible assets in contrast to other sector included in the study.

4.2 Trends in Working capital Management

Figure 4. 1: ROTA Ratio



In order to discover the trend of managing working capital, the yearly averages of different variables is plotted and its trend with respect to duration of the study is observed. Lines Graphs are plotted for different variables show the tendency of these variables are shown in Figure 4.1 to figure 4.9.

The Figure 4.1 represents $rota$ graphically and indicates the trend in performance of the sample firm from year 2011 to 2017. In 2011 the average $rota$ of the sample firms was about 20% whereas in 2017 its decline to 10%. This values of the variable indicate that the performance of the firms in the last seven years decline and become one half.

Similarly the graph of $gear$ ratio indicates an increasing trend in the sample firms toward the financing for its operation. In 2011 Total debts to total assets ratio has a value of 43%, which increase to about 53% in 2017.

Figure 4. 2: Gearing Ratio

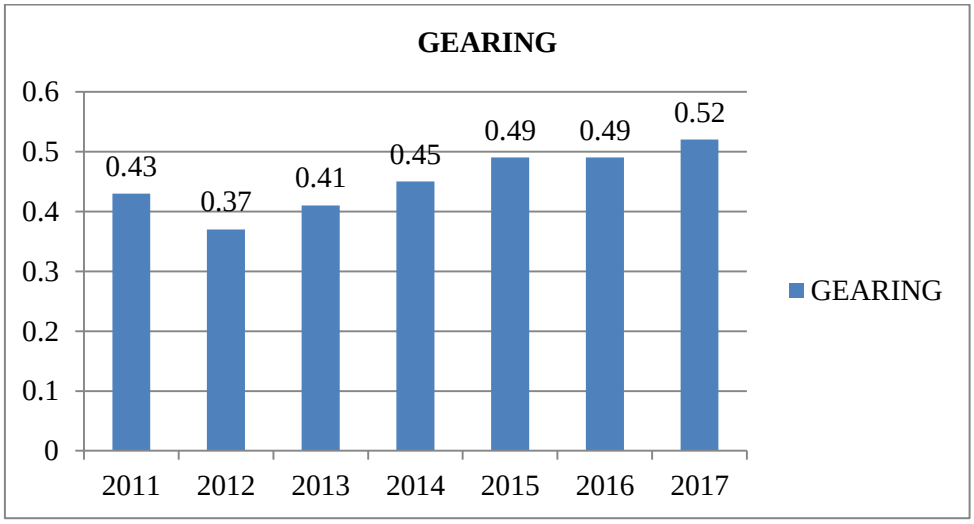
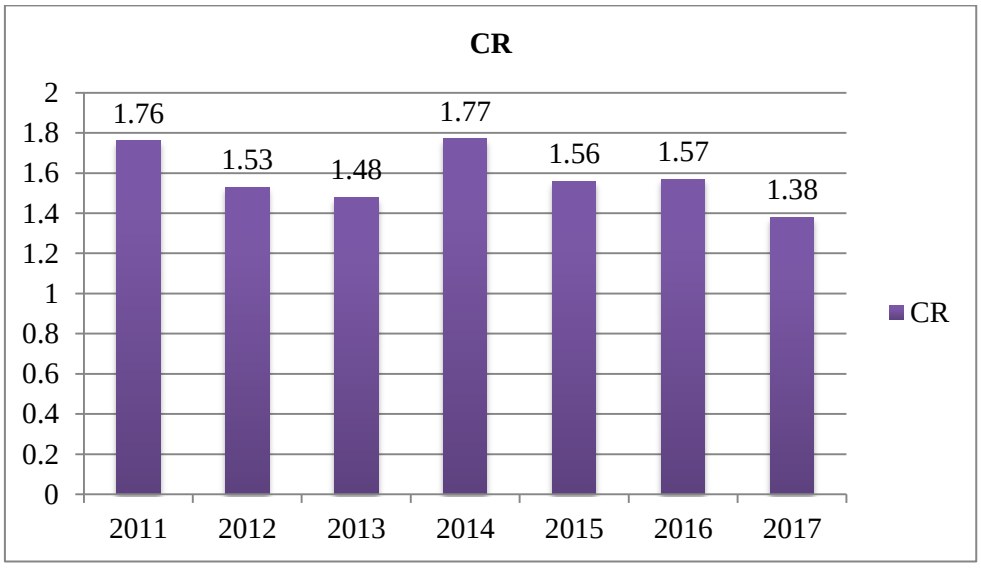


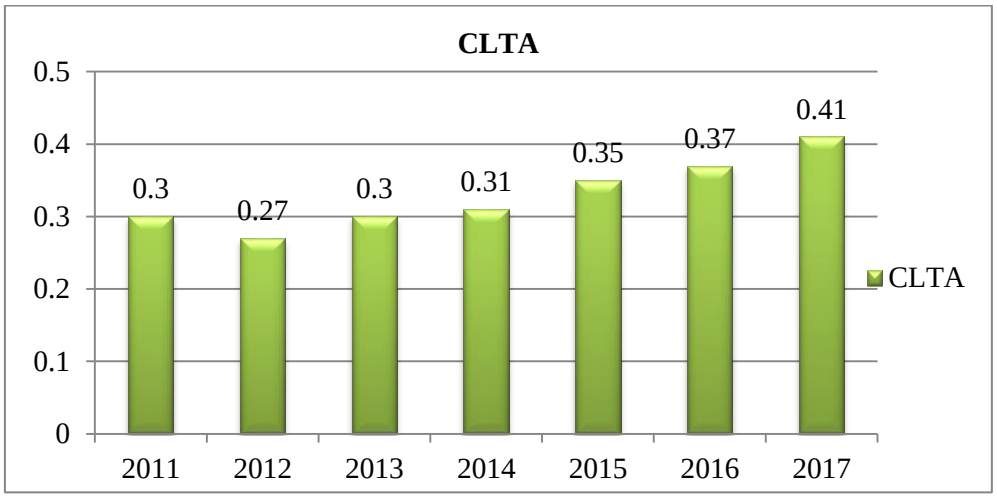
Figure 4.2 shows the trend of the management toward the debts financing of the sample firms in order to fulfill its obligations.

Figure 4. 3: Current Ratio



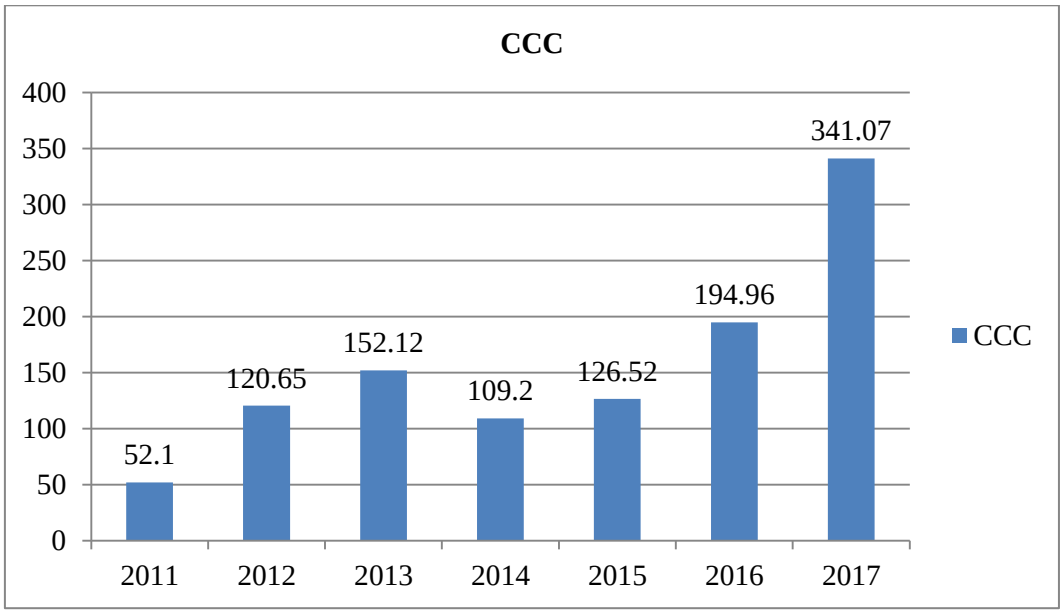
The current ratio as shown in Figure 4.3 illustrates a decreasing trend from 2011 to 2013 and its then increase in 2014 and decrease again till 2017. The figure shows that the ratio has the value of 1.75 in 2011, which indicate the better liquid position of the firms. On the other side this also indicates that the current assets are not utilized in a better way, which influences the performance of the firm. The value of the ratio in 2017 is about 1.42, which indicates that the management realized the importance of short term assets and so utilized it in a better approach to enhance the performance of the firm in such a way to not affect the liquidity of the firm.

Figure 4. 4: CLTA Ratio



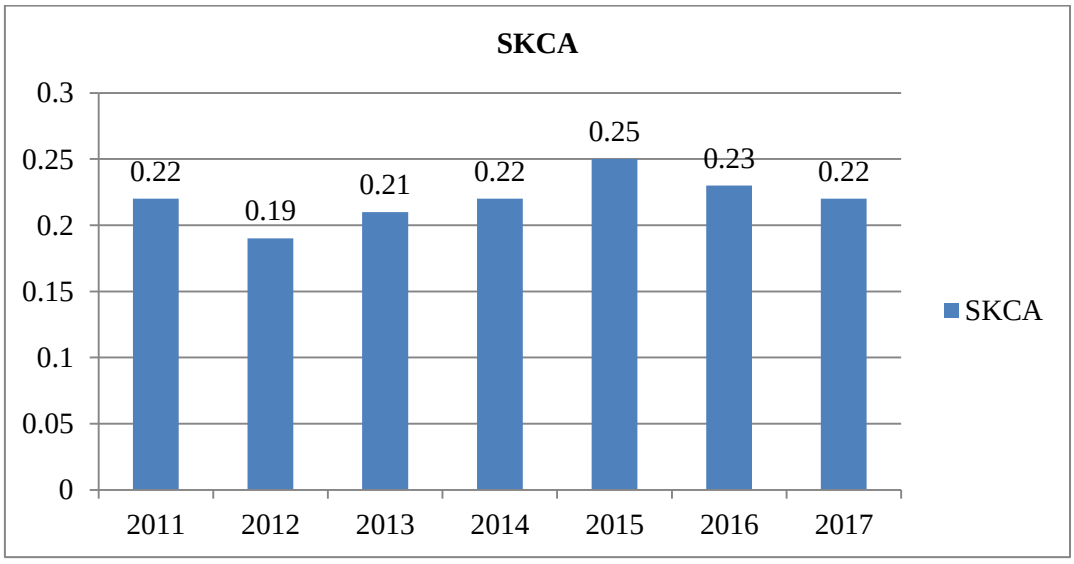
The Figure 4.4 indicates the increasing trend of short term liability to total assets in the company's policy to fulfill its current obligations from the short term financing. This shows that during this period short term financing is cheaper than the cost of equity and adopting this type of financing will increase the performance of the company. The graph indicates an increase from 30% in 2011 to 45 % in 2017 in the proportion of short term liability to total employed assets.

Figure 4.5: CCC Ratio



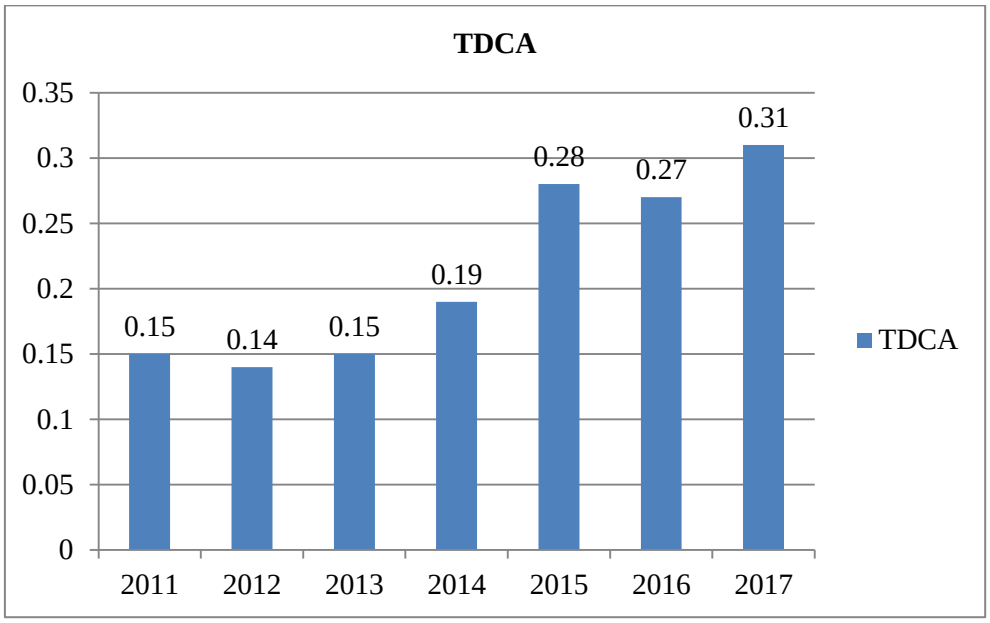
The cash gap (CCC) which is the proxy to indicate the management of working capital is plotted with bar graph and is shown in Figure 4.5. The graph shows the increasing trend in this variable. The value of this variable in 2011 is 52 days, whereas in 2017 *ccc* is about 280 days. This trend show a poor performance in managing working capital of the firms, because the lower value of CCC indicates the better performance of the firms. This pointed that during the said period, the management of the firm is not able to manage the working capital in the proficient style.

Figure 4. 6: SKCA Ratio



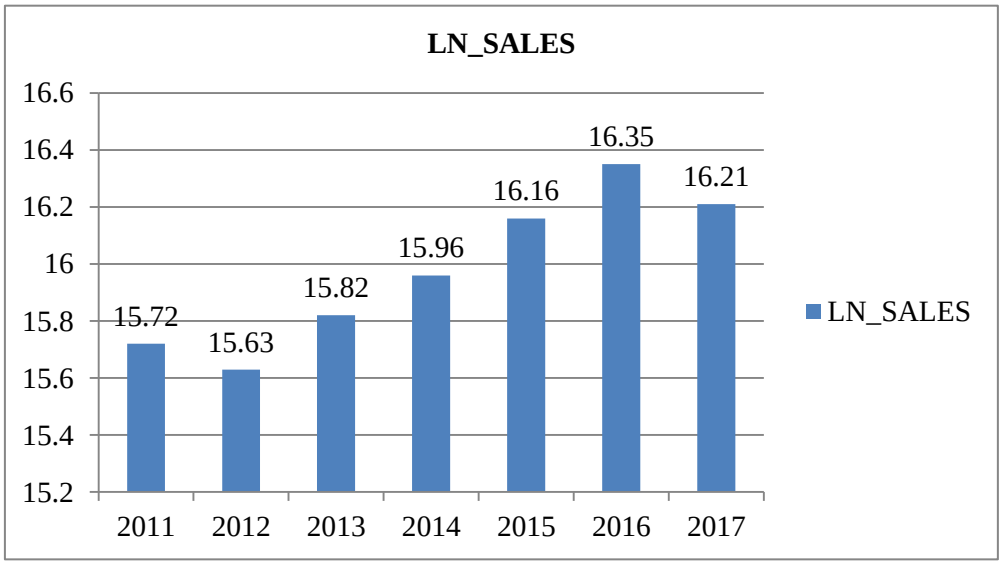
The trend of inventory to total assets is shown in Figure 4.6. It shows a decreasing trend from 2011 to 2012 and then increases till 2015 and again decreasing in year 2016 and 2017. The graph shows that the management holding large quantity of inventory for the smooth operation of the firm on one side, but will increase the carrying cost of the firm, which will ultimately decrease the profitability of the firm.

Figure 4. 7: TDCA Ratio



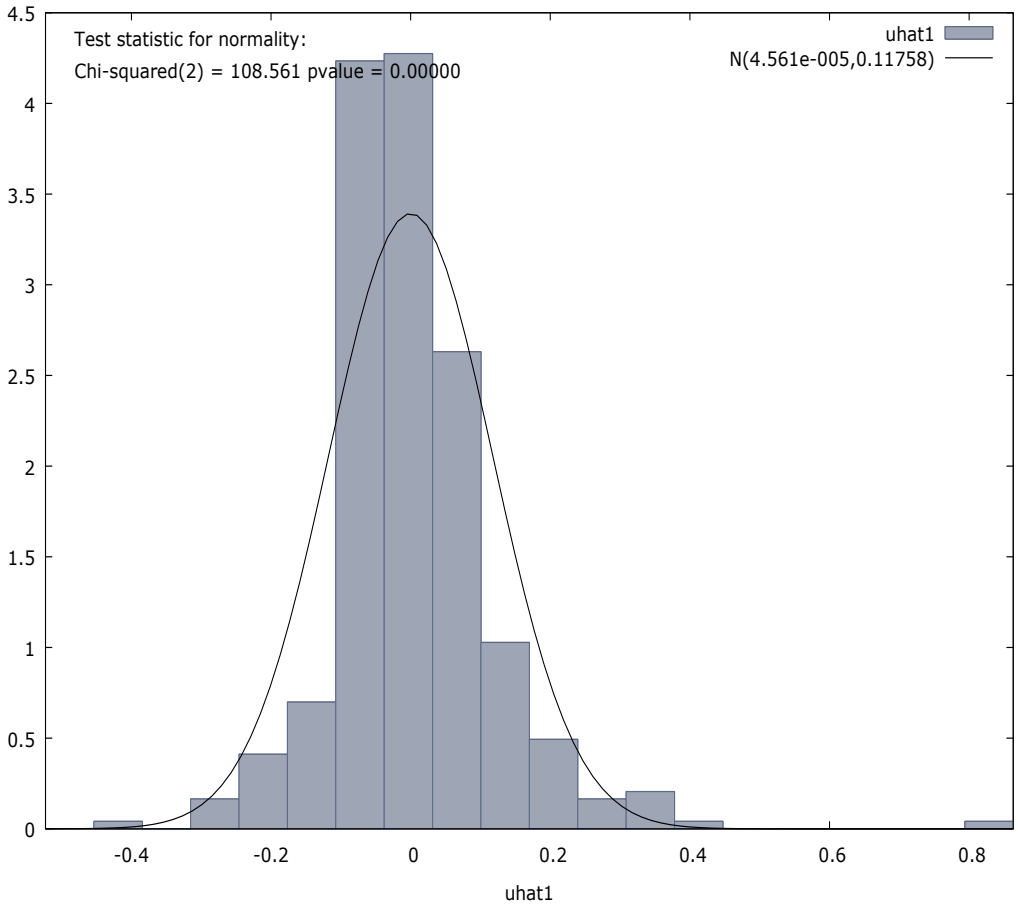
The Figure 4.7 illustrate trade debt to current assets and show an increasing tendency in this variable during the study period from 15% in 2011 to about 31% in 2017. This indicates the well versed policy of the management to collect the account receivables in an efficient manner to enhance its performance.

Figure 4.8: In-sales Rratio



Similarly size of the firm represented by *lnsales* is shown in Figure 4.8. The figure show an increasing trend from year 2011 to 2016 and then decreases in 2017. The graph show that the sales of firm increases from 2011 to 2016, which show the opportunity of expansion for the firm in the marketplace. The study also illustrates a direct significant relation between the size of the firm and its performance.

Figure 4.9: Jarque-Bera test



The intention of find the normality of data, Jarque-Bera test is used for this purpose. According to JB test the null hypothesis will be a combination that K=3 and S=0. The test statistic of zero for JB test states that the data is normal.

Table 4. 4: Jarque- Bera Test

Frequency distribution for uhat1, obs 1-375

number of bins = 19, mean = 4.56098e-005, sd = 0.117584

Interval		midpoint	frequency	rel.	cum.
Lower	Upper				
	< -0.38445	-0.41911	1	0.27%	0.27%
-0.38445	-0.31514	-0.34979	2	0.53%	0.80%
-0.31514	-0.24583	-0.28048	4	1.07%	1.87%
-0.24583	-0.17652	-0.21117	11	2.93%	4.80%
-0.17652	-0.1072	-0.14186	19	5.07%	9.87%
-0.1072	-0.037892	-0.072548	103	27.47%	37.33%
-0.037892	0.031419	-0.0032363	108	28.80%	66.13%
0.031419	0.10073	0.066075	65	17.33%	83.47%
0.10073	0.17004	0.13539	27	7.20%	90.67%
0.17004	0.23935	0.2047	12	3.20%	93.87%
0.23935	0.30867	0.27401	6	1.60%	95.47%
0.30867	0.37798	0.34332	5	1.33%	96.80%
0.37798	0.44729	0.41263	1	0.27%	97.07%
0.44729	0.5166	0.48195	2	0.53%	97.60%
0.5166	0.58591	0.55126	3	0.80%	98.40%
0.58591	0.65522	0.62057	2	0.53%	98.93%
0.65522	0.72454	0.68988	1	0.27%	99.20%
0.72454	0.79385	0.75919	2	0.53%	99.73%
	>= 0.79385	0.8285	1	0.27%	100.00%

Test for normality of residual -
Null hypothesis: error is normally distributed
Test statistic: Chi-square(2) = 108.561
with p-value = 2.66907e-024

The frequency distribution of the residuals of the model. In this test chi square statistic is used with 2 degree of freedom. The result shows the Chi-square (2) = 108.561 with p-value = 2.66907e-024. As the p value is very low, so we reject null hypothesis of normality. The distribution of error for JB test is also shown graphically in Figure 4.9.

4.3 Quantitative Study

To find the relationship between the firm profitability and WCM, Correlation analysis and the regression analysis has been employed. Pearson correlation matrix is applied to determine the affiliation between the variables under

consideration. The SPSS software is employed to find the degree of association among the different variables indicating the management of firm's working capital.

4.3.1 Pearson correlation matrix Investigation

Table 4. 5: Correlation Matrix

	rota	*turna*	*gear*	*cr*	*qar*	*cata*	*clta*	*skca*	*tdca*	*invdays*	*ardays*	*apdays*	*ccc*	*lnsales*
rota	1													
turna	0.29	1												
gear	-0.22	0.230	1											
cr	0.41	0.020	-0.39	1										
qar	0.44	-0.03	-0.41	0.92	1									
cata	0.47	0.659	0.25	0.32	0.28	1								
clta	-0.12	0.49	0.72	-0.32	-0.36	0.59	1							
skca	-0.01	0.22	0.25	0.01	-0.25	0.19	0.28	1						
tdca	0.01	0.12	0.25	0.03	0.05	0.18	0.23	-0.05	1					
invdays	0.03	0.12	-0.04	-0.27	-0.08	-0.15	-0.12	-0.45	0.05	1				
ardays	-0.03	-0.15	0.07	0.22	0.20	0.14	0.13	-0.15	0.47	-0.18	1			
apdays	0.06	0.12	-0.08	0.06	0.03	-0.05	-0.12	0.11	-0.14	0.28	-0.41	1		
ccc	-0.05	-0.12	0.08	-0.08	-0.02	0.04	0.11	-0.21	0.22	-0.10	0.51	-0.97	1	
lnsales	0.13	0.36	0.16	-0.01	0.05	0.29	0.28	-0.08	0.32	0.21	0.12	0.03	0.02	1

Pearson Correlation Matrix is employed to measure the degree of association among the variables indicating how efficient the firm manages their working capital and the performance of the firm. The extent of alliance among the variables representing the WCM and performance of the firm is shown in table 4.3. It is anticipated that there should be an indirect relationship between the variable representing the management of working capital and performance of the firm. Similarly the expected association between the days sale outstanding period and the conversion period like inventory turnover days should be negative and should be positive relationship for the account payable days. The association between ACP and performance of the firm as indicating by $rota$ is -0.0354, show that if the duration of inflow of the receivables increased this leads to lower the revenue of the firm. Similarly the association between the performance and inventory turnover in days of the firm comprises a value of 0.0343, indicating that if the inventory turnover in days is increased, it will leads to an increased earning of the firm, which is opposite to the expected result, because the lower the value of days to converts the inventory into sales, the higher will be the revenue of the firm. The association between the accounts payables

in days and profitability is 0.0628, which point out that if the firm delays their due payment to suppliers, the profitability of the firm increases. The CCC which represents the firm ability of managing working capital has also have a coefficient of -0.0586. It shows that the firm may enhance its performance in term of profitability by decreasing the value of this variable to the minimum possible.

It is concluded that the enterprise may enhance its profitability as well as the efficiency by efficiently managing these time periods.

The connection between the profitability and size of the firm, the Pearson's coefficient of correlation is 0.1363 between $ROTA$ and size of the firm ($lnsales$), which imply that the impact of firm size on the firm performance is positive and significant. If the size of firm increases the earning of the firm also increases.

The study results indicate a positive and significant relationship between the current ratio and the firm's performance and have a coefficient of 0.4168, so the Pakistani firms show positive association amid the firm's liquidity and its profitability.

This analysis shows a negative association of inventory conversion period ($invdays$) and cash gap. The correlation coefficient for this relationship is -0.1018, which illustrates that if the company required longer time to switch its raw material into sales, the same will escort to a broadening in the value of cash gap. Similarly the association of Days sales outstanding with cash gap is direct with a coefficient of 0.5157, imply that by lengthening the average collection period will result in the broadening the cash gap of the company.

The analysis of relationship between $apdays$ and ccc demonstrate an indirect affiliation having a value of -0.9726 as a coefficient. This amount shows that by increasing the time to pay its obligation with respect to selling its inventory and receiving the bills from customers, in this way the firm can reduced its cash gap and thus will increase its performance.

All the above analysis shows that in Pakistani context, management of working capital has a sturdy and significant effect on the performance and efficiency of the firm

4.3.2 Regression Investigation

To discover the effect of managing working capital in a best possible manner on the firm performance, regression analysis is employed. As the data has a combination of cross-section and longitudinal data, so we used panel data regression models for the estimation. Pooled OLS regression and the weighted least square model technique are

employed to discover the effect of WCM on the firm's profitability. The results of both methods are shown in Table 4.4

4.3.2.1 Pooled Least Square Estimation

Table 4. 6: Pooled Least Square Estimation

	Regression Model							
	Pooled OLS (HAC)				Weighted Least Square			
Explanatory variables	1	2	3	4	1	2	3	4
$lnsales$	0.00451	0.00698	0.0049	0.00488	0.0099	0.0112	0.0109	0.0107
	(0.0217)	(0.0019)	(0.0165)	(0.0164)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
$gear$	-0.0843	-0.0589	-0.0411	-0.04088	-0.0982	-0.1073	-0.1019	-0.0994
	(0.306)	(0.1455)	(0.4774)	(0.4802)	(0.0565)	(0.0384)	(0.0504)	(0.056)
cr	0.0341	0.0356	0.0292	0.0294	0.0143	0.0091	0.0052	0.0058
	(0.0161)	(0.0180)	(0.053)	(0.0509)	(0.0013)	(0.0183)	0.0931	(0.0633)
$clta$	-0.0879	-0.121	-0.1198	-0.1193	-0.1642	-0.1997	-0.2543	-0.2556
	(0.1162)	(0.1023)	(0.1562)	(0.1620)	(0.0271)	(0.0069)	0.0005	(0.0004)
$turna$	0.0432	0.0044	0.0558	0.0558	0.0727	0.0756	0.0864	0.0870
	(0.0007)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	0.0000	(0.0000)
$invdays$	0.00011				0.0002			
	(0.0271)				(0.0043)			
$ardays$		-0.00026				-0.0002		
		(0.0593)				(0.0892)		
$apdays$			-9.95E-06				-2.11E-05	
			(0.1154)				0.2907	
ccc				-1.05E-05				-2.7E-05
				(0.140)				(0.146)
R^2	0.5978	0.5625	0.6000	0.60018	0.282311	0.271435	0.26774	0.269822

To discovered the casual elements of $rota$ are examined for all the observations by Pooled least square method. As the data is panel so hetroskedasticity and autocorrelation corrected model is used. The models to be used to estimate the dependence of independent variables on the dependent variable are shown in methodology section. In model 1

$$Y_{it} = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 invdays_{it} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \quad 3.3$$

The dependent variable is regressed on explanatory variable of Inventory turnover in days and log of sales, gearing, cr, short term liability to total employed assets and assets turnover are used as controlling proxies. The table 4.4 explains the end result of the model 1 in which the value of $ivndays$ is positive showing direct relation and significant at 5% level of significance. The manager can make the firm

more valuable for their shareholders by lowering the sales outstanding period and inventory turnover in days (Deloof, 2003). This shows an unexpected result, that by increasing the inventory conversion process by one unit leads an increase of 0.0001133 units in the performance of the firm. Similarly the effect of $lnsales$ on the firm's profitability is significant and direct as evident from the slope value of 0.0045 for the said variable and p value of 0.0217 respectively. The other variable like cr and $turna$ has a considerable positive impact. Similarly $clta$ and $gear$ has a negative coefficient but the relationship of these variables with ROTA is insignificant. The value of R^2 = 0.5978 illustrate goodness of fit and shows that the explanatory variables of the model is responsible for 59.78 percent of the variation in dependent variable.

Equation of our second model is.

$$Y_{it} = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 ardays_{it} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \quad 3.$$

In this regression the dependent variable is regressed on the same controlling variables but with explanatory proxy $ardays$. The outcomes shown in the table illustrates that the coefficient of $ardays$ is -0.00026 with p is 0.0593. This shows that the relationship of average collection period with the profitability is negative and significant at 10% level of significance. It demonstrates that if the firm relaxed its collection policy and increased the variable by one unit will leads to decrease the firm's earning by 0.00027 units. Other variables like $lnsales, cr, turna$ have a direct and significant impact on the revenue of the firm. Similarly the sign of the coefficients values and the corresponding value of p=0.1023 and 0.1455 for $clta$ and $gear$ ratio show an inverse effect on the firm performance but this impact is insignificant as explained by the p values. The value of R^2=0.5625 imply that these explanatory variables of the model are responsible for 56.25 % changes in dependent variable.

Model 3 represent the association of $rota$ with the account payables in days.

$$Y_{it} = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 apdays_{it} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \quad 3.5$$

The result of the regression of $rota$ as a dependent variable and takes accounts payables in days as explanatory variable, while the controlling variables

remain the same. The high p value of 0.1154 shows insignificant direct affiliation between $apdays$ and the earning of the firm. The controlling variables shows the same results as indicated in the other two models. The value of R^2 = 0.6000 show goodness of fit and illustrates that about 60 percent of the changes in $rata$ is bring by these explanatory variables.

In last model ccc is used as an explanatory variable to represent cash lag with other as controlling variables. The model for this regression is shown as under.

$$Y_{it} = \beta_0 + \beta_1 lnsales_{it} + \beta_2 gear_{it} + \beta_3 cr_{it} + \beta_4 clta_{it} + \beta_5 turna_{it} + \beta_6 ccc_{it} + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \quad 3.6$$

Taking ccc as an explanatory variable, the corresponding parameter and p values of -1.05e^{-05} and 0.140 illustrate an inverse but insignificant association amid ccc and the firm's profitability. Other controlling variables behave the same as in previous three models. The R^2 value of 0.6001 represents that about 60% variations in $rota$ are bringing by these included explanatory variables.

In pooled least square method the effect of individual independent variables are examined in the four equations. $invdays$ and accounts receivables collection period has significant effect on dependent variable i.e. earning ability of the firm, whereas the account payables in days and cash conversion cycle did not show the significant connection with $rota$ i.e. the dependent variable. The association of debt ratio with the firm performance shows an inverse association but the association is insignificant. Similarly the size has a significant direct association with the firm's earning ability.

4.3.2.2 Weighted least Square Model

As we know that the numbers of cross-sections are more than the time series in the data, the problem of heteroskedasticity arises i.e. a changing deviation after a short time period. To overcome this problem the Weighted Least Square model is employed. In this method the squared residual is used as a weight and weighted proxies are achieved by the ratio of that proxy with the square residual. The scaling of this technique is a normal way that did not affect the validity of the parameters results. The results of weighted residuals make it more comparable in contrast with the ordinary pooled models the effects of weighted least square method are shown in the second portion of table 4.6. The analyses of each model using weighted least square method are one by one explain below. In first equation of weighted least square method $ROTA$ the dependent variable is regressed on explanatory variable of $invdays$ and the same auxiliary proxies as used in

the pooled least square method. The results of the model 1 under weighted least square, the coefficient of $invdays$ is (+ve) and has 1% level of significance are shown in Table 4.6. It shows that if the inventory turnover is increased by one unit will lead to an increase of 0.0002 units increase in the performance of the firm. There is direct and significant association amid $lnsales$ and the earning ability of the firm. Similarly cr and $turna$ has a significant positive effect on the firm's performance, while $clta$ and $gear$ ratio have 0.027 and 0.056 as their p respectively and show a 5 and 10 percent significant inverse association with the firm profitability. The value of R^2 =0.2823 shows that 28.23% change in the dependent variable are explained by these variables.

In second model the dependent variable is regressed on the same controlling variables but with explanatory variable $ardays$. The end results shown in the table illustrates that the $ardays$ value is -0.0002. This demonstrates that the relationship of $ardays$ with the profitability is negative but significant at 10% significance level as evident by p value of 0.089. It shows that if the firm loses its tight collection policy and $ardays$ is increased by one unit, the earning of the firm affects drastically and decreased by 0.0002 units. Other variables like size of the firm, Current Ratio, assets turnover have a direct significant effect on the earning ability of the firm. Similarly $clta$ has a 1% significant and inverse association. Debt ratio and firm performance is inversely related with 5% level of significance. The R^2=0.2714 value demonstrates that in this model the explanatory variables explained about 27% variations in dependent variable.

Similarly in third equation $rota$ is taken as a dependent variable and regressed on accounts payables in days as explanatory variable, while the controlling variables remain the same. The high p=0.2907 value shows insignificant association between $ardays$ and $rota$ of the firm. The result indicates an inverse relation as evident by the negative sign of the parameter. The controlling variables behave the same as previous results and have the relationship with the firm's performance. The value of R^2 is 0.2677 shows that these independent variables explained 26.77% of the changes in dependent variable.

In the last model ccc is employed as a main explanatory variable with other as controlling variables. Taking ccc as main explaining variable, the result confirm that the association among $rota$ and ccc is inverse and is insignificant as indicated by the high p=0.146 value of ccc. The same previous behavior is noted for other variables. The R^2 value of 0.2698 represents goodness of fit and illustrates that 27% changes in explained variable

$rota$ is due to these dependent variables. The results of the weighted least square method represent generally the same elucidation that the performance of the firm is affected by the tendency of the firm in managing its working capital. The result shows that liquidity and earning of the firm moves in the same direction. Similarly if the firm relies heavily on debt financing, the firm loses its tempo and thus its performance decreases. The results show that firm size and firm's profitability move in the same direction, which demonstrates that with increasing the size of the firm, the profitability of the firm also increases.

4.4 Discussion

The association between average collection period and performance of the firm as indicating by $rota$ is -0.0354, show that if the duration of inflow of the receivables increased this leads to lower the revenue of the firm. Similarly the association between the performance and inventory turnover in days of the firm comprises a value of 0.0343, indicating that if the inventory turnover in days is increased, it will leads to an increased earning of the firm, which is opposite to the expected result, because the lower the value of days to converts the inventory into sales, the higher will be the revenue of the firm. The association between the accounts payables in days and profitability is 0.0628, which point out that if the firm delays their due payment to suppliers, the profitability of the firm increases. The cash conversion cycle which represents the firm ability of managing working capital has also have a coefficient of -0.0586. It shows that the firm may enhance its performance in term of profitability by decreasing the value of this variable to the minimum possible. It is concluded that the enterprise may enhance its profitability as well as the efficiency by efficiently managing these time periods.

The connection between the profitability and size of the firm, the coefficient value is 0.1363 between $ROTA$ and size of the firm ($lnsales$), which imply that the impact of firm size on the firm performance is positive and significant. If the size of firm increases the earning of the firm also increases.

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sales, the same will escort to a broadening in the value of cash gap. Similarly the association of Days sales outstanding with cash gap is direct with a coefficient of 0.5157, imply that by lengthening the average collection period will result in the broadening the cash gap of the company.

The analysis of relationship between $apdays$ and ccc demonstrate an indirect affiliation having a value of -0.9726 as a coefficient. This amount shows that by increasing the time to pay its obligation with respect to selling its inventory and receiving the bills from customers, in this way the firm can reduced its cash gap and thus will increase its performance.

All the above analysis shows that in Pakistani context, management of working capital has a sturdy and significant effect on the performance and efficiency of the firm

CHAPTER 5

Conclusion and Recommendations

5.1 Conclusion

As evident from the trend of different ratios relating to the efficiency of the firm in managing its working capital, in the study period the firms invested heavily in working capital. It is expected that if the investment is managed in an efficient way, the performance of the firm will enhance. The study found individually that variable representing the time required to convert the stock into sales i.e. $invdays$ has a positive, while the Accounts Receivables in days $ardays$ has an inverse connection with $rota$. Both these association is significant. The individual relationship of $apdays$ with $rota$ is positive but insignificant. Similarly ccc and $rota$ have the inverse $rota$ but insignificant association. These study results illustrate that in order to increase/create value for their shareholders; the firm may employ such policies to reduce $invdays$, $ardays$ or to lengthen its period of payment i.e. $apdays$ to the optimum level. In this way they may be able to decrease ccc to the possible minimum level to enhance its value. The result regarding the rapport between liquidity and firm performance show a significant direct association. This shows that by increasing its liquidity, the firm may be able to enhance its performance. With more liquid assets the firm will be able to fulfill its short term obligation on due time and thus the credibility of the firm increases. The results about the size hypothesis state that if the firm grows more and more in size, the firm's performance also enhanced and thus earning capacity of the firm also increases. The result demonstrates a significant direct bond amid the firm's size and its performance.

Similarly the debt own by the firm and the firm's performance has an inverse but insignificant association. This shows that the debt financing does not affect the earning of the company.

5.2 Recommendations:

As 30th June 2016 is taken as the reference date, so sample size contains the firms on the said date. The study suggest that research may be further conducted on analyzing the KSE-100 and include all those firms which represent Karachi Stock market during the entire period of the study. The sample size of the study will increase as a result of this action and represent the KSE-100 index in its original sense. Similarly the study may also be widened to cover other constituents of working capital management like cash and marketable securities.

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