The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan

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ABSTRACT

The purpose of this study was to empirically explore the impact of working capital management (WCM) on firms performance of chosen manufacturing firms listed in Karachi stock exchange (KSE). The quantitative research methods, correlation matrix and multiple regressions, secondary data and purposive sampling have been worked out. A random sample of 50 listed non-financial companies on Pakistani Stock Market was selected for the period ranging from year 2005 to 2014. The WCM has been used as an independent variable, i.e., inventory turnover (ITO), cash conversion cycle (CCC), average collection period (ACP), and average payment period (APP). The firm performance (FP) has been used as dependent variable, i.e., return on asset (ROA), return on equity (ROE) and earning per share (EPS). The results of multiple regression articulated that the APP, ITO and CCC have negative and significant impact on ROA but ACP has positive and significant impact on ROA. While APP has negative significant impact on ROE. The ITO has negative significant impact on EPS while ACP has positive and statistically significant impact on. The study results advocated that the FP of selected firms is influenced by WCM. By validating the findings with previous researchers, this endeavor will contribute to the literature. It will be beneficial to the academic, social and practical deportment. The study findings endowed with deeper insights into WCM practices and present recommendations that in turn bring improvements in the FP of the targeted firms.

Keywords: Working Capital, Working Capital Management, Financial Performance, Pakistan
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1. INTRODUCTION

The working capital management (WCM) is one of the contentious issues in short term financial management and it is key as well as tricky financial decision for any company because it has an influence on return and liquidity of a firm. The firms are demanding to have most advantageous level of WC so as to maximize their worth. The core purpose of all firms is to be lucrative and having enough money to pay its short terms obligations and best possible WC decision will enhance the company's performance (Horne and Wachowicz, 2004). The efficiency of WCM is essential, principally for manufacturing firms, because the major part of the manufacturing firms consists of firm's current assets (CA) (Horne and Wachowicz, 2000).

The manufacturing sector contributes about 13.2% to gross domestic product of Pakistan. It is considered as the second largest sector of the economy of Pakistan. It is at large scale plays a pivotal role and contributes about 13.8% of overall employed or working labor force of Pakistan. In addition, it plays a significant role to the overall economic growth of Pakistan and community as well. This sector is dominated by cement, sugar, textile, Pharma and Bio Tech, oil and gas, automobiles and Parts, Beverages, Industrial metals and mining, Technology Hardware Equipment and other sector in terms of credit provision and assets size, it is reported by government of Pakistan ministry of finance (Pakistan Economic Survey, 2012-13).

The running assets management is a decisive decision performed by the financial managers. It has direct influence on the firm's

monetary performance. It is regarded very important area of financial manager's decisions making (Haq et al., 2011). High amount of WC is not good for business, this will cause financial problems and on the other hand too little WC is also not appropriate for the business because it will lead a firm toward credit or liquidity crunch. In both cases it may hit the survival of the companies, consequently a firm may go into collapse or liquidation, and therefore, companies should maintain appropriate level of WC (Gitman, 1994).

The chief goal of any firm is to get maximum profit, because financial managers want to maximize firm's profit. But, another important objective is to maintain the liquidity of a firm.

They also added that, the cost of liquidity can take a firm to severe problem. So, firms' strategy must be of such type that it could maintain balance between these two objectives. The reason behind that is, both the objectives are same, thus one objective cannot be placed at cost of another. If the firm overlook profit it cannot maintain survival for a longer time period, alternatively if the firm fails to keep balance and does not worry about liquidity, may have to confront the problem of bankruptcy as well as insolvency (Rahman and Nasr, 2007).

The WC means the monetary arrangement which represents operating liquidity at hand to an entity, is known as WC. WC means the company's CA minus current liabilities (CL). It has been known by financial managers as an important thought. There are several reasons behind this; one of them is that companies do not have adequate CA more likely confront the problem of short term source of finance and finds it problematic for their operation (Afza and Nazir, 2009).

There are three kinds of decisions that relates to the company's financing. First decision is about company's overall capital structure, second decision regarding capital budgeting and third decision concerning WCM. It is very essential decision because it affects the firm liquidity and profitability. WCM is the best possible combination of WC elements such as CA and CL in such a way, which in turn boost the value of shareholders (Sarniloglu and Demirgunes, 2008).

The WCM is treated as a critical playing field in financial management that includes taking decisions regarding CA amount, its structure and how to fund these CA. Maintaining best possible balance among the components of WC is chief objective of WCM. Company's achievements of profit-making chiefly rely on the aptitude of financial managers in maintaining inventories proficiently account payable and account receivable (Raheman and Nasr, 2007). The well-organized WCM deals with CA, planning and controlling of CA and CL in such manner that removes the peril in order to meet short term obligations on one side and on the other front to avoid widespread investment on these assets (Lazaridis and Tryfondis, 2006).

The WCM is one of the essential issues in short term financial resource management. 50% decisions of financial managers are associated with WCM. Most of the financial managers are finding it not easy to manage WC elements. Moreover, WCM stance

is concerned that large amount of WC CA reduces the risk of liquidity. Opportunity cost connected to cash, that can be used up in high levels of CA, may reduce risk of liquidity which is linked to opportunity cost. Company's having large amount of CA may negatively influence the monetary performance of a firm (Raheman and Nasr, 2007).

On the other extreme, small amount of these assets may create problems in companies' daily affairs and consequently reduces liquidity. Best possible management of WC elements increases the financial performance (FP) of the firm; therefore, the importance of WCM cannot be overlooked (Afza and Nazir, 2009). WC is regarded as life giving force for almost all types of firms. WC decision is an imperative for business managers. It is the most critical aspect in order to stay alive as well as to maintain liquidity and profitability of an economic unit. Almost every kind of business, either profit generating or not, needs certain amount of WC regardless of its temperament, nature and magnitude (Mukhopadhyay, 2004).

According to ISA-1, financial or monetary performance means measuring the outcome of a company's overall polices and operations in terms of money. For measuring FP, different proxies can be used e.g. return on equity (ROE), return on assets (ROA), earning per share (EPS), etc., In addition, the main purpose of preparing financial statements is to determine profit and loss FP as well as financial position of an entity (survival and solvency), demonstrating how poor or rich the firm is at a specified point in time. According to ISA-7, the aim of statement of cash flow is to forecasting an organization's cash flow prospective. Consequently, to determine the FP, financial analysts employ different techniques such as ratio analysis.

The core objective of this paper which was investigated in this research whether WCM impacts on the firm's FP or not**.** The WC is an akin in the present day business world. It is treated similar as heart in the skeleton of human beings. As heart in the human body is performing the function of blood circulation to diverse organs, in the similar way WC governs the different kinds of economic activities with the help of appropriate WCM. Any stumbling block in the smooth operation of WCM may trigger the day to day operation of business toward severe problem (Gill et al., 2010). The WCM is a worldwide problem for almost all kinds of businesses due to globalization and competition. The Pakistani manufacturing firms are also confronting this problem. According to economic survey of Pakistan (2012-13), most of manufacturing firms listed in KSE of Pakistan have decreasing returns and poor FP of stock from last 3 years. The weak WCM may be one of the important reasons behind this.

However, the degree to which WCM affects monetary performance of these firms is not well identified. This study typically focuses on analyzing manufacturing sectors of Pakistan. This was the main reason for conducting this study. Moreover, this was not well explored and it was therefore important to study. Therefore; due to the aforementioned vital position of WCM in the success of business, in particular, this sector needs meticulous and detail investigation at firm as well industry level. More specifically, the researchers were intended to investigate the impact of WCM

on FP of selected manufacturing firms listed in Karachi stock exchange (KSE) of Pakistan. A Sample of 50 firms from different manufacturing sectors, i.e., Parma and Bio Tech, oil and gas, automobile and parts, industrial metals and mining, beverages, tobacco, technology and hardware and equipment. The rationale for choosing manufacturing sector for this particular research project was that the mainstream of the assets of such sort of firms consists of CA which are known as WC. The main objective to this study is to investigate the relationship of WCM with firm's FP selected manufacturing firms listed in KSE of Pakistan.

In manufacturing sector of Pakistan, the WCM has struggled and is still struggling. Most of the firms have failed to manage WC properly. According to the economic survey of Pakistan (2013) the FP of manufacturing firms are decreasing day by day. It has reached at cross-road where one cannot overlook this issue. Manufacturing sectors is playing and has capability to play vital role in the development of Pakistan.

By considering aforementioned facts, a study on impact of WCM on FP of manufacturing firms listed in KSC was quite important. In addition to this, our study will be of great value to the future students. After studying our recommendations financial managers will be aware of the impact of WCM on firm's performance. One can make better use of this knowledge and properly manage WC and increase firm's performance. This is the first study in Pakistan that empirically examines the impact of WCM on the performance of the firm. This study inquire about to fill up these crevice. All of these conclusion are beneficial to practitioners when they portrayal the strategic of the company.

2. LITERATURE REVIEW

This section enlightens on studying the literature review on impact of WCM on firms' monetary performance. It is categorized as; WC-an overview, WCM, relevant and exiting literature, summary of literature review, summary of major studies results found in literature review, knowledge gap and hypothesis of research project are presented.

The WC is the divergence between CA and CL. It can be written as (Preve and Allende, 2010).

"WC = CA-CL."

The WCM is best possible mixture of WC elements such as CA and CL in such a way, which in turn heightens the value of shareholder (Sarniloglu and Demirgunes, 2008). The purpose of WCM is to attain at most optimal balance between WCM mechanisms (Gill et al., 2010). The professional and proficient WCM are considered necessary because it affects the FP and liquidity of the firms (Taleb et al., 2010). In addition to this, (Nazir, Afza, 2008) advocated that the efficient management of WC is the essential point of concern in general, corporate tactic to create "value" for shareholders.

WCM has turned into one of the essential problems for majority of the companies in the present epoch of business world where the managers are striving to recognize the WCM problems and seeking

for the best possible policies to negotiate with those problems arising due to mismanagement of the WC (Gitman, 1994; Binti et al., 2010; Alipour, 2011; Ademola, 2014).

The successful and smooth operation of a firm WCM is considered as important as well as most valuable factor. That's why from many disciplines in different environments many researchers have conducted study on it by performing various analyses. Specifically, this section focuses on studying the relation of WCM with firms' performance; related available literature to this study split into theoretical and empirical review of literature would be presented in the discussion to come. Nobanee et al. (2011) performed analysis on 2123 Japanese non-financial companies the key findings of their study advocated that managers can boost the FP of firms by decreasing cash conversion cycle (CCC). According to Brealey et al. (2002), Fathi and Tavakkoli (2009) WCM is known as the management of CA of the firm. It handles the different CA and CL as well as involves in decisions regarding finance of the CA through debt and equity. Conclusively, WCM covers the major portion of capital in small and large organizations and is also important in managing the elements of supply chain.

Singh and Asress (2011) have also reported that well organized WCM, has a considerable participation on performance and short term solvency of firms. Nwankwo and Osho (2010) added that WCM involves the adequate mixture of CA and CL for keeping the business run efficiently particularly in terms of energy, goodwill and time. No doubt, the efficient WCM will help in generating the shareholders wealth which is main objective of survival of business. Bellouma (2010), Dong et al. (2010), Mansuri et al. (2012), and Makori et al. (2013) suggested that maintaining the proper WMC is the best way to achieve the value. He added that the WCM is essential for firms' liquidity and its existence. According to Odi and Solomon (2010) WCM deals with decisions associated with short term financing and WC. It maintains the relationship between firm's CA and CL. The purpose of WCM is that the firms have enough cash flow to run its operations in order to meet the short term obligations and to maintain the level of investment in CA (Olsson et al., 2007; Napompech, 2012; Pouraghajan et al., 2012; Naveed et al., 2014).

Rehman and Nasr (2007) have probed that WCM has a negative correlation with firms' profitability and liquidity. Shaw (2006) Stated WCM is pretty much necessary for the success of any organization. He added that if a firm appropriately manages its WC and keeps a positive balance to meet short term needs, and to take advantages of short terms opportunities, can increase its profitability. For example, discounts from suppliers. It is further argued that Positive balance also enables firm to purchase inputs which are necessary to run business smoothly and to increase firms' performance.

According to Deloof (2003) the chief purpose of each financial manager is to increase the sales volume and firms' profitability. In order to get this goal, efficient WCM is indispensible because WCM have an impact on the profitability and liquidity of firms. Gitman (1994) defined WCM as the management of short term assets and short term liabilities of firms to balance the risks and

profitability that have positive contribution in the value of firms. The latest study conducted by Chashmsayadan, AghajanNashtaei, (2014) in order to explore the impact of WCM on the firms performance listed in Tehran stock exchange in perspective of Iran, on an emerging small firms from 2007 to 2011, the researchers also performed conceptual and empirical analysis in this regard, CCC and its elements acted as a key measure of WCM abilities of firms, two performance measures were taken into consideration in this study, i.e., market as well as accounting measures, this study advocated that there is positive significant association of WCM with firms profitability, additionally, they also suggested that the more lucrative companies are that not as much forced toward their WCM. Another study performed by Gulia (2014) to find out the impact of WCM on the profitability of the pharmaceutical sector by choosing sample of 60 firms from this sector, the analysis were made by using correlation and multiple regression analysis the findings clearly revealed that the WCM have positive significant impact on firms performance on the leading pharmaceuticals firms.

Forghani et al. (2013) did a research study to scrutinize the connection between WCM and FP of the companies. For this purpose they targeted 56 companies of Iran which are listed in Tehran stock exchange. The analysis was made during 2003-2007. Key performance measures such as ROA, ROE, and ratio of market value to book value of the company (P/B) were taken as variables with the view to measure the relationship whether there is a positive relationship or negative. They concluded there is a positive and considerable relationship between performance and WCM. Moreover, this study indicates that managers can use better strategies for WCM to improve the profitability of the firms such as reasonable ways to control the account receivables and debt collection, minimizing the debt collection period, and increase cash to improve WC of the company.

Mobeen et al. (2011) used 65 listed companies of KSE for the period covering 2005-2009 and revealed that there exists a strong correlation between the WC components with the firms' profitability. Taani (2011) observed positive relationship between financial performance measures, i.e.. EPS with WCM elements. Sharma and Kumar (2011) reported that CCC and average collection period (ACP) have positive correlation with FP of firms under consideration. Akinlo (2011) demonstrated that ACP and CCC have positive affiliation with the performance of the firm.

Furthermore, Lazaridis and Tryfonidis (2006) attempted a study in order to investigate the relationship of WCM with the profitability of firms. They took a sample of 131 registered firms from 2001-2004, to do so they used regression analysis. The result of this study confirmed there is a statistical significance between these two variables. Eljelly (2004) studied the impact of WCM on firm's performance in case of Saudi Arabia by applying regression and correlation analysis. He found significant relationship between firm's performance and WCM. Another most important study is performed by Ghosh and Maji (2003), Rajesh et al. (2011) by taking into account the Indian cement companies and advocated that there is positive affiliation between WCM indicators, i.e. ACP and FP proxy, i.e., Earnings before interest and taxes (EBIT).

Qureshi (2014) studied the association of one element of WCM on firms return in case of companies listed in Karachi stock of Pakistan to conduct research on manufacturing firms listed in KSE. The study results confirmed that there is a strong negative correlation of WCM elements with firms' FP it was also concluded that as CCC swells, consequently, the profitability of the corporation decreases. According to the Alavinasab (2013) probed the relation of WCM with profitability in case of Tehran stock exchange by taking the sample of 147 listed companies from 2005-2009. The results of this study reported there is a negative significant association of WCM proxy, i.e., CCC with profitability measures, i.e. ROA and ROE. In order to test the relationship Pearson correlation and multivariate regression were applied.

Uremadu et al. (2012) have empirically proved positive connection between ACP and profitability of companies. Bagchi and Khamrui (2012) empirically test the correlation between WCM and profitability of a firm. They confirmed that there is a strong negative relationship between variables of the WCM and FP of the firms and debt used by the firm and its FP. Amarjit and Biger (2010) indicated that there is a negative link of ACP with profitability on the other side, CCC have positive relationship with profitability. Padachi (2006) in his study analyzed the impact WCM on firms performance, the results indicated that inventory days and CCC have positive association with profitability but Account payable days and account receivable days have negative relationship with firms performance.

Deloof (2003) advocated firms attempt to maintain a most favorable level of WC that in turn enhances the wealth of shareholders. The results of this study found that WCM has a negative relation between firms performance. The major part of literature review mentioned above typically focuses on the association of the WCM with firms' FP. Most of the researchers have applied correlation and multiple regression analysis to empirically test the impact of WCM elements on firms' performance. In several studies they have applied CCC, RCP, inventory turnover (ITO), average payment period (APP), as key measures of WCM whereas for measuring FP ROA, ROE, and EBIT, GOP. In literature review we found that there are contradictory results (Shaw, 2006; Sen et al., 2009; Uyar, 2009; Vural et al., 2012)..

These all of the researchers reported that firms having an efficient WCM strategy earn greater profit. To increase profitability they argued that firms should have low stocks and receivables while highest sum of payables. By keeping adequate WC managers can generate value for shareholders. It is also advocated that efficient WCM is indispensible in order to increase the firms' profitability respectively.

The theoretical and empirical literature review aforementioned gives clear association of WCM with the FP. Moreover, literature review also provides evidence that WCM also affects the performance of firm. It is worth mentioning that the research studies discussed in the above literature review of this project have been done by taking different sample size, different time periods, in different platforms and in different industries. The previous researchers also carried research in manufacturing, financial firms, telecommunication and fast moving consumer goods. This also

indicates evidently that WCM is important in corporate world; the WCM is paying higher consideration.

In spite of these facts that the researchers studied the impact of WCM on FP manufacturing firms in case of Pakistan. Nevertheless, these studies are not sufficient. Literature review revealed that lack of empirical evidence on the WCM and its impact on the FP in case of manufacturing sector of Pakistan. In addition, as we found in literature that there are only few research studies, i.e. (Abor and Joshua, 2004; Raheman and Nasr, 2007; Majeed et al**.** 2013; Malik and Mahumad, 2014; Ahmad et al. 2014; Qureshi, 2014; Mobeen et al. 2011; Azam and Haider, 2011) are performed on these selected manufacturing firms listed in case of Pakistan. It was main motivating force to conduct a study on this topic. In Pakistan's context there is still need of demonstrating the relationship between these two variables. This argument has forced researchers to do a research on some of the subsectors of manufacturing companies, i.e. pharma and bio tech, oil and gas, automobile and parts, industrial metals and mining and technology hardware and equipment.

Apart from this reason, another ground that has forced researchers to do research that the literature review also indicate contradictory results of the existing research in this particular area. There are some supporters of positive association and some advocate negative relationship between the WCM and firms FP hence, there is no analogy as far as relationship between WCM and firms' FP is concerned. By considering this purpose, from 2005-2014 the sample of 50 firms scheduled on KSE has been taken under this study. Therefore, this study is intended to investigate the impact of WCM with firms' FP.

3. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The corresponding to literature review as presented above we have categorically found that there is conflicting results on the impact of WCM on FP. Comparatively, greater part of studies have advocated that WCM (CCC, APP and ITO) has negative impact on FP (ROA, ROE and EPS). By basing this reason we hypothesized negative association between WCM, i.e., CCC, APP and ITO and FP, i.e., EPS, ROE and ROA in the same way. While relatively mainstream of previous studies found positive association between ACP and firms FP proxies.

On this premise, researchers' hypothesized positive association between ACP and FP. Due to these arguments, the researchers have developed the following hypothesis to test out the impact of WCM on FP of the firms.

H_{1a}: There is a significant positive impact of inventory turnover (ITO) on ROA.
H_{1b}: There is a significant impact of ITO on ROE.
H_{1c}: There is significant impact of ITO on EPS.
H_{2a}: There is a significant positive impact of ACP on ROA.
H_{2b}: There is significant positive impact of ACP on ROE.
H_{2c}: There is significant positive impact of ACP on EPS.
H_{3a}: There is a significant impact of APP on ROA.
H_{3b}: There is a significant impact of APP on ROE.
H_{3c}: There is significant impact of APP on EPS.
H_{4a}: There is a significant impact of CCC on ROA.
H_{4b}: There is significant impact of CCC on ROE.
H_{4c}: There is significant impact of CCC on EPS.

This model explains that the ACP, APP, ITO and CCC are independent variables and FP is dependent variable (Figure 1).

4. METHODOLOGY

The study was indented to empirically figure out the impact of WCM on FP of chosen manufacturing firms in KSE of Pakistan. The population of this research project was 50 manufacturing firms scheduled in KSE of Pakistan. The data has been taken for 10 years 2005 to 2014. The companies whose data (financial reports) were not there as well as were not reachable skipped from our research project. The size of sample was different manufacturing industries, i.e., pharma and bio tech, oil and gas, automobiles and parts, beverages, industrial metals and mining. The numbers of companies selected for this particular project from manufacturing sector listed in KSE Pakistan has been portrayed. Because of the nature of the study as well as the target population, researchers were paying attention in collecting relevant information and in order to draw inferences.

For this study, the required data were collected from secondary source, official websites of the companies and from Website of KSE of Pakistan. Additionally, the data were also collected for this particular research from the annual reports of the companies under study, balance sheet analysis from the website of the state bank of Pakistan and economic survey of Pakistan as well. In order to collect the data, the list of the manufacturing firms was downloaded from the website KSE our focused were to collect the reports of the selected companies by using companies' websites. To probe impact and the overall significance of study modals the researchers have been employed the multiple regression analysis. According to Kothari (2004), regression analysis is an important technique and typically attempted to study of how one or more variables have an effect or influences on another variable (Table 1).

Figure 1: Theoretical framework of the study
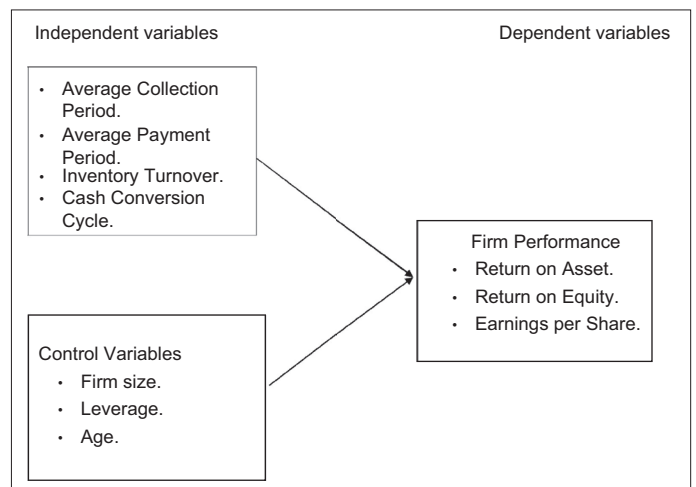
Model-I: $ROA = \beta_0 + \beta_1\, ITO + \beta_2\, ACP + \beta_3\, APP + \beta_4\, CCC + \beta_5\, LEV + \beta_6\, SIZE + \beta_7\, AGE + \varepsilon$

Model-II: $ROE = \beta_0 + \beta_1\, ITO + \beta_2\, ACP + \beta_3\, APP + \beta_4\, CCC + \beta_5\, LEV + \beta_6\, SIZE + \beta_7\, AGE + \varepsilon$

Model-III: $EPS = \beta_0 + \beta_1\, ITO + \beta_2\, ACP + \beta_3\, APP + \beta_4\, CCC + \beta_5\, LEV + \beta_6\, SIZE + B_7\, AGE + \varepsilon$

5. RESULTS AND DISCUSSIONS

This study was mainly attempted to empirically scrutinize the impact of WCM on the FP of manufacturing firms under consideration. This part of project is designed to highlights the subsequent sections, i.e. correlation results and interpretation, regression models results and interpretation the three Regression models, discussions, hypothesis testing summary and future research question.

Table 1: Variable description

Variables	Description	Measurement
ROA	Return on assets	(Net income (profit after tax)/ total assets)
ROE	Return on equity	(Net income (profit after tax)/ equity)
EPS	Earnings per share	(Earnings Available for common stock holders/numbers of common stock outstanding)
ACP	Average collection period	(Sale/average account receivable ×365)
APP	Average payment period	(Purchases/average account payable ×365)
ITO	Inventory turnover	(Cost of goods sold/ Averageinventory ×365)
CCC	Cash conversion cycle	(RCP+ITO–APP)
SIZE	Firm size	(Logarithm of total assets)
LEV	Leverage	(Book value of debt divided by book value of total assets)
AGE	Age	(Natural log of age or number of years since company incorporated)

** and * indicates significance at the 5% and 10% level respectively. ACP, APP, ITO, CCC, SIZE, LEV and AGE stands for average collection period, Average payment period, inventory turnover, cash conversion cycle, size, leverage and age. ROA: Return on asset, ROE: Return on equity, EPS: Earning per share, ACP: Average collection period, APP: Average payment period, ITO: Inventory turnover, CCC: Cash conversion cycle

Table 2: Descriptive statistics

Variable	Mean±SD	Min	Max
ROA	38.85±40.53	27.59	53.13
ROE	18.38±23.11	5.77	68.07
EPS	25.89±27.19	6.99	65.43
ACP	33.38±36.84	37.00	83.00
APP	20.42±23.13	35.13	65.71
ITO	34.79±38.41	22.00	62.00
CCC	25.90±28.99	67.98	112.89
SIZE	8.99±0.56	5.64	11.11
LEV	0.70±0.37	0.16	3.54
AGE	1.50±0.19	0.70	1.76

ROA: Return on asset, ROE: Return on equity, EPS: Earning per share, ACP: Average collection period, APP: Average payment period, ITO: Inventory turnover, CCC: Cash conversion cycle

Table 2 shows the descriptive statistics of sample data. The ROA presents an average value of 38.85 which means that for each one rupee invested in the assets these companies can engender 38.85 rupees of earnings. The ROE presents an average value of 18.38 which means that for each one rupee investor the invested in the equity these companies can engender 18.38 rupees of earnings. The mean value of the ACP is 30.38 which mean that after the sale the company receives the payment on average 30 days. The mean value of APP is 20.42 days which means that the company on average payment days is 20 days. On average the CCC is 25 days.

The Table 3 shows the degree of association between each variable which are used in this research. The correlation matrix symbolizes the potency and direction of relationship among the variables. From the given table, it can be observed that CCC and SIZE are showing highest correlation which is of −0.6211 and they are inversely correlated with each other, while all other variables have very less correlation. The given matrix also illustrate that none of the variable have correlation value above 0.70. Hence there is no issue of multicollinearity in the data.

Table 4 indicates the results of regression equation using to check impact of WCM on the performance of firms. The F statistics is 10.3089 and P value is also significant which enlighten us the fitness of the model. The value of coefficient determination R^2 is 29.87%. It shows that all independent variables caused (29.87%) variation on the FP. However there are no other factors which are persuading the dependent variable because our C is statistically insignificant. The above table demonstrates that ACP has a positive and significant alliance with ROA at 5% of significance level. The APP, ITO and CCC have a negative and significant alliance with ROA at 5% of significance level. The results are alike with the studies of (Deloof, 2003; Ghosh and Maji, 2003; Rahman and Nasr, 2007; Sharma and Kumar, 2011).

The second regression model (equation) is attempted in order to test our hypotheses, i.e., the Impact of WCM elements, i.e., CCC, ITO, RCP, APP on ROE and to probe predictive ability of model-II used in this study. The F statistics is 11.9833 and P value is also significant which enlighten us the appropriateness of the model (Table 5). The value of coefficient determination R^2 is 30.78%. It shows that all independent variables caused (30.78%) variation on the FP. However there are no other aspects which are persuading the dependent variable because our C is statistically insignificant. The above table demonstrates that APP has a negative and significant alliance with ROE at 5% of significance level. The results are alike with the studies of (Qureshi, 2014; Ali, 2011).

The third regression model (EQUATION) is attempted in order to test our hypotheses, i.e., the impact of WCM elements, i.e., CCC, ITO, RCP, APP on ROE and to probe predictive ability of Model-III used in this study. The F statistics is 9.8766 and P value is also significant which enlighten us the appropriateness of the model (Table 6). The value of coefficient determination R^2 is 32.87%. It shows that all independent variables caused (32.87%) variation on the FP. However there are no other aspects which are persuading the dependent variable because our C is statistically

Table 3: Correlation matrix

	ROA	ROE	EPS	ACP	APP	ITO	CCC	SIZE	LEV	AGE
ROA	1									
ROE	0.0547	1								
EPS	0.0891	0.0324	1							
ACP	−0.0534	0.0541	−0.0177	1						
APP	−0.5444	−0.0891	0.0398	0.1009	1					
ITO	−0.0472	0.0181	−0.0712	0.0538	0.1206	1				
CCC	−0.0466	−0.0341	0.0281	0.1108	0.0634	0.0734	1			
SIZE	0.0522	0.0384	−0.042	−0.0334	0.0151	−0.0401	−0.6211	1		
LEV	0.0129	−0.0662	−0.0671	−0.0172	0.0642	0.02834	−0.1789	−0.1831	1	
AGE	−0.007	0.0686	−0.0014	0.0159	−0.1941	0.0611	0.0145	0.1893	0.0896	1

ROA: Return on asset, ROE: Return on equity, EPS: Earning per share, ACP: Average collection period, APP: Average payment period, ITO: Inventory turnover, CCC: Cash conversion cycle

Table 4: Dependent variable ROA

Independent variables	Coefficient	P
ACP	0.0447	0.0456*
APP	−0.344	0.0145**
ITO	−0.609	0.0289**
CCC	−0.449	0.0579**
SIZE	56.4356	0.3098
LEV	19.5645	0.1267
AGE	1.9876	0.3278
Constant	76.9805	0.3456
R^2	0.2987	
Adjusted R^2	0.2623	
F-statistics	10.3089	
Prob (F-statistics)	0.0002	

** and * indicates significance at the 5% and 10% level respectively, ACP, APP, ITO, CCC, SIZE, LEV and AGE stands for average collection period, average payment period, inventory turnover, cash conversion cycle, size, leverage and age, ROA: Return on asset, ROE: Return on equity, EPS: Earning per share, ACP: Average collection period, APP: Average payment period, ITO: Inventory turnover, CCC: Cash conversion cycle

Table 5: Dependent variable ROE

Independent variables	Coefficient	P
ACP	0.4821	0.0387
APP	−0.1609	0.0432**
ITO	−0.5971	0.0061
CCC	−0.006	0.0967*
SIZE	46.1812	0.1523
LEV	26.7443	0.8109
AGE	2.9873	0.9984
Constant	903.6176	0.1567
R^2	0.3078	
Adjusted R^2	0.2886	
F-statistics	11.9833	

** and * indicates significance at the 5% and 10% level respectively, ACP, APP, ITO, CCC, SIZE, LEV and AGE stands for Average collection period, Average payment period, Inventory turnover, Cash conversion cycle, Size, Leverage and Age, ROE: Return on equity, CCC: Cash conversion cycle, APP: Average payment period, ITO: Inventory turnover

Table 6: Dependent variable EPS

Independent variables	Coefficient	P
ACP	0.4821	0.0387**
APP	−0.1609	0.1932
ITO	−0.5971	0.0061**
CCC	−0.006	0.9671
SIZE	46.1812	0.1523
LEV	26.7443	0.8109
AGE	2.9873	0.9984
Constant	−903.617	0.1567

**and* indicates significance at the 5% and 10% level respectively. ACP, APP, ITO, CCC, SIZE, LEV and AGE stands for average collection period, average payment period, inventory turnover, cash conversion cycle, size, leverage and age, ACP: Average collection period, APP: Average payment period, ITO: Inventory turnover, CCC: Cash conversion cycle

insignificant. The above table demonstrates that ACP has a positive and statistically significant alliance with EPS at 5% of significance level. This means that if the company receives the payment in a short time period than it turns down the better performance of a particular company. The results are alike with the studies of Almazari and Quresi (2014).

6. CONCLUSION

The purpose of our study was to gauge the impact of WCM on the FP. The study sample data was 50 firms from seven sub sectors of manufacturing sectors of Pakistan. To gauge FP three proxies, i.e., ROA, ROE and EPS while to measure WCM four indicators (ITO, ACP, APP and CCC) are considered.

The measure of the impact of WCM on FP multiple regressions has been put in place. Three regression equation frameworks are prepared and used to probe the predictive power or strength, of these frameworks, to assess the one or more variable affect changes in another variable individually and to test hypothesis as well. The model summary tables of ROA, ROE and EPS results indicate on the base of R^2 (Coefficient of determination) value that model second and three have the predictive power to measure the affect of independent variables, i.e., CCC, ITO, ACP and APP on dependent variables proxies, i.e., ROE and EPS and they are statically significant. Overall significance of models is measured on the basis of P and F values. The Correlation results show a negative correlation existing between these two variables. The multiple regressions results demonstrate that ITO, APP and CCC have negative but statistically significant impact on ROA whereas ACP has positive impact which is also statistically significant. The second model depicts that the APP have negative but statistically significant impact on ROE. In case of CCC, there is a negative but statistically insignificant impact on ROE whereas ACP has positive impact on ROE which is statistically significant. The third model of EPS indicates that ITO has a negative but statistically significant impact. The CCC has also negative impact on EPS which is statically insignificant. These study findings are in accordance with Majeed et al. 2013; Ali, 2011; Deloof, 2003; Almazari, 2014; Qureshi, 2014; Sharma and Kumar, 2011).

7. RECOMMENDATIONS AND POLICY IMPLICATIONS

On the grounds of above mentioned research results following recommendations may be offered. This study recommends that

managers should have best line of actions in order to appropriately control to the WCM, i.e. ACP, APP, CCC, and ITO. In this way companies may get greater profit. This recommendation is in line with (Almazari, 2014).

When the CCC increases to the desired level the firm's FP will be decreased.

Whenever such like circumstances is prevailing the manager should take step and may have to reduce CCC as much as they can to the minimum level. The ACP has positive impact on FP signifying that the facility of credit swells the sale volume which, in turn raise the monetary performance of firms. The ACP has negative relationship with FP means that these firms take more time period to collect their receivables which may lead them to undesired situation so they have to cut ACP more to the reasonable minimum time to get higher profit. Qureshi (2014) reported that companies should be quick in the matters of A/R collection as well as proficient in reinvestments of these collections into short span of time securities for instance marketable securities. The manufacturing companies should put up such type of receivable collection period and APP course of actions, which in turn offer support to them. In addition, the end result also recommends that the business leaders may give big boost to FP of the manufacturing firms listed in KSE by reasonably maintain ITO and recover account receivable to reasonable time as they can.

The study has another policy recommendation is that ITO may be improved by appropriately injecting international portfolio investments in KSE. The foreign private investments and Greenfield investments may have another good way in order to give raise to sales of inventory. But it can only be possible when political stability and better infrastructure will be ensured in Pakistan. This study only revolves around some of the manufacturing firms and unfavorable political and industrial conditions can also affect the results. Future researchers may generalize the research on other sectors in place of these seven sectors. They can also increase the sample size and number of years. There has been less work done on impact of WCM on EPS and future researches may work on the same proxy as well as can add more proxies of WCM and FP to analyze their corresponding affects.

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