# Impact of Working Capital Management on Corporate Performance

by

## Bakhtawar Qayyum

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the
Faculty of Management & Social Sciences
Department of Management Sciences

2018

*I dedicate my work to my Parents and respected teachers who had been an inspiration throughout my life.*

CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY

ISLAMABAD

# CERTIFICATE OF APPROVAL

## Impact of Working Capital Management on Corporate Performance

by

Bakhtawar Qayyum

MB-141038

## THESIS EXAMINING COMMITTEE

| S. No. | Examiner | Name | Organization |
|--------|----------|------|--------------|
| (a) | External Examiner | Dr. Ahmad Fraz | PIDE, Islamabad |
| (b) | Internal Examiner | Dr. Jaleel Ahmed Malik | CUST, Islamabad |
| (c) | Supervisor | Mr. Nasir Rasool | CUST, Islamabad |

Mr. Nasir Rasool

Thesis Supervisor

December, 2018

Dr. Sajid Bashir

Head

Dept. of Management Sciences

December, 2018

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sciences

December, 2018

# Author's Declaration

I, **Bakhtawar Qayyum, (Registration No. MB-141038)**, hereby state that my MS thesis title, **"Impact of Working Capital Management on Corporate Performance"** is my own work and has not been submitted previously by me for taking my degree from Capital University of Science and Technology, Islamabad or anywhere else in the country / world.

At any time, if my statement is found to be incorrect even after my graduation, the university has the right to withdraw my MS degree.

**(Bakhtawar Qayyum)**

Dated: November, 2018

Registration No: MB-141038

# *Plagiarism Undertaking*

I solemnly declare that research work presented in this thesis titled "**Impact of Working Capital Management on Corporate Performance**" is solely my research work with no significant contribution from any other person. Small contribution/help wherever taken has been dully acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Capital University of Science and Technology towards plagiarism. Therefore, I as an author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred/cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of MS Degree, the University reserves the right to withdraw/revoke my MS degree and that HEC and the University have the right to publish my name on the HEC/University website on which names of students are placed who submitted plagiarized work.

**(Bakhtawar Qayyum)**

Registration No: MB-141038

# *Acknowledgements*

In the name of Almighty Allah, most gracious and the most merciful. He is beneficent and gracious to all mankind. I want to thank my dissertation supervisor **Mr. Nasir Rasool** for his continuous support in my MS study and research, for his patience, motivation, enthusiasm, and immense knowledge. His guidance and persuasion helped me in all the time of research.

I would like to thank my Parents who had motivated me continuously to achieve this milestone. A word of applause for my friends and classmates, who had given me assistance in sharing knowledge during my studies.

Thank you all.

# *Abstract*

*This study investigates the impact of working capital management on the performance of the non-financial firms in Pakistan. The period of the study is from 2006 to 2016. The study has been used secondary data of hundred non-financial firm listed in Pakistan Stock Exchange. Panel data methodology has been used to examine the relationship. Firm value (Qt) has been taken as a proxy of corporate performance and Net Trading Cycle (NTC) as a proxy for working capital management. Firm size (SIZE), leverage (LEV), Return on assets (ROA) and sales growth (GROWTH) has been used as control variables. Results suggest that net trading cycle, return on assets and leverage have a significant and positive relationship with corporate performance.*

**Key words:** Working Capital Management, Corporate Performance

# Contents

# List of Tables

# Abbreviations

| | |
|---|---|
| **AP** | Accounts Payable |
| **CCC** | Cash Conversion Cycle |
| **CGS** | Cost of Goods Sold |
| **CA** | Current Assests |
| **CL** | Current Liabilites |
| **CP** | Cash Payment |
| **CPP** | Cash Payment Period |
| **DCP** | Detors Collection Period |
| **FCF** | Free Cash Flow |
| **ICT** | Information and Communication Technology |
| **LEV** | Leverage |
| **LogNTC$^2$** | Log of Net Trading Cycle Square |
| **NTC** | Net Trading Cycle |
| **OLS** | Ordinary Least Square |
| **QT** | Corporate Performance |
| **ROA** | Return on Assets |
| **ROI** | Return on Investment |
| **ROE** | Return on Equity |
| **SMEs** | Small Medium Enterprises |
| **SG** | Sale growth |
| **TSC** | Transport Sector and Construction |
| **VIF** | Variable Inflation Factor |
| **WCM** | Working Capital Management |

# Chapter 1

# Introduction

## 1.1  Theoretical Background

The impact of working capital management on firms performance is investigated using Firm value (Qt) as a proxy of corporate performance and Net Trading Cycle (NTC) as a proxy for working capital management. In increasing profitability of a company Working capital management (WCM) plays a significant role as it plays an important role in companies financial affairs. It is considered that the Working capital management is a very significant component for analyzing the firms performance through daily operations. The main objective of managing working capital is to make sure that corporation constantly sustains adequate Cash Flow (CF) in order to fulfill its short debt obligations and short-term operating costs. Operating capital is a straightforward way of making sure the capability of the company in order to find the variance between the short-term assets and liabilities.

Shin and Sonen (1998) use the net trading cycle to evaluate the efficiency of managing working capital. The decrease in NTC leads to an increase in corporate profitability and when profitability increases value of firm increases. Thus, putting the effort in reducing time period is approved. There are several operating cycles in a year and the total amount of these cycles are made of some other amounts of Account payable, account receivable. Rahman et al. (2010) argue that increasing

number of days in inventory or account receivable reduce CF and thus it reaches the cash balances. While decreasing number of days in inventory or account receivable increase CF and thus it reaches the cash balances. Cash Conversion Cycle (CCC) and NTC is used to measure working capital but there is the difference between these two measures. NTC use a denominator of net sales which is the common denominator and represented by sales as a percentage while CCC use denominators which is not common. NTC is defined as a number of days needed to sell products to fulfill the working capital requirement. Shin and Sonen, (1998) argue that NTC plays an important role in creating value for companies shareholders.

Profitability is an important indicator of the company's analysis. In corporate governance, profitability is considered as important criteria for decisions regarding investment. Profitability is an excess of income over expenditure. Managing the working capital is considered important in financial management because it has a direct impact on firms' profitability (Shin and Sonen, 1998). Similarly, Eduardo and si (2002) argue that corporate functions especially which are short-term are highly affected by decisions related to financial management. Firms value and profitability can be increased by efficient management of working capital. Dylof (2003) use CCC as a tool to measure the Working Capital Management (WCM). Baker and Powell (2005) defined CCC as the gap between an average number of days when we receive payment of sold products from customers and pay for factors of production e.g labor and raw material. Similarly, Lazarydys and Trayfonydys (2006) argue that the growth and profitability of a company can be increased by proper management of CCC and NTC which has a direct impact on working capital and hence increase firm value. Aktas, Croci and Petmezas (2015) argue that decreasing or increasing investments in working capital has an impact on working capital policy. Positive relation is found between firm performance and the current ratio by Chukwunweike (2014).

### 1.1.1 Theory of Working Capital

Working capital has been defined by the Shin and Soenen (1998) as the outcome of the time lag that occur between the payments of purchasing raw material and

collecting the payments of finished goods. Generally, net working capital is termed as the difference between current liabilities and current assets. So a company finance their receivable, inventories and short term assets through companys short term liabilities (Akinwande, 2009).

An aggressive working capital policy states that a firm squeezes all its cash at work and keep a very minute amount as cash in hand. Firms pursuing such policies, their aim is to keep receivables low and stretch their payables as long as possible. Such policies have high return, as firms invest in various ventures, however, risk is also high in these policies. Increasing aggressive working capital management significantly increases the profitability as well (Jose et al., 1996). These firms work to speed up their business cycle in order to push their revenues. They cannot afford to delay their interest and tax payments as their creditors are in position to sue them, declare them bankrupt through court and liquidate their assets. However, it also create unease for investors and they hesitate to invest in the company due to its high risk.

A conservative working capital policy states that firm is not willing to take unnecessary risks. It is a risk aversion working capital policy. Firms make certain that they meet their liabilities on time and extra cash is readily available just for the uncertainty (Kulkarni, 2011). Such policies enforce plenty of cash in firms account, payment of payables on time and inventory levels are high. Such policies are at very low risk, as they make sure plenty of liquid assets are available for any emergency. These firms are not willing to take up various profitable projects as it will leave them vulnerable to risks. So such policies leave firms with low long-term profitability as excess cash saved by the firm for a rainy day does not earn much of a return. However, this policy develops investors confidence and it enhances firm value (Bandara and Weerakoon, 2011).

Matching working capital policy states that against each asset, an equal amount of debt instrument should compensate the asset. It is a moderate policy and it is not at high risk as in case of aggressive policy, neither it is subjected to low profitability as in conservative policy. It enjoys moderate perks while moderately being exposed to risks.

In order to assess working capital management, various methods are available. Shin and Soenen in 1998 suggested NTC as a better alternative to CCC. They stated CCC as an additive concept and its measure include several time lags (days of receivable, days of inventories and days of payables) which are .not useful. NTC on the other hand is a measure that includes these components of CCC but depicted as sales percentage. NTC shows the figures as the number of days (in sales) the firm has to finance its working capital. Since sales growth is also in consider, NTC is a better indicator of the performance of working capital management (Shin and Soenen, 1998). Significant relation happened to be found between NTC and performance of larger firms (Nobanee and Ellili, 2015). Our findings were in accordance with the previous studies which concluded that firm with higher NTC will achieve higher firm value (Abuzayed, 2011). Hence there exist an positive relation between them.

We can safely state that working capital has four dimensions: inventory, account receivable, cash and account payable. Liquidity of a company depends largely on working capital which ensures that short term liabilities are met and its business journey can be proceeded from a profitable venture (Padachi, 2006). However, many see investing in working capital as cash outflow. Due to the fact that once investment enter the main streamline of working capital, it cannot be pulled out or used for other business purposes (Autukaite and Molay, 2011). Efficient working capital management policies play a vital role in ensuring enhanced corporate performance and firm value. Working capital theory emphasizes the relation between corporate performance and working capital management. There exists an optimal point between these two. So, with an optimal working capital, we can achieve maximum firm value (Deloof, 2003).

Modigliani and Miller in 1958 studied the importance of capital structure in a perfect market. They found that capital structure has no importance when market conditions are perfect. However, such perfect conditions are not possible in reality as various costs are circulating which ceases the market to be perfect. Seeing such imperfect market, firms need to decide optimal capital structure that fit their environment most to achieve maximum firm value. Discounted cash flow model is

one of widely used tool to evaluate firm value. This tool takes into account the current assets and current liabilities of the firm. The mathematical depiction of Free CasH Flow (FCF) method and discounted cash flow supports the fact that working capital is a vital variable in determining the firm value. Unfortunately, exact relation between these two is out of sight.

As we know an optimal capital structure is needed to maximize firm value. It is also worth noting that any investment exceeding this optimal point has negative consequences on firm. Like keeping high inventory levels in order to ensure availability also tends to increase the costs of storage of inventory. Such costs include security expenses, insurance cost and warehouse rent (Kim and Chung, 1990). Investment in working capital beyond the optimal point also tend to increase interest expenses as well (Kieschnick et al., 2011). Optimal level of working capital tends to maximize firm value along with meeting working capital demands. It also helps firms to reduce unnecessary costs, reduce financial constraints and avoid the chances of bankruptcy (Luo, Lee and Hwang, 2009). In 2011, Autukaite and Molay studied the importance of efficient working capital management. They stated that efficient working capital management can benefit firm to lessen their dependence on outside funding. As more cash will be available, this cash can be used for future business investment which gives the firm financial flexibility (Autukaite and Molay, 2011). Shin and Soenen (1998) showed that K-mart, which had a capital structure which was quite comparable with supermarket giant Wal-Mart, went broke mainly due to poor working capital management.

Four dimensions of working capital, as discussed earlier, has been focal point for managers to achieve optimal level of working capital management: cash management, inventory management, debtor management and creditor management. They all should be considered as a whole due to presence of trade-off in relationship of each. Increase in sales can be achieved due to generous trade credit policy and huge inventory levels, and it also allows customers to judge quality of the product before handing over the money (Long, Malitz and Ravid, 1993; Deloof and Jegers, 1996). The drawback of generous trade credit policy and huge inventory levels is that money enters the main streamline of working capital (Deloof, 2003). And it

ceases its use in any other business purposes. Specifically, we expect a positive relation among corporate performance and working capital management till the optimal point. Beyond this optimal point, we expect the relationship to be turned negative.

There are various methods to assess the performance of the firm. We used Tobins Q as a proxy for firm performance. This tool is expected to have a negative sign due to the fact that it is a comparison of the value of the assets of the firm to the value of the firm provided by financial markets (Nasir and Afza, 2009). In 2001, Sauaia and Castro studied the Tobins Q as a proxy for firms performance. They found that high performing firms also tended to had high Tobins Q, so they concluded that this statistic happened to had predictive validity. We also used Tobins Q as a performance indicator in our study.

## 1.1.2  Profitability and Firm Value

Profitability has been defined as the firms ability to make profit Weston and Copelan, (1995). High profit margins of companies can skyrocket their share price. Based on Signaling Theory, Brigham in Sujoko (2007) studied market and found that high profits depict a prosperous image of company. Such image will enhance the confident of investors in the market and they will respond positively. This positive response will increase firms value terms of its stock. Higher portion of profits dedicated to dividends also releases the scent of prosperity among the investors and they will be confident and positive to invest in the firms stocks. Firm value is affected by the profitability of business. The greater the profitability of the company, distributable earnings for the shareholders will also be increased and as a result expected firm value will be higher (Haugen and Baker, 1996).

## 1.2 Problem Statement

The working capital decisions are considered to be one of the most significant decisions taken by the finance manager as working capital decision have a significant impact at corporate performance. Kim and Chung (1990), Schiff and Lieber (1974) , Smith (1980) projected as the working capital decisions has an effect at the performance of the company. Wang (2002) exposed statistic that companies of Japan and Taiwan having higher values hold an implicitly lesser investment in WCM when compare with companies having lower values. Kieschnick et al. (2011) calculated relationship within the value of firm and WCM, whereas the above research is focusing on the impact of extra financing in WCM at the value of a firm. The current study is examining an effect of WCM over QT to find a relationship between corporate performance and WCM is a negative or positive significant relationship. Specified, Investment situations may perform a central part regarding this relation, there are limited studies existing which inspected practical effect of WCM over QT.

## 1.3 Research Question

- What is the impact of Working Capital Management on Corporate performance?

## 1.4 Research Objective

- To investigate the impact of Working Capital Management on Corporate performance.

## 1.5 The Significance of the Study

The present study is important for finance managers in having the depth knowledge of WCM , QT and their impacts on each other especially in presence of financial

constraints of an organization, study is also important for finance managers for knowing the current situation of Working Capital Management and for achieving optimal level to have maximum benefit by making timely decisions. Significant of study at evolving markets just have become vital due to the interest of investors which looks the marketplace as a vital mean of financing. By taking Faulkner and Wang (2006) as baseline estimation model in their studies and analyzed in what way investors of United States companies worth an extra capitalized in net WC through use of stock's additional revenues as a proxy for the value of the firm. Hence the outcomes are showing that, over an average, the extra dollar financed in the net operating working capital have lesser value as compare to a dollar kept in cash.

It was also found that with the growth in the net WC over average, will decrease surplus stock revenue they display that decrease will be larger for such companies who have a restricted access to exterior investments. The cost of external investment is increased because of market imperfections that are relative to interior created capital Myers and Majiluf (1984), Jensen and Meckling (1976) and Greenwald, Stiglitz, and Weiss (1984) which ultimately results in controlling the debt Fazzari et al. (1988) and Stiglitz and Weiss (1981), recommended, companies' financing can be dependent on monetary factors like, obtainability of interior investment, entre in money markets or investment cost. Fazzari and Petersen (1993) suggested through their research because financing in WCM has become much complex to financial constraints than financing in fixed capital.

The significance of the research is testing the model taking proxies incoming fluctuations of anticipated results that will be valuable for practical future execution through a wide variation of concerned stockholders making financing decisions. For investors, the probability revenues have a monetary (financial) significance whereas framing financing strategies, allotting the resources. The research will contribute towards the best understanding of Firms QT in clearing the decisions of WCM. It is captivating in order to give and see the empirical support of this study in the country (Pakistan) which will inspire more innovative studies in this field.

## 1.6  Plan of Study

Plan of the study is, Chapter I includes the introduction of the study. Theoretical base with empirical findings is described in chapter II. Chapter III comprises of the methodology used for the study. Analysis and results discussion of empirical results is described in chapter IV. In chapter V, conclusion, recommendation and future direction of the study are explained.

# Chapter 2

# Literature Review

## 2.1 Working Capital Management

The corporate performance was progressed by several empirical and theoretical contributions. A lot of researches display the direct relationships within WCM and firm value. Various explanations are present, concerning motivations of corporations who have the positive WCM. Furthermore, the financing decisions are self-regulating, wide studies which are based on the imperfections of capital-market has seemed which is supporting. The relationships between WCM and QT Modigliani and Miller (1958). Van Horne and Wachowicz (2008) defined Net WC as the variance between current Assets and liabilities. Ding et al. (2013) described that WC is mainly used for quantifying a liquidity of a firm. WC acts like sword corporation required WC in order to operate efficiently, WC is even expensive as it has to be financed and may involve other operational costs, like logistics costs, storage costs for inventories and accounts receivables credit losses Subramanyam and Wild (2009). For investors, the concept of working capital proved as an exciting indicator.

Working capital delivers safety cushion to creditors because it is a significant measure of liquid assets. Subramanyam and Wild (2009) described that it is also vital for the measurement of liquid reserve that are available in order to meet uncertainties and contingencies surrounding a firms cash balance of outflows

and inflows. WCM is explained as current assets management in a corporation and administrations of the financing required for supporting these current assets Van Horne and Wachowicz (2008). Some of the very important questions must be answered by working capital management WCM that shape firms financial strategy and has an impact on the companys sustainability, in both long term, short term such as, how much inventory and cash must be kept by the company? Should the company will sell goods on credit to its clients? How the firm will acquire any short-term required financing? (Ross, Wester field and Jordan, 2008).

Akinlo (2012) defined that WCM as the important exercise for companies. Bei and Wijewardana (2012) described that in order to minimize the chances of corporate failure and for improving the performance of the business, some firms must adopt a formal strategy regarding WCM. Further clarifying the significance of working capital concept by Ross, Westerfield and Jordan (2008), to manage the WC of a firm could be a daily measure which gives a guarantee about the company that it is having satisfactory assets for proceeding its processes, sustain a tactical distance by expensive intrusions. That contains numerous activities that are related to a companys disbursement and receipt of money. Moreover, Horne and Wachowicz (2008) disused, WCM is having basic insinuations because of a few reasons current assets in manufacturing enterprise justifies for almost its partial of whole resources. In case of a dispersion firm, these look for indeed further. Additionally, the extreme levels of the firm's CA can effectively outcome which realize its bad output over the investment. Moreover, the corporations having fewer current resources can face deficiencies and difficulties for keeping up plane operations. Horne and Wachowicz (2008). Correlation of WCM was observed by Deloof (2003). For this, he took a sample of 1009 non-financial corporations of Belgian from the year 1992 to 1996. Results presented a meaningfully negative relationship between Average Receivables Period and Gross Profits, the Average Inventories Period and Average payable period. Greater the time periods of inventories, payables, and receivables lead to lesser Profitability of a company. This was recommended too that create value for stockholders might be created by the managers if they try to decrease the duration of inventories and receivables to a

reasonably smallest level. For investigating, the relationship between profitability and liquidity empirically, Eljelly (2004) taken twenty joint stock corporations as a sample from the years 1996 till 2000 and estimated the regression and correlation analysis. The outcomes of this study exposed a negative significant relationship exists between liquidity and productivity. Current ratio typically affected the profitability that is significant a liquidity measure. Though, Cash Gap is more vital as compared to Current Ratio in order to affect growth and profitability. Profitability is also influenced by the size of the firm. profitability is slightly influenced by the cash gap in labor concentrated sector.

Prior studies of doof (2003) Gill, Biger, and Mathur (2010) focused on investigating the part regarding WCM aa CCC optimum account receivable, account payables, optimum stock level over the success of a company. Firm-level regarding WCM and productivity were examined as CCC gross operating income, respectively. Results indicated that after managing CCC effectively companys manager can earn a handsome profit for corporate Uchenna et al. (2012), After studying the influence of WCM at firms productivity scholars used cash convert cycle in order to measure working capital through use of numerous regression analysis, thus the results presented that working capital management as CCC has influence on productivity of firm. The consequences also showed a reliable result with prior researches for instance Charitou, Elfani, and Lois (2010), Pouraghajan and Emamgholipourarchi (2012), specified important association between firm performance and WCM Aregbeyen (2013), Foe examining the relationship between firms performance and WCM almost 48 registered companies on Nigerian stock exchange were studied in the time horizon of 1993 to 2005. Measurement of working capital management was done by using various proxies for instance average payment period, inventory turnover period, CCC, average collection period. For estimating a firms performance three measures were used by researchers that are known as net operating revenue, returns on assets and gross operating revenue. The ultimate results stated that ineffective working capital level decreases the companys success. those results also had been similar with prior study of Smith (1973), who informed that a big amount of companies disappointment effects WCM on

Companies Profitability due to the useless level of working capital. therefore, the effective and efficient WC level is required to get long-term, short-term business aims.

Marttonen, Monto and Karri (2013) by using flexible assets managing model examined the effect of WCM on success among industrial maintenance and service sector. Results discovered significantly a negative affiliation between WC return on investment and cyclical time. Baos caballero, Gracia-Teruel, and Martinez-Solano (2014), evaluated effect between QT and WCM. Enqvist, Grahm, and Nikknen (2014), inspected the influence of WCM on QT. Results showed that opposing towards boom, the financial downturns are having a statistically substantial impacts at an above-mentioned relationship. Purpose for efficient WCM is to decrease CCC to the adequate optimum point which suites companys condition.

Ukaegbu (2014) anticipated relationship between the efficiency of firms performance and WC between various manufacturing sectors in different republics like South Africa, Egypt Kenya and Nigeria writer in order to examine their relationship used balanced panel quantitative approach from the year 2005 to 2009. The study exposed a negative relationship between corporate performance and WCM. The larder cash conversion cycle decreases corporate profitability. Deloof (2003) and Filbeck and Krueger (2005) presented similar results by the US.croci, and permease (2015), estimated an effect of working capital management over organizations performance of USA from the year 1982 to 2011. Through using various numerical methods, outcomes showed optimum level for WCM and companies. Who attain this optimum level would present a higher stock and operating performance. Literature is too suggesting several theory-based opinions for observing the possible relationship between firm performance and WCM. Research showed that further investment in WC increases the companys performance by reducing supply cost and enhancing sales. Another study proposed that over-investment in WC will badly impact the performance of the company by increasing financing costs (Kieschnick, Laplante and Moussawi, 2013).

Usman, M., Shaikh, S.A, and Khan, S. Afrifa and Padachi (2016), explored a link within the level of Working capital examined like CCC , performance of small

medium enterprises for 5 years 2005 to 2010. the results recommended that there is a concave association in the performance of a corporation and WCM. The effect of working capital management was also quantified by Singh, Kumar and Colombage (2017) at businesss performance through utilizing meta-analytic model which was introduced by Hunter, Schmidt, and Jackson (1982).

His research utilized forty-six previous studies in order to estimate the above mentioned relationship. The outcomes presented a negative relation exists between the performance of firm and CCC. The effect of WC management was assessed by Tran, Abbott, and Jin-yap (2017) for encouraging worth of firm, particularly between SMEs. Writers utilized various procedures for calculating working capital management for instance account receivable, work in process, raw material, bank balance, cash balances, and finished goods. These results of the study offered that effective WCM represent a decrease in account payable, account receivable and inventory turnover days that will significantly improve the profitability of the firm. For determining whether earnings of gross WC will be larger as compared to the cost of gross WC Barine (2012) used a one-tailed test of sampled quoted companies. He examined collected data and discovered that standard deviation is 3.99 for variance among earnings of population, he applied t-test which showed that in Nigerian firms revenues on the gross working capital financing is lesser as compare to cost of working capital investment of such sampled firms that displays that there is inadequacy in usage of their net working capital so a here is the negative impact on the productivity of these companies. That negative impact is explaining that the equation of WC costs and earnings is showing low returns for shareholders.

Barine (2012) proposed that in Nigerian firms there is an improved position of gross working capital though but still these companies are relying on short-term liabilities and debts in order to fund their short-term capital and results in too much cost which ultimately reduces their profitability that was reason of a negative working capital position on more than 50% sampled firms. The research of Barine (2012) also displayed that in Nigeria the sampled firms have high actual profits but the costs of working capital on the other hand is also higher as compared to

the % of working income to gross WC Therefore, research recommended that in the case of quoted Nigerian firms, improving the position of gross working capital has no influence on improvement in profitability of such corporations.

Ukaegbu (2014) also discovered that in Kenya, as a mean rate of CCC corporations take 13-day that disclosed their effectiveness in WCM as compare to firms of Egypt because firms take twenty-seven days for converting cash. when compared with the firms of Nigeria and Egypt it's bad because these countries take a lengthier period for paying accounts payable as compared to receive their accounts receivables from clients. Ukaegbu (2014) recommended that in developed countries such as Egypt and South Africa the level of investor protection is higher that is attributed towards the development of capital market and level of corporate governance. A study of Ukaegbu (2014) recommended as companies of South Africa , Egypt are bigger when compare with those firms of Kenya and Nigeria, he told that size of firm and size of board-related positively with each other. Ukaegbu (2014) revealed in his study that an inverse relationship exists between the number of days a corporation require for the collection of cash from its clients and firms profitability across all the four countries. By adding in it the Ukaegbu (2014) described a positive association within productivity and inventory turnover ratio that is used to measure the speed of converting stock into sales in Kenya, Nigeria, and South Africa. Ukaegbu (2014) recommended that lower the inventory ratio displays an ineffective inventory management and the quicker the stock sells, and lesser companys resources tied up. Ukaegbu (2014) told the relationship of profitability and AP was positive in Egyptian firms which is inverse for companies in other states. The study of Ukaegbu (2014) displayed that if firms will take more time in order to settle their accounts they are more profitable in Egypt. On the contrary, Ukaegbu (2014) described that if in Kenya, South Africa and Nigeria corporations take less time in order to settle their accounts, they will be more profitable. Ukaegbu (2014) demonstrated that such differences mean there is a good relationship between firm and its suppliers which can be beneficial for cutting deals regarding discounts and on time delivery of goods. Ukaegbu (2014) found that an inverse relationship exists between the performance of firms and

CCC in term of WCM. This discovery of Ukaegbu (2014) proved that the company who knows how to sell their stock faster and can quickly collect its cash and ensure that they take more time for paying their suppliers are expected to be more profitable.

Sharma and Kumar (2011) by making a variables correlation matrix showed a negative relationship exists between ROA and success and amount days regarding account payables have numbers of days inventory. While there is the positive correlation between CCC, a number of days accounts receivable likewise return on assets. Regarding the correlation between firms size, leverage, and growth with ROA. Sharma and Kumar (2011) proved that these are negatively connected, though positively connected for measuring the short term liquidity that is a current ratio. According to Sharma and Kumar (2011) regarding number for days inventory and profitability of firm the first regression analysis discloses that a negative relationship exists in the leverage, growth, and stock in the Indian firms size, and with firms profitability with regard to ROA that is a dependent variable in his research. The results of Sharma and Kumar (2011), has differences by numerous global researches and recognized as the corporate finance theory, hence the study stated that a positive relationship exists between growth, inventory of a company, the size, and profitability. Though, Sharma and Kumar (2011) proved as in Indian corporations that positive relation exists among the ROA and a conventional measure of liquidity that is CR Sharma and Kumar (2011) applied second regression equation examination on the correlation among days of accounts receivables , firms profitability. The analysis showed a positive relation is existing between days of accounts receivables and profitability in Indian firms,results regarding their analysis were similar with corporate finance theory which tells that the higher the profitability of a firm if there are fewer number accounts receivables days. By the value of coefficient regarding accounts receivable are days the research revealed, the single rise in account receivables days would be related to a rise up to 0.038 percent in ROA in Indian companies.

The hypothesis of Jafari et al. (2014) showed a significant relationship between the organizations bankruptcy possibility which are registered on the Stock

Exchange of Tehran. Jafari et al. (2014) founded at altman model considered bankruptcy and cash conversion cycle as a dependent variable and described some indicators as an independent variable, in order to recognize WCM the first measure was the conversion period of debtor that was measured by average of collection period from debtors = average of AR. Inventory conversion period is another measure that is calculated as inventory conversion period = inventory average/ (CGS/365). Third indicator is Period of Debits Postponement it was measured by using this formula [period of debits postponement = average AP/ (CGS/365)] for frequently evaluating the CCC, that equation was considered [inventory conversion period period of debits postponement + CCC= average of collection period from debtors]. Research of Jafari et al. (2014) likewise measured firm size, ROA, Leverage ratio reserved money prior to the end of the period, cash changes, rate regarding risk-free return and standard deviation for companys outcome as control variables in his study. Jafari et al. (2014) by using descriptive statistics study used a central index like the median, mean and standard deviations indexes, kurtosis, and skewness presented primarily that means of CCC had a value of 206.56 days of the experimented companies which are listed on Tehran Stock Exchange while having 138.10 as standard deviation. 0.29 as a mean of ROA f while having the standard deviation of 0.2928. In this research, descriptive statistics presented that kurtosis and skewness mostly have values near to zero which shows their closeness to a normal distribution and the balance of research variables.

Those individuals which possesses a corporate and all those that are interested in it as creditors, family members and banks, employees and managers. This theory is suggesting the daily operations of an enterprise are run by the executives who act like agents who were involved by proprietors of firm being the principals that are too recognized as stakeholders.This emphasizes at the cost of transaction, constricting the analysis subsequent the effort of Coase (1937) Jensen and Meckling (1976) and most vital, Stiglitz and Weiss (1981). The effort of such authors pointed towards those difficulties which are surrounding management interrelationship possession, credit rationing and promised contracts etc. between exterior finance providers and SMEs thus exposing companies towards risk of replacing

assets that means a variation in companys structure of asset. For really minor and micro-firms this replacement of asset would occur among the owners of household and enterprise.

In 2004 it was mentioned by South African Reserve Bank in their report that the existence of such difficulties in companies might describe better use of guarantee loaning to companies the way of trading with such agency issues. Plans of lenders for trading with such agency complications too contribute meaningfully towards cost of trading with that sector of industry. For a larger business valuation of an application for finance might be restricted towards valuation of audited set of monetary declarations and supportive documents which are provided by a candidate, whereas for the SMEs valuation normally should go faraway outside this, suggesting the significantly greater cost of transaction.

The theory holds that any financial transactions has two parties and both act for their best interest while having various expectations. The main problem that is related to this theory contains moral hazard, adverse selection and asymmetric information Kwame (2010). According to Stiglitz and Weiss (1981), agency issues as moral hazards and information asymmetry may have effect on the accessibility of credit and eventually on the capital structure of small and medium enterprises SMEs. Stiglitz and Weiss named this as credit rationing.

Commons (1934) formulated the Transaction Cost it was reinforced by arrow (1969, 1974) Williamson (1985, 1991) and coase (1937). Furthermore arrow (1969) described as the transaction costs is that which is involved in operating the economic system. Coase (1988) suggested that costs are always there to carry out market transactions. Consequently, if the cost will be lesser as compare to the cost of carrying out the transaction in the market a company will always prefer transactions to be managed within the corporation. Though, as the additional costs of transactions inside the enterprise would cross carrying cost of transaction, companies are trying for decreasing cost of transaction through vertical integration Williamson (1991). Hence justification in back of the theory of transactional cost was, cost of markets is generally very high for companies to overwhelmed individually. It creates the linkages for small companies ultimately. Thorelli (1986).

From the perspective of transactional cost theory, a company as its part of internationalization process required to keep in consideration about two main costs, control costs and market transaction costs. Williamson (1985) Hennart (1989).

These costs occur due to opportunism, behavioral and environmental uncertainties and asset specificity, Rindfleisch 1994 (1997). Heide (1994) stated about both behavioral and environmental uncertainties which is refer to the market changes that is Commerce and Management, United Kingdom Licensed and International Journal of Economics. Contractual constraints are results of Such unpredictability, that signify every consequent response and possibility become more unproductive Heide (1994). The acting that is based on self-interest with sharpness is known as opportunism Williamson (1985). The main claim of this theory was, transactions would be carried out for reducing costs that is present to carry out them. In WCM, the four elements debtors, stock, creditors and cash are considered as the key difficulties, the management of these problems involves rigorous resource commitment and effective planning. For instance, stocks can be shown mathematically in order to articulate an elementary policy when stocks would be ordered regarding associated cost and quantity. In the environment of small and medium enterprises due to lack of proper resources the cost of such adoption may offset the benefits. In most practical circumstances, companies have choice to select between relative advantages of these two main kinds of policies for net WCM either companies are able to adopt working capital polices or firms can reduce the investment in WCM or increasing their sales.

This theory is stating that WCM is following a sequence that depends on the type of firm under study Brealey and Myers (2002). By using this cycle, a corporation can identify its WCM at any time. the working capital cycle describe as a time period it takes for business in order to alter its cash into finished goods or raw materials it can also be defined as the duration a firm receives its cash from the debtors. The cycle can be different for different firms and can be differentiated by keeping in mind the distinctive features of the corporation such as its products, its asset and its size etc. working capital cycle described by Brealey and Myers (2002) for the manufacturing firms was like Cash is transferred into raw material.

Raw materials will be transformed into work-in-progress. the Work-in-progress will be transformed into finished goods which is stock. Finished products or stock is transformed into debtors normally termed as trade credits. And finally trade credits debtors are transformed into cash.It includes four components which include account receivable ,account payable and inventory. Padachi (2006) argues that WC is important to the source of liquidity. Autukaite and Molay, (2011) State that money used as WC cannot be used in other operations. Deloof, (2003) supported this view and argue that the managing working capital is important because the value of the firm can be increased with the optimal level of WCM. Luo, Lee, and Hwang (2009) argue that in a perfect market, capital structure is not important but in reality, markets are imperfect and costs of bankruptcy and taxes are involved. Optimal level of WC is required to handle all these costs to increase firms value. By increasing WC to an optimal level, financial constraints can be reduced.

WC indicates as an important foundation in order to offer liquidity, that is a forecast to make sure that organization is capable of meeting its CL and continuous flow may be sure from a profitable endeavor Padachi (2006). Though it is considered that increasing investment in WCM as the outflow of cash that financed in WCM is protected, this cant be utilized in another corporate area Autukaite and Molay, (2011). Thus, in financial management, the WCM is an important element. The Value of the firm might be increased by an optimum WC level, Deloof (2003). Question is that which source should be used for reaching this optimum level which is extremely thorny in the organization. For seeing that more evidently, I will prefer to show that how WC is relating with companys worth hypothetically. Modigliani and Miller (1958) proved as in a perfect market, the capital structure proved to be insignificant. Though, in certainty the market is imperfect. It includes various taxes, bankruptcy, and costs. All these need that companies should possess an optimum capital structure that is suitable for situation mostly when maximizing organizations worth. There are numerous means for evaluating business worth, e.g. discount dividend model and multiple comparison analysis.

For evaluating the firms value the most used alternatives is the discounted cash flow model, which underlines current liabilities and assets The WCM described as a decision which describes the association between short-term liabilities and assets. With a well-organized WCM, the liquidity of a firm will get better, and company worth would increase through gaining the optimum level that encounters in WCM requirements . By the help of effective WCM, organizations would decrease the chances of facing financial constraint, the firm can avoid the risk of bankruptcy and reduce financial cost Luo, Lee, and Hwang (2009). Autukaite and Molay (2011) declared a significance regarding effective WCM in this research. They told that Companies whose WCM is efficient are able to lessen dependency from external investments and utilize free money for their upcoming investments; it would ultimately tend to have monetary flexibility. millions of losses can happen annually if a firm doesnt have well-organized WCM. Ensuring an optimum WCM level would be attained if four WCM dimensions would be considered as, that is CA management debtor management, inventory management, CP management and cash management. Each component having own features. Though, executives must take every element in an attention entirely since the tradeoff present in the association of each element. For example. Though, keeping inventory and granting trade credit means that cash is protected in WCM Deloof, (2003). Consequently, has a knowledge of every single component of WCM will be pretty supportive for making the financials decision.

## 2.2 Corporate Performance

Initially, by increasing the capital in inventories and trade credit can maximize the performance of corporation for numerous causes. Blinder and Maccini (1991) explained that greater stock level may decrease fluctuations in price supply cost and can prevent disruptions in harm of corporate manufacturing method because of a shortage of goods. They also avoid high production costs and allow companies to provide better service to their clients rising from higher variations in manufacturing Schiff and Lieber (1974).

Giving trade credit may rise sales of a company, this can assist as the actual cut of price Brennan, Maksimovic, and Zechner (1988): Petersen and Rajan (1997); it inspires clients for obtaining goods when they have less demand emery (1987); this supports long-lasting relationships of supplier and customer. N, Smith, and Smith (1999); Wilner (2000). This permits purchasers for confirming the quality of product services before payments lee and store (1993); Smith (1987). So, this decreases an asymmetry of info within the seller and purchaser. Shipley and Davis (1991), Deloof and Jegers (1996) propose when this is difficult in differentiating goods the trade credit may act as a significant selection criterion of the supplier. Emery (1984) advocates that as compare to marketable securities trade credit act as a more gainful short-term investment. WC providing insurance in contradiction to future deficits in cash can behave like the stock of protective liquidness Fazzari and Petersen (1993). Lastly, from accounts payables point of view, ng et al. (1999) and Wilner (2000) similarly determine as after decreasing its suppliers financing a company can acquire vital discounts for initial payments.

According to Kabethi (2013), corporate performance is termed as the method of calculating the outcomes of a Companys operations and policies in the monetary terms. Machiuka (2010) in order to reflect the financial performance of the company argued the analysis, the competitiveness level in similar sector , a detailed knowledge regarding profit centers and cost inside the organization. corporate performance can be explained as a universal measure of an overall financial health of the company for a specified time period and can be used for comparing same businesses within the similar industry or to relate aggregation sector Maymand (2014). Financial matrices such as liquidity, repayment capacity, solvency, short-term financial management profitability, firm overcapacity and financial efficiency are used to measure corporate performance. Profit is that wealth of a firm which is earned by utilizing available resources Stern (2014). On other hand business liquidity recognized its capability for maintaining its cash equivalents and liquid cash in order to meet its debt obligation by using the quick ratio and current ratio on a timely basis Woodruff (2014), As a measure of a business ability Purdue (2013) described solvency in order to meet a firms debt obligations if all its assets

are traded together with its ability to recover from financial chaos.

A firms corporate performance can be calculated with the aid of how well it manages its short-term financial objectives, for instance, operating capital management and inventory control, on one hand, economic performance measures the diploma with which an enterprise is the usage of its assets inside the generation of gross revenues and the effectiveness of manufacturing, purchasing product, pricing a financing choice Purdue (2013). Firms success regarding performance is depending on its monetary objectives. The companys monetary activities can be calculated in financial terms in order to provide an insight within the overall performance of an enterprise. These measurements may be used for degerming the organizations wealth as a whole for a given period of time. ROA, ROE proved as the most familiar measures in a corporates financial performance. The ROA is utilized for measuring the earnings of shareholders equity investment over a time horizon. It can also be used to measure the number of earnings a firm generates from its owners or equity holders. ROA is used to measure income generated by total organizational assets after taxes and interest. It provides information to the management regarding efficiency level through that asset of a company are financed either via using equity or debt.

Impact of WCM and QT was discussed in numerous theories. Such theories were also observed in the researches of Khalaf (2012), Adamu (2016) and Finau (2011), and environment of Nigeria is extremely unpredictable that general price and demand, future cash flows are difficult to predict and ascertained as well as due to its related high cost the surplus cash is difficult to tie down for unexpected contingencies. Henceforth, the refusal of both defensive and aggressive theories for multinational corporations in Nigeria. The next is the positions of scholars with regard to CCC, Creditors Payment Period (CPP) Debtors Collection Period (DCP), and Financial Performance by using ROI is a proxy for corporate financial performance.

Samiloglu and Demirgunes (2008) inspected an impact of WCM at corporation productivity of industrial companies registered at the stock exchange of Istanbul for ten 10 years 1998 to 2007. Accounts Receivable Period and CCC were

considered by way of proxies of WCM on other hand ROI was considered for measurement of corporate financial performance. The outcomes of regression analysis presented that a negative significant relation of Conversion Cycle and Debtors Collection Period exists with ROI.

Similarly, Muhammed (2015) inspected the effect of WCM over QT relative research on West Europe, Middle East firms. The outcome of the regression analysis displayed that an insignificant, negative association exists between firms profitability and Debtors Collection days. While no significant association prevails between CCC and QT. Though, a positive and significant relation exists in profitability of company and CPP.

Shadrack, Jane, and William, (2015) observed the impacts of WCM and corporate financial performance of various tourist hotels of Mombasa country in Kenya. While ROI was cost of as a measure of account receivable period, account payable period CCC productivity, as well as it, was utilized for measuring WCM. The correlation matrixes displayed that a significant negative relationship exists among CCC and account receivable period with ROI Though, a there is a significant positive association exists in financial performance and CPP. These results are relevant with the research of Vincent (2012) who explained that in manufacturing firms of Kenya significant and negative association exists in CCC, Financial Performance and DCP.

Timothy and Alex (2016) also inspected the effect of WCM at Performance of corporate in Small organizations of Nakuru Country. This study described that a positive and significant association exists in corporate performance,CPP in Nakuru Smaller companies. Cyprian, Jomo, and Tobias (2014) measure the influence of WCM on the performance of firm that is registered on Securities Exchange of Nairobi. A significant positive relationship revealed in between corporate performance and Creditors Payment Period.

Adamu (2016) inspected the influence of WCM on the performance of corporate in pharmaceutical companies of Nigeria. The results of regression analysis specified that ROI and CCC are inversely and significantly related with each other.

Faith and Ela (2016) also stated that significant, negative association exists between DCP, CCC with firms profitability. Finally, Tanveer, Muhammad and Sadat (2016) calculated the influence of WCM on the corporate performance of almost 50 non-financial firms listed in Pakistan. The research employed account receivable period, account payment period, Firm Size, CCC as control variable and proxies for WCM the corporate performance was calculated by using ROI and ROA. The results of regression analysis exposed that CPP, Firm size as well as CCC have a positive , significant relation with company performance while there is a significant negative relationship between corporate performance and receivable collection period,. Many preceding types of research proposed that decisions of WCM having the significant effect over companies profitability. Most important, though, is the impact that decisions of WC are having over firms return, share price and risk van Horne and Wachowicz (2008). Aktas et al. (2015) described the effective WCM is extremely vital for the companies mostly for the time period when there is an increase in an investment opportunity. Lind et al. (2012) with an effective WCM, a company could increase investment for further strategic objectives by increasing profitability by reducing financial expenses.

Knauer and Whrmann (2013) WCM is significantly vital for the victory of a corporations. Furthermore, Mousavi and Jafri (2012) presented a positive association within WCM and QT Different researches propose that a significant association exists between WCM with regard to firm performance and cash conversion cycle. we can simply see the relationships between. The companys profitability and cash cycle by remembering that a basic element of growth and profitability of a company is its over-all asset turnover ratio, that may be expressed as sales divided by total sales, Westerfield and Jordan (2008). Greater that ratio will be, higher will be a companys accounting return on equity ROE, ROA. Therefore, by keeping others things constants when the cash cycle is smaller, the firms investment in receivable and inventories will be lower. The companys total turnover is greater and total assets are lesser, Ross, Westerfield and Jordan (2008), agha (2014), the company might grow its profit through its proficient WCM is extensively measured like an effective tool for affecting financial factors and profitability.According to

Vishnani and Shah (2007), the practices and policies regarding WCM are having a deep impact on the companys profitability.

Numerous corporations attempted to expand productivity and CF by decreasing capital in CA by using approaches like a gathering of receivables and efficient credit underwriting, just-in-time management of inventory. Moreover, corporations always finance a great part of their Current Assets (CA) by using Current Liabilities (CL) accruals and accounts payable in an effort to decrease (WC) working capital. Due to the influence of current liabilities and current assets on profitability and liquidity, investigation of CL and CA and it is quite significant both in profitability investigation and credit analysis Subramanyam and Wild (2009). By adding to this, the WCM take on 2 vital verdicts for the company, these will be the inspection of an optimum investment level in CA, suitable combination of long term, short-term investments that are used for supporting this financing in the CA.Van Horne and Wachowicz (2008) Although, at the end, such decisions were affected by the exchange which should be incorporated between risk and profitability.

Van Horne and Wachowicz (2008). By decreasing the investment level of CA, whereas still being capable of supporting sales, will lead to a growth in the companys return on overall assets. The actual expenses of long enduring investments are higher when compare with short-term investment, the larger is a firms profitability the larger will be a percentage of short-term debt to total debt,Van Horne and Wachowicz (2008). The explanation regarding association within payment period of payables and short-term interest rates with regard to the returns of the organization: Though sometimes short-term rate of interest is higher than long-term interests rates, usually these are lesser. Even after the short-term interest rates are greater, the condition was expected as temporary. Furthermore, the claim of short-term loan as opposed to long-term loan will definitely increase the profit, liability would be pay off in the horizons when thats no more required. Van Horne and Wachowicz (2008). With respect to the WC regarding level of its CA ,CL that productivity expectations recommend to sustain a low CA level and a higher percentage of CL and total liabilities. That policy would produce in a possibly negative and low WC level. Compensating the effectiveness of that policy increase

the risk for a company. The risk is defined as a threat to an organization for not sustaining enough current assets in order to fulfill its cash requirements because they support the suitable sales level. Van Horne and Wachowicz (2008). The productivity of any organization relies on investment level in CA. In the working capital, an over-investment leads to a negative impact on the productivity of the company whereas it has a positive impact on a firms liquidity.

Numerous studies were based on the relation between the investment level in profitability and current asset while having an inverse relationship in research at both macro and micro levels. In various hotels, the CA containing cash, inventory, debtors account number of times border half of all assets.It is because of the fact as in hotel industry mainstream of requirements is depending on the firms level of ability in order to fulfill its daily responsibilities. If the company have fewer current assets it can experience difficulties in maintaining smooth firms operations and shortfalls Horne and Wachewicz, (2000). For effective WCM it essential to include controlling and planning regarding CL that this will eradicate the risk of incapability in order to fulfill the companys short-term obligations that have dropped due as well as avoid the over-investment in CA Eljelly (2004).The effect of 15 variables of WCM was shown by using three measures of performance which are ROA, ROE and gross profit margin, the results showed as there is was a positive association of inventory on ROA gross profit but it is having a negative significant affiliation with ROE. An insignificant positive association is because of increasing sales while reducing levels of inventory, later profitability. Average collection period was showing a positive significant relationship with gross profit and returns on average collection period improved accounts receivables so have a positive impact on corporate performance.

Mugwe (2013) inspected the association between firm financial performance and other specific factors from the year 2008 till 2012. In her study she cast-off two measures in order to determine the association between a companys specific factors, its corporate performance through determining a companys performance by using ROE and ROA. Outcomes of the study indicated a positive significant association within corporate performance and the firms specific factors. She used a

descriptive statistic by using correlation analysis she described that these corre-
lations are supporting the hypothesis that in the model all independent variables
have their own specific informative ability and value in order to explain corporate
performance.

Ngulumbu (2013) examined the relationship between corporate performance and
board composition of firms that are registered with the Nairobi Stock Exchange
which formed a positive significant association among the board committee, board
size and corporate performance. This proposes that numerous managers positively
affect the companys operations. He suggested that there is a lean significant neg-
ative impact at the earnings and board size which elaborate that a lean board will
be more effective. Waithaka (2012) measured the association within practices of
WCM and CP especially for corporations which are registered with the Nairobi
stock exchange. The research accepted the correlation design which permitted
a collection of secondary data through structural questionnaires. The targeted
population was companies and individuals that are listed in the Nairobi stock
exchange numbering seven. The data was examined by using inferential and de-
scriptive statistics. Mathur (2010) measured the impact of WCM with regard to
company profitability at listed companies and taken 30 companies for a sample
which are registered in Kenya with the (NSE) by years 1993 till 2008. The food
effects regression and pooled OLS models were considered in order to examine
the results. The study exposed that significant negative relationship exists within
collection period and profitability. hence a negative impact on corporate perfor-
mance reveals that successful businesses need a smaller time period for collecting
cash from creditors which leads in credit reduction. This research also revealed a
negative significant relationship within the time horizon for converting inventory
into the sales which lead to profitability.

It is consequently clear that companies which sustain the adequately higher
level of inventory decrease the cost of probable gaps in processes of production
likewise loss of business in a result of goods scarcity. This also helps in decreasing
the supply costs of the company also defending them from prices function. This
research is also revealing a significantly positive relation between the time period

that a company takes in order to pay its credits that is profitability and an average payment period. Therefore, it means that companies which needs a longer time period for payments to their creditors stays profitable.

Wainaina (2010) did a study for determining the relationship within WC and performance on some small medium enterprise in Kenya. He took a sample of 40 corporations whose turnover of sales range from 10 million to 500 million. The study showed that no relationship exists within profitability and CCC of companies who are relating to Transport Sector and Construction (TSC). But a positive relation exists within CCC and profits in industries like agricultural sectors and general trade. Further, the study exposed that there is a positive relation exists between inventory days in all sectors of this study. The results showed that for a higher demand a higher inventory is essential henceforth inventory requirements to be sustained at sensible levels.

Mutungi (2010) calculated the association in WCM and QT in oil marketing companies which are listed in Kenya with the petroleum institute of East Africa in the Nairobi and its surroundings. The sample consisting of 59 listed oil industries in Kenya. The study exposed that decisions regarding WCM have an impact at corporations risk and profit as well as on its share price. The research exposed that for a firm to operate efficiently, inventory and receivables must be controlled and monitored appropriately.

The impact of having a suitable working capital level for the sustainability and growth of a corporation is consequently fundamental. Lazaridis T. (2006) studied the relationship between the level of profitability and cash conversion cycle on 13 registered corporations with stock exchange of Athens from 2001 till 2004. This study expected to determine statistically a substantial relationship between profitability and CCC that is calculated by working profit. Accounts payable turnover, Accounts receivable turnover and inventory management as making part of the cash conversion cycle used in this study. The study exposed that companies are interested in the growth of their AR up to an optimum level which increases their profitability ultimately a growth in market share and sales. The Pearson regression and correlation outcomes were considered in the analysis which exposed the

presence of a negative significant relationship among accounts payable turnover, inventory management and accounts receivables turnover with profitability which are smiler with the research of Deloof (2003) in firms of Belgium. The results highlighted that the WCM is having a significant influence on QT and growth in productivity by reducing a number of accounts receivables days likewise decrease in the level of inventory which could be useful for the firms. Rahaman and Nasr (2007) displayed the effect of numerous variables over Net profits considering average payment period, CCC and inventory turnover days average collection period within Pakistan.

Control variables consist of firms size, debt ratio, and financial asset and total asset ratio was applied and used. Pearson regression and correlation for data analysis purpose. The study consists of 94 Pakistani registered firms on the stock exchange and time period was by 994 to 2004. The outcomes of the study showed that shareholders wealth can be maximized by managers through managing cash conversion cycle efficiently. The study exposed that strong negative relationship exists within the companys procedures and profitability on WCM. The study revealed that credit management was not suitable henceforward it has a negative impact on corporate performance. Truel and Solano (2007) in their study exposed as a negative relation between CCC and QT. By an efficient WCM the results were showing a probability of enhancing firm profitability. For this, it is to be understood that significant that major elements of CCC for instance short-term accounts receivable, inventories and short-term trade liabilities should be organized in such a way that they will increase a companys profitability. An effective WCM enhances free cash flows towards the corporations opportunities of growth and revenues for stockholders. This study is indicating that an element of negativity is there on credit management, therefore, it leads to a negative impact on corporate performance. QT is the composite estimation of how nicely a business enterprise is executing its utmost important parameters, typically marketplace, the performance of shareholder and monetary parameters. The analysis of QT is the subset of business intelligence and business analytics which are involved in the firms financial health, that was historically analyzed as corporate financial

performance. Though, in previous years, the idea regarding business strength has become wider.

If there is a constraint in the way of your freedom, you are not allowed to do whatever you wanted to do. A lawful constraint is a regulation that bounds your freedom to do what you like to do. A financial constraint refers to a deficiency of cash due to which you are not able to purchase something or you cannot do something. When you perform under a constraint, you are forcefully required to do something that you do not want, no institute can provide real education if it is working under any financial constraint, deficiency of resources definitely impacts research projects and study programs that are advantageous for the country growth. You will sign the document only when you are persuaded that its contents are in your best interests.

Chung Wright and Charoenwong (1998), McConnell and Muscarella (1985), Burton, Lonie, and Power (1999) presented that, the literature regarding investment decision was evolved by numerous empirical and theoretical contributions. Several studies are showing a significant relationship between the value of a firm and investment. Moreover, Modigliani and Miller in (1958) presented an influential study which exposed, there are the independent decision of funding and investment, wide literature that was founded at inadequacies capital market appeared in these decisions which are supporting relationship. Hubbard(1998), Fazzari, Petersen and Hubbard, (1988).

Sartoris and Hill (1983), Kim and Chung (1990) Schiff and Lieber (1974), In spite the significance regarding these interdependencies among different elements of WC after assessing their impact at corporate performance to estimate impacts in WCM and definitely, a probable impact of funding, few studies of empirical evidence at this relationship exists. Literature on WCM falling into challenging perspectives regarding investment in WC. better working capital levels allow corporations to booming their level of income gain better early payments discounts doof (2003) and, consequently, might maximize the companys worth.kieschnick Laplante and Moussawi (2011). Otherwise, larger levels of WC need funding subsequently, corporations are facing additional financing charges, who rise chances

of their bankruptcy. Combining those positive and negative outcomes of working capital is leading to the forecast of the nonlinear relationship among financing in WCM and QT. Increase in profits and increase in sales of any firm relay on production management and as well as on cost management. These factors suggest corporation effectiveness and market denomination. There are various elements which take part in company productivity, but amongst all WCM is exclusive.

Uchenna, value and Mary (2012) exposed that it requires higher share amongst company charges, specifically in manufacturing businesses. Thirty to forty percent of the firms investment overall is signified by working capital. That is needed in order to sustain WC at an optimal level for escaping any deficiency problem in dealing with smooth enterprise operations Harris (2005). WCM acts as a significant component for anticipating companys profitability keeping liquidity. Financing in working capital is an element of companys total assets Appuhami (2008), that may be generally clarified as a variance of current assets and entire current liabilities that are contributing in firms financial strength. effective working capital management as described by Harris (2005), contains planning controlling regarding CA and CL in order to sustain constancy between liquidity and profitability working capital management act as a manner for financing short-term financial needs via effective control regarding current liabilities and current assets. Companys primary goal is maximizing wealth which could handiest be finished via developing a stability in above-cited indicators. accordingly, WCM can be taken into consideration as a key component in order to provide an explanation for firm performance via retaining liquidity for every day moves Van Horne and Wachowicz (2008). For the success of the company, the WCM act as an important pre-requisite Ghosh and Maji (2004). That was among those seven aspects which were explained by Rappaport (1986), that is used to determine the wealth of shareholders. Main aim of a WCM is to provide a guarantee through that a firm is able to fulfil its short term obligations to cover its all daily expenses in the given time horizon.

Though, working capital management might leads to a financial crunch, heaves danger and also cuts success Ukaegbu (2014). Because of the considerable quantity and investment in WC and the reputation of working capital strategy to

determine the risk of the firm WCM is having an effect not just at the financial performance of the firm but also an impact on its market performance Abuzayed (2012). Aim of this research was clarifying the relation between WCM and QT between Scandinavian republics (Sweden, Norway, Denmark). Here are two details for the choice of these republics: primarily, such republics have firm political situations economic conditions, on the other hand, their formal situations are helpful of developing corporate activities and structuring durable corporate relations. Working capital management (WCM like inventory days, cash conversion cycle, payable days receivable days, current ratio and working capital. The results of the study are showing the negative impacts days of account receivable and days of account payable CCC and days of inventory at corporate productivity.

Such consequences are indicating as great retrieval period impacts at funds available that ultimately affects the profitability and operation of a firm. Furthermore, a positive relation prevails within working capital and current assets with a value of a business, which displays the significance of excessive CA research recommends that the companies who are expected in order to improve their productivity have to pay superior care towards working capital management. The extreme levels regarding CA tells that. There is a negative impact on the profitability of firm while a lower level of CA may lead toward reducing liquidity stock outs outcomes from complications in sustaining smooth actions. Old perception regarding WC is diverse among CL and CA. Therefore, WCM is an effort in order to regulate and manage current liabilities and current assets for increasing the appropriate liquidity level and productivity in corporate. WCM and its effect on Companys performance was studied broadly by various researchers like Padachi (2006); Finau (2011); Anand and Gupta (2002) Janli, 2012 and, Adamu 2016 and Mohamad and Noriza, (2010). Most of these and other researchers identified a significant association between firms performance and working capital management.

It has though been exposed that some procedures used by managers for making working capital decisions dont depend on the principles of finance, relatively they use uncertain poorly constructed models and rules of thumb thereby worsening the performance of the enterprise. This makes managers dont successfully accomplish

the numerous combinations of elements of available WCM to them, the corporation might be undercapitalized or overcapitalized or it might be poorest but still liquidate. While a number of studies both at local and foreign level have been done in the area of performance of firms and WCM discusses running of short-term assets According to the elementary idea, assets must be assigned in order to realize their optimum potential and to decrease waste. Brealey, Myers and Allen, (2013). Pointing consideration to working capital management is proved popular during recessions in disasters for instance crises of oil during the year 1970, Scholleova (2012). One explanation with regard to this is that large size businesses can easily get monetary funding from outside resources, for instance having the ability to issue bonds and have higher credit ratings. Which impact at the significance of WCM and its effect on different corporations. Russ Banham (2013), Scholleova (2012).

It was discussed by Gill, Biger, and Mathur (2010) working capital managements idea in a relationship with the effectiveness. An important task of WCM demands enhancing the effectiveness it even has to build this striking over a time period, under the virtuous financial environment likewise in strict environment Gill et al. (2010). Though, in accordance with the work of Russ Banham (2013) who investigated thousand major government-based corporations of Europe, the quantity of devotion paid to WCM leads to decline during corporations attain growth right after a slump. In spite of businesses move their devotion towards energies directing for increasing progress of revenues. Companies are not using their working capital capably as a result that rising revenue becomes more expensive.

Banham (2013) Danske Bank during 2009, together with Ernst and Young (2009) studied a number of Nordic corporations opinions about WCM and its report is aligning with opinions of Scholleova (2012) study indicated WC was perceived as the most significant in the time period of recessions while liquidity was considered as bigger worry for businesses. Furthermore, the discoveries of Danske Bank and Ernst and Young (2009) showed, the growth was considered most important during economic prosperity, henceforth, there may be an exchange between revenue growth in working capital management. Moreover, a shift in attention has

made corporations to get less money for their businesses their efforts for growth Banham (2013).

## 2.3 Financial Constraints

In a study, Modigliani and Miller (1958) argued, in this world, firms at all times attain outside funding without difficulties therefore investments dont rely on the accessibility of internal capital. Once capital market deficiencies that are (agency costs and asymmetric information) are existing, capital market resistances growth cost of external investment comparative to inside created capitals Greenwald et al. (1984)

Jensen and Meckling, (1976) Myers and Majluf, (1984). Therefore, investment from outside resources does not provide better alternatives for interior investment. stiglitz and Weiss (1981) similarly described how info asymmetry product in controlling of debt. this line, Fazzari et al. (1988) propose as companies' financing depends on monetary factors like an accessibility of interior investment, entree to the cost of funding and capital markets.

There are numerous measures in prior researcher for distinct companies which are facing problems of financial constraints but thats still a point for discussion that which is the better measure. Therefore, we categorize companies through bellow mention proxies regarding the presence of financial constraints.

### 2.3.1 Dividends

Following Fazzari et al. (1988) used Dividend as their main variable for identifying a company's level of constraints in So financially weaker companies incline to not give dividends for reducing a possibility of increasing exterior financing in coming years. Therefore, firstly we have to divide data into two groups which are good positive dividend and second is zero dividend groups. We assume that which company pay zero dividend that companies have more chances to face financial distress.

Fazzari et al. (1988) considered that companies are financially constrained if outside investments are too much expensive. These, companies are supposed to suffer financial distress if seeing their exterior investment cost, measured though using this ratio financial expenses divided by total debt.

### 2.3.2 Interest Coverage

.

This is the most important variable for the measurement of a companys bankruptcy, financial distress and the company's risk Whited (1992). On interest coverage ratio base companies go into two sets, that arises by measurement of the ratio incomes prior to tax and interest to monetary expenditures.

Larger this ratio, will results the lesser difficulties the company will have for paying its liability and corporation's incomes earlier from tax interest will shelter the payment of interest. Henceforth, firms who are having an interest coverage ratio below and above the sample median are more or less possible to be financially constrained.

**H$_1$:** There will be a significant effect of WCM decision on QT.

**H$_0$:** There will be no significant effect of WCM decision" on QT.

# Chapter 3

# Research Methodology

## 3.1 Data Specification

This study investigates the impact of working capital management on the performance of the non-financial firms in Pakistan. The study has been used secondary data of hundred non-financial firm listed in Pakistan stock exchange From 2006 to 2016 remain listed. Panel data methodology has been used to examine the relationship. QT has been taken as a proxy of corporate performance and NTC as a proxy for working capital management. $NTC^2$ tells us that if you goes in excessive credit policy which means when you give your creditors double credit this will effect your firm value and firm performance will be negative. While Firm size (SIZE), leverage (LEV), Return on assets (ROA) and growth (GROWTH) has been used as control variables. The firms included in the study qualify the criteria that they remained listed on the Stock Exchange from 2006 to 2016. Data is extracted from the annual reports of these firms. Sectors included in the study are as follow.

TABLE 3.1: Sector of Firms

| | |
|---|---|
| 1. Allied textile composite and Vanaspati. | 2. Glass and ceramics |
| 3. Automobile assembler | 4. Leather and tanneries |
| 5. Automobile parts and accessories | 6. Oil and gas marketing |
| 7. Cable | 8. Oil and gas exploration |
| 9. Cement | 10. Personal care products |
| 11. Chemical | 12. Refinery |
| 13. Electric Goods | 14. Spinning and textile |
| 15. Engineering | 16. Synthetic and rayon |
| 17. Fertilizer | 18. Textile |
| 19. Food | 20. Weaving |

The secondary data will be collected in this study from annual reports of Non-financial companies listed in Stock Exchange of Pakistan.

## 3.2   Model Specification

We regress corporate performance against NTC and NTC$^2$. Other control variables are also included in the study due to their potential influences on the performance of the firm. These variables are the firm size (SIZE), leverage (LEV), opportunity growth (GROWTH), and return on assets (ROA). Therefore, we estimate the following model:

$$Q_{i.t} = \beta_0 + \beta_1 NTC_{i.t} + \beta_2 NTC_{i.t}^2 + \beta_3 SIZE_{i.t} + \beta_4 LEVI_{i.t}$$
$$+ \beta_5 GROWTH_{i.t} + \beta_6 ROA + \lambda_t + \epsilon_{i.t}$$

**Whereas,**

NTC = Net Trading Cycle

$NTC^2$ = Square of Net Trading Cycle

SIZE = Firm Size

LEVI = Leverage

GROWTH = Sales Growth

ROA = Return on Assets

$\lambda$ t = Parameter is a time dummy variable

$\varepsilon_{i.t}$ = Random disturbance

# 3.3 Variable Specification

## 3.3.1 Corporate Performance

According to Baos-Caballero, S., et al., (2013) the formula to calculate corporate performance is as under

$$Market\ value\ of\ equity + (Long\text{-}term\ Debt\ /\ Total\ Assets)$$

## 3.3.2 Net Trading Cycle

NTC is an ongoing liquidity management that provides an easy estimate for additional financing needs with regard to working capital (Baos-Caballero, S., et al., 2013). The formula to calculate the net trading cycle is as under

$$(Accounts\ Receivables\ /\ Net\ Sales\ *\ 365) + (Inventory\ /\ Net\ Sales\ *365) - $$
$$(Accounts\ Payables\ /\ Purchases\ *\ 365)$$

### 3.3.3   Square of Net Trading Cycle

According to Baos-Caballero, S., et al., (2013) the formula to calculate the square of the net trading cycle is as under

$$[(\text{Accounts Receivables / Net Sales * 365}) + (\text{Inventory / Net Sales *365}) - (\text{Accounts Payables /Purchases * 365})]^2.$$

### 3.3.4   Firm Size

Firm size is used to capture the complexity of the firm (Baos-Caballero, S., et al., 2013). Size shows firm size as the natural logarithm of sales. The formula to calculate firm size is as under

$$\text{Log (Net Sales)}$$

### 3.3.5   Leverage

Baos-Caballero, S., et al., (2013) Leverage is the firm's ability to how well its assets can be used to pay the firm's obligations and formula to calculate leverage is as under

$$\text{Total Debts / Total Assets}$$

### 3.3.6   Growth

Sales growth represents investment growth opportunities (Baos-Caballero, S., et al., 2013). The formula to calculate sales growth is as under

$$(\text{Current Year Total Assets - Last Year's Total Assets}) / \text{Last Year's Total Assets}$$

### 3.3.7   Return on Assets

ROA reflects the profitability of a company relative to its total assets (Baos-Caballero, S., et al., 2013). ROA shows that how efficiently management generates earnings by using its assets. The formula to calculate ROA is as under

$$EBIT \text{ / Total Assets}$$

# Chapter 4

# Results and Discussion

## 4.1  Descriptive Statistics

Descriptive statistics are used to test the frequency distribution. The analysis of this study started with descriptive statistics. The descriptive statistics are reported in Table 4.1. The mean, median, minimum and maximum values with a standard deviation of different variables are presented in the Table. Mean, median shows the central tendency of the data whereas standard deviation explains the dispersion of the data that how much data is deviated from its mean. Kurtosis, skewness, minimum and maximum values represent scattering of the data.

Results indicate that the corporate performance of firms ranges from 0.72727 to 0.00925 with a mean of 0.20100. The mean NTC is 52.07 days (median is 56.45 days). On leverage, 15.68% of total assets are financed with financial debt. The mean GROWTH ratio is 0.08 while its wide range is spread between 0.3% and 16.85% indicating a low variation of firms growing policies within this period of study. Mean ROA is 29.13% (median is 27.10%), indicating 29.13% of total assets are generated from earnings. The standard deviation of corporate performance is 0.19698. Kurtosis represents relative Preakness or flatness of data distribution. Kurtosis is 3 for normal distribution. The data distribution is relatively peaked or leptokurtic if it exceeds 3 and it is considered to be platykurtic if the value is less than 3. Table signals platykurtic distribution of data.

TABLE 4.1: Descriptive Statistics

|  | QT | NTC | LOGNTC2 | SIZE | LEV | SG | ROA |
|---|---|---|---|---|---|---|---|
| Mean | 0.201 | 52.079 | 6.794 | 15.265 | 0.156 | 0.087 | 0.291 |
| Median | 0.138 | 56.454 | 8.066 | 15.346 | 0.129 | 0.090 | 0.271 |
| Max. | 0.727 | 99.043 | 9.191 | 17.859 | 0.365 | 0.168 | 0.689 |
| Min. | 0.009 | 2.294 | 1.661 | 12.254 | 0.001 | 0.003 | -0.053 |
| SD | 0.196 | 35.264 | 2.739 | 1.440 | 0.124 | 0.074 | 0.176 |
| Skewness | 1.322 | -0.116 | -1.052 | -0.236 | 0.499 | -0.034 | 0.421 |
| Kurtosis | 3.904 | 1.611 | 2.523 | 2.574 | 1.871 | 1.179 | 2.970 |
| Obs. | 1089 | 1089 | 1089 | 1089 | 1089 | 1088 | 1089 |

*\*Values rounded off to three decimal places*

## 4.2 Correlation Matrix

Table 4.2 report to check the problem of multicollinearity by Pearson correlation and Variance Inflation Factor (VIF) test. The correlation matrix is used to identify the relationship among variables, specifically the effect of independent and dependent variables. Hence, there is no value above from the threshold.

TABLE 4.2: Correlation Matrix

|  | QT | NTC | LOGNTC2 | SIZE | LEV | SG | ROA |
|---|---|---|---|---|---|---|---|
| QT | 1.00 |  |  |  |  |  |  |
| NTC | -0.03 | 1.00 |  |  |  |  |  |
| LOGNTC2 | -0.02 | 0.71 | 1.00 |  |  |  |  |
| SIZE | -0.02 | -0.17 | -0.07 | 1.00 |  |  |  |
| LEV | 0.88 | -0.07 | -0.04 | -0.02 | 1.00 |  |  |
| SG | 0.02 | -0.01 | 0.01 | 0.16 | 0.04 | 1.00 |  |
| ROA | 0.03 | 0.05 | 0.113 | 0.23 | -0.01 | 0.18 | 1.00 |

*\*\*Values rounded off to two decimal places*

For the confirmation, by running variance inflation factor values reported in table 4.3 which clearly evidence that all VIF values shows meaning that there is no issue of multicollinearity exit in the empirical study.

TABLE 4.3: Variance Inflation Factor

| Variable | VIF |
|----------|------|
| NTC | 7.07 |
| LOGNTC2 | 7.10 |
| SIZE | 1.23 |
| LEV | 1.02 |
| SG | 1.05 |
| ROA | 1.36 |
| **Mean VIF** | **3.14** |

## 4.3 Redundant Test

For the appropriate model selection between the common coefficient and fixed effect, the decision has been concluded by applying the redundant test. The result report in table 4.4, predicts that the appropriate model the empirical study is a fixed model.

TABLE 4.4: Test Cross-Section Fixed Effects

| Effects Test | Statistic | d.f. | Prob. |
|--------------|-----------|------|-------|
| Cross-section F | 3.2582 | -98982.0000 | 0.0000 |
| Cross-section Chi-square | 306.0206 | 98.0000 | 0.0000 |

- **$H_0$: The appropriate model is the common coefficient**

- **$H_1$: The appropriate model is fixed effects**

Table 4.4 result predicts that the chi-sq. prob. Value is less than 0.05, clearly indicates that the appropriate model is a fixed effect because the prob. value is below 0.05.

## 4.4 Hausman Test

Hausman Test runs to determine the appropriate model selection between fixed and random effects. The result shows that the Chi-sq. statistics probability value is less than 0.05 which is significant. Therefore, the appropriate model is a fixed effect rather than a random effect model.

TABLE 4.5: Test Cross-Section Random Effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| --- | --- | --- | --- |
| Cross-section random | 19.3349 | 6.0000 | 0.0036 |

- **$H_0$: The appropriate model is random effects**

- **$H_1$: The appropriate model is fixed effects**

## 4.5 Impact of Working Capital Management on Corporate Performance

The results indicate that Growth (p=0.7104) is not significant and is having a negative relation with the QT. This finding is consistent with the findings of Jahfer (2015) who concluded an insignificant relation between firm value and growth. The results indicate that Leverage (p=0.0000) is having a significant and positive relationship with the QT.

TABLE 4.6: Effect of Working Capital Management on Performance

| Variable | Least Square | | | Fixed Effect | | | Random Effect | | |
|---|---|---|---|---|---|---|---|---|---|
| | Coeff. | SE | Prob. | Coeff. | SE | Prob. | Coeff. | SE | Prob. |
| C | -0.0034 | 0.0318 | 0.9151 | 0.0678 | 0.0535 | 0.2057 | 0.0274 | 0.0395 | 0.4885 |
| NTC | 0.0011 | 0.0002 | 0.0000 | 0.0005 | 0.0002 | 0.0439 | 0.0007 | 0.0002 | 0.0006 |
| LOGNTC2 | -0.0128 | 0.0027 | 0.0000 | -0.0067 | 0.0030 | 0.0256 | -0.0091 | 0.0028 | 0.0009 |
| SIZE | -0.0003 | 0.0021 | 0.9021 | -0.0047 | 0.0036 | 0.1929 | -0.0023 | 0.0026 | 0.3792 |
| LEV | 1.3949 | 0.0222 | 0.0000 | 1.3526 | 0.0278 | 0.0000 | 1.3735 | 0.0244 | 0.0000 |
| SG | -0.0585 | 0.0377 | 0.1209 | -0.0134 | 0.0360 | 0.7104 | -0.0305 | 0.0354 | 0.3888 |
| ROA | 0.0828 | 0.0188 | 0.0000 | 0.0513 | 0.0268 | 0.0559 | 0.0667 | 0.0217 | 0.0022 |
| $R^2$ | 0.7913 | | | 0.8425 | | | 0.7482 | | |
| Adj. $R^2$ | 0.7901 | | | 0.8258 | | | 0.7468 | | |
| F-statistic | 682.4637 | | | 50.5109 | | | 534.9142 | | |
| Prob. (F-statistic) | 0.0000 | | | 0.0000 | | | 0.0000 | | |

*Significant at 0.05

Table 4.7: Impact of Net Trading Cycle on Corporate Performance

| | Fixed Effect | | | |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.0678 | 0.0535 | 1.2664 | 0.2057 |
| NTC | 0.0005 | 0.0002 | 2.0177 | 0.0439 |
| LOGNTC2 | -0.0067 | 0.0030 | -2.2359 | 0.0256 |
| SIZE | -0.0047 | 0.0036 | -1.3029 | 0.1929 |
| LEV | 1.3526 | 0.0278 | 48.6091 | 0.0000 |
| SG | -0.0134 | 0.0360 | -0.3714 | 0.7104 |
| ROA | 0.0513 | 0.0268 | 1.9137 | 0.0559 |
| R-squared | 0.8425 | | | |
| Adjusted R-squared | 0.8258 | | | |
| F-statistic | 50.5109 | | | |
| Prob. (F-statistic) | 0.0000 | | | |

*Significant at 0.05*

This shows that an increase in Leverage (LEV) will positively impact corporate performance (Qt) and decrease in Leverage (LEV) will also lower corporate performance (Qt). This finding is in contradiction to some earlier studies and further research is needed to be conducted to find out the reason. The results indicate that Net Trading Cycle (p=0.0439) is having a significant and positive relationship with the corporate performance (Qt).

This finding is inconsistent with Nurein (2014) which concluded a strong significant relationship between firm value and Net Trading Cycle and concluded firms under less financial constraints manage their working capital effectively and

efficiently. Certain studies investigated that if you extend credit policy of the company that will effect of the company performance. While (NTC$^2$) results indicate that Baos-Caballero, S., et al., (2013) found that NTC is positively and its square is negatively related with corporate performance. (NTC$^2$) tells us that if you goes in excessive credit policy which means when you give your creditors double credit this will effect your firm value and firm performance will be negative. This is confirming a huge and statistically significant inverted U-shaped relationship between corporate performance and working capital.

LOGNTC2 is solution of this if we not take LOGNTC2 then we can't run regression without taking log of NTC$_2$ to linearized the results we take log and then the fixed effect model will be applied.

The implication of the finding is that the results of higher sales couple with early payments discounts arise when the working capital level is below the optimal level, therefore, firm performance is positively influenced by working capital. The results indicate that Return on Assets (p=0.0559) is having a significant and positive relation with the corporate performance (Qt). This finding is consistent with Bui, N.D. & Nguyen, L.T. (2015) who found a significant and positive relation between firm value and return on assets. The results indicate that SIZE (p=0.1929) is not significant and is having a negative relation with the corporate performance. This shows that an increase in Firm's size (SIZE) will negatively impact corporate performance (Qt) and a decrease in Firm's size (SIZE) will enhance corporate performance (Qt). The findings are consistent with the observations by Amato and Wilder (1990) who stated that as a firm grows in size, inefficiencies are developed, leading to relatively inferior performance.

# Chapter 5

# Conclusion and
# Recommendations

## 5.1   Conclusion

Previously we discussed the findings of this study through the results of the descriptive statistics, correlation matrix and the regression analysis. However, now we are focused on the conclusions, implications and further research recommended by this study.

The study set out to provide empirical evidence about the effects of working capital management on corporate performance for a panel made up of a sample of a hundred non-financial firms for the period 2006-2016. A panel data model is used and the methods applied for the regression analysis were Common-effect, Fixed-effects, and Random-effect.

The purpose of this thesis is to test our hypothesis whether there exists a relationship between working capital and corporate performance in non-financial firms of Pakistan. The results show that for the overall non-financial sector, working capital management has a positive significant impact over corporate performance.

The findings of this study have been expressly analyzed in this chapter. This consist of the summary statistics of data for this study, the correlation matrix showing the correlation between the independent variables, the Variance Inflation

factors that indicate the level of multicollinearity of the variables, and the regression analyses of the data. Our study is inconsistent with Vural, Skmen and etenak (2012) which concluded that working capital has a significant and positive impact on the firm performance and many earlier studies.

A multitude of previous studies has shown that corporate performance is influenced by efficient and effective working capital management. Most of these studies found a negative significant relationship between firms' performance and working capital management, while few studies came out with a positive significant relationship between them. However, this study is in line with previous studies that found a positive relationship between corporate performance and working capital management.

In our study, we found a weak and negative relationship between corporate performance and growth, and firm size but the positive and significant relation between corporate performance and the rest of the variables. A positive significant relation between ROA and performance shows effective management of their assets by these firms.

An inverse relation between firm size and corporate performance highlights that firms develop inefficiencies as they grow in size which leads to inferior performance. A significant positive relation of net trading cycle with performance indicate firms are managing their working capital effectively and efficiently. An inverse relation between growth and performance is inconsistent with the earlier study of Jahfer (2015) who concluded the same results. Leverage is found to have a significant and positive relation with a performance which contradicts the earlier studies. This phenomenon may be attributed to the inconsistent and volatile economic conditions of Pakistan. The reasons for this contradiction may further be explored in upcoming researches and this topic is left for the future.

## 5.2  Recommendations

This study implies that managers should focus on maintaining and enforcing an effective and efficient working capital policy due to its effect on overall corporate

performance. Firms should be concerned about possible costs that could be incurred if the optimal working capital level is not achieved by them. Payment and collection policies of the firms should be periodically revised. Firms need to develop policies and put strict monitoring in order to enhance their performance and efficiency using minimum resources. Hiring competitive and skilled labor is the key to enhance corporate performance. Managers consistently need to take corrective measures in order to push their firms in the right way. The data used for this study are limited and applicable to non-financial firms in Pakistan. However, the results and the recommendations are useful for any non-financial firms, governments, financial analysts, researchers, managers, accountants, and stakeholders.

# Bibliography

Abdulazeez, D. A., Baba, N. A., Fatima, K. R., & Abdulrahman, Y. (2018). Working Capital Management and Financial Performance of Listed Conglomerate Companies in Nigeria. Journal of Accounting, Finance and Auditing Studies, 4(2), 49-66.

Abuzayed, B. (2012). Working capital management and firms performance in emerging markets: the case of Jordan. International Journal of Managerial Finance, 8(2), 155-179.

Adamu, Y. (2016). Effects of Working Capital Management and the Financial Performance of the Pharmaceutical Firms in Nigeria, Journal of Economics, Commerce and Management, Vol. 4(4), 349-367.

Afrifa, g. a., & Padachi, K. (2016). Working capital level influence on sMe profitability. Journal of Small Business and Enterprise Development, 23(1), 44-63.

Akinlo, O. O. (2012). Effect of working capital on profitability of selected quoted firms in Nigeria. Global Business Review, 13(3), 367-381.

Akinwande, G. S. (2009). Working capital managent in telecommunicatio sector-a case study of Vgc Telecoms. School of Management, 63, 81-86.

Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. Journal of Corporate Finance, 30, 98-113.

Altman, E. (1968). Financial ratios, discriminant analysis and the prediction of the corporate bankruptcy. Journal of Finance, Vol.23(4),589-609.

Amato, L., & Wilder, R. (1990). Firm and industry effects in industrial economics. Southern Economic Journal, 57,93-105.

Anand, M., & Gupta, C. P. (2002). Working capital performance of corporate India: an empirical survey for the year 2000-2001.

Appuhami, B. r. (2008). the impact of firms capital expenditure on working capital management: an empirical study across industries in thailand. International Management Review, 4(1),1-24.

Aregbeyen, o. (2013). the effects of working capital management on the profitability of nigerian manufacturing firms. Journal of Business Economics and Management, 14(3), 520-534

Arrow, K. J. (1969). The organization of economic activity: issues pertinent to the choice of market versus nonmarket allocation. The analysis and evaluation of public expenditure: the PPB system, 1, 59-73.

Baos-Caballero, S., Garca-Teruel, P. J., & Martnez-Solano, P. (2013). The speed of adjustment in working capital requirement. The European Journal of Finance, 19(10), 978-992.

Baos-Caballero, s., garca-teruel, P. J., & Martnez-solano, P. (2014). Working capital management, corporate performance, and financial constraints. Journal of Business Research, 67(3), 332-338

Bei, Z., & Wijewardana, W. P. (2012). Working capital policy practice: Evidence from Sri Lankan companies. Procedia-Social and Behavioral Sciences, 40, 695-700.

Blinder, A. S., & Maccini, L. J. (1991). The resurgence of inventory research: What have we learned? Journal of Economic Surveys, 5, 291-328.

Brealey, R. A., Myers, S. C., & Allen, F. (2013). Principles of Corporate Finance. McGraw-Hill, Irwin Series in Finance.

Brennan, M., Maksimovic, V., & Zechner, J. (1988). Vendor financing. Journal of Finance, 43, 1127-1141.

Burton, M. B., Lonie, A. A., & Power, D.M. (1999). The stock market reaction to investment announcements: The case of individual capital expenditure projects. Journal of Business Finance & Accounting, 26, 681-708.

Charitou, M. S., Elfani, M., & Lois, P. (2010). The effect of working capital management on firms profitability: Empirical evidence from an emerging market. Journal of Business & Economics Research, 8(12), 63-68.

Chung, K. E., Wright, P., & Charoenwong, C. (1998). Investment opportunities and market reaction to capital expenditure decisions. Journal of Banking & Finance, 22, 41-60.

Coase, R. H. (1937). The nature of the firm. economica, 4(16), 386-405.

Deloof, M., & Jegers, M. (1996). Trade credit, product quality, and intragroup trade: Some European evidence. Financial Management, 25, 33-43.

Deloof M, (2003) ,"Does working capital management affect profitability of Belgian Firms? ", journal of Business, Finance and Accounting. Vol .30, 573-87 .

Eljelly, A. M. (2004). Liquidity profitability tradeoff: An empirical investigation in an emerging market. International journal of commerce and management, 14(2), 48-61.

Emery, G. (1984). A pure financial explanation for trade credit. Journal of Financial and Quantitative Analysis, 19, 271-285.

Emery, G. W., 1987 an optimal financial response to variable demand, Journal of financial and Quantitative Analysis 22, 209-225.

Enqvist, J., Graham, M., & Nikkinen, J. (2014). the impact of working capital management on firm profitability in different business cycles: evidence from finland. Research in International Business and Finance, 32, 36-49

Faith, D. and Ela, N. G. (2016). Impact of Working Capital Management and Firm Performance: Evidence from the Bist SMEs Industrial Index, International Journal of Trade, Economics and Finance, 7(2), 123-135.

Faulkender, M., & Wang, R. (2006). Corporate financial policy and the value of cash. Journal of Finance, 61, 1957-1990.

Fazzari, S. M., Hubbard, R. G., & Petersen, B. C. (1988). Financing constraints and corporate investment. Brookings Papers on Economic Activity, 1, 141-195.

Fazzari, S. M., and B. Petersen, 1993, working capital and fixed investment: new evidence on financing constraints, Rand Journal of Economics Vol.24, p. 328-342.

Filbeck, g., & Krueger, t. (2005). industry related differences in working capital management. Mid-American Journal of Business, Vol.20(2), 11-18.

Ganesan, V. (2007). An analysis of working capital management efficiency in telecommunication equipment industry. Rivier academic journal, 3(2), 1-10.

Ghosh, D. s. K., & Maji, s. g. (2004). Working capital management efficiency: a study on the indian cement industry. Management accountant Calcutta -, 39, 363-372.

Gill, a., Biger, n., & Mathur, n. (2010). the relationship between working capital management and profitability: evidence from the united states. Business and Economics Journal, 10(1), 1-9.

Greenwald, B., Stiglitz, J. E., &Weiss, A. (1984). Informational imperfections in the capital market and macroeconomic fluctuations. American Economic Review, 74, 194-199.

Harris, a. (2005). Working capital management: difficult but rewarding. Financial Executive, 21(4), 52 -54.

Hennart, J. F. (1989). The transaction-cost rationale for countertrade. Journal of Law, Economics, & Organization, 5(1), 127-153.

Hubbard, R. (1998). Capital-market imperfections and investment. Journal of Economic Literature, 36, 193-225.

Jahfer, A. (2015). Effects of working capital management on firm profitability: empirical evidence from Sri Lanka. International Journal of Managerial and Financial Accounting, 7(1), 26-37.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency cost and ownership structure. Journal of Financial Economics, 3, 305-360.

Kabethi, L. (2013). The Effect of Working Capital Management Practices on the Financial Performance of Small and Medium Enterprises in Kenya. Journal of Business and Management, 2(3), 35-40.

Kieschnick, R., LaPlante, M., & Moussawi, R. (2011). Working capital management and shareholder wealth. Working paper (SSRN: http://ssrn.com/abstract=1431165)

Kieschnick, r., laplante, M., & Moussawi, r. (2013). Working capital management and shareholders wealth. Review of Finance, 17(5), 1827-1852

Kim, Y. H., & Chung, K. H. (1990). An integrated evaluation of investment in inventory and credit: A cash flow approach. Journal of Business Finance & Accounting, 17, 381-390.

Lazar-Baker, E. E., Crampton, K. A., Kenny, B., Finau, K. A., Gangai, S., & Ramita, I. (2011). Postharvest disease management of horticultural produce in the Pacific Island Countries: a brief overview. Stewart Postharvest Review, 79(2), 1-9.

Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens stock exchange.Journal of Financial Management and Analysis 19(1), 82-89.

Lee, Y. W., & Stowe, J. D. (1993). Product risk, asymmetric information, and trade credit. Journal of Financial and Quantitative Analysis, 28, 285-300.

Long, M.S., I.B. Malitz, and S.A. Ravid, 1993, Trade Credit, Quality Guarantees, and Product Marketability,"Financial Management , 22, 117-127.

Machiuka, N. K. (2010). Growth strategies used by commercial banks in Kenya. unpublished MBA research project, School of Business, University of Nairobi, Kenya

McConnell, J. J., & Muscarella, C. J. (1985). Corporate capital expenditure decisions and the market value of the firm. Journal of Financial Economics, 14, 399-422.

Marttonen, S., Monto, S., & Krri, T. (2013). Profitable working capital management in industrial maintenance companies. Journal of Quality in Maintenance Engineering, 19(4), 429-446.

Mel, S. D., McKenzie, D., & Woodruff, C. (2014). What generates growth in microenterprises? Experimental evidence on capital, labor and training (No. 212). Competitive Advantage in the Global Economy (CAGE),2, 45-56

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. American Economic Review, 48, 261-297.

Mohamad, N. E. A. B., & Saad, N. B. M. (2010). Working capital management: The effect of market valuation and profitability in Malaysia. International Journal of Business and Management, Vol. 5, No. 11; 5(11), 140-144.

Mugwe, M. W., & Oliweny, T. (2013). The Effect of Credit Information Sharing on the Performance of Commercial Banks in Kenya. International Journal of Business and Commerce, 5(3), 41-63.

Myers, S., & Majluf, N. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13, 187-221.

Ng, C. K., J. K. Smith and R. L. Smith, 1999, evidence on the determinants of credit terms used in interfirm trade, journal of finance 54, 1109-1129.

Ngulumbu, O. M. (2013). Relationship between board composition and financial performance of companies listed at the Nairobi Securities Exchange. Unpublished, University of Nairobi.

Nyamweno, C. N., & Olweny, T. (2014). Effect of Working Capital Management on performance of Firms Listed at the Nairobi Securities Exchange. Economics and Finance Review, 3(11), 01-14.

Padachi, K. (2006). trends in working capital management and its impact on firms performance: an analysis of Mauritian small manufacturing firms. International Review of business research papers, 2(2), 45-58.

Petersen, M., & Rajan, R. (1997). Trade credit: Theories and evidence. Review of Financial Studies, 10, 661-691.

Pouraghajan, a., & emamgholipourarchi, M. (2012). the impact of Working Capital Management on Profitability and Market evaluation: evidence from tehran stock exchange. International Journal of Business and Social Science, 3(10), 135-148.

Petersen, M., and R. Rajan, 1995, the effect of credit market competition on lending relationships, quarterly journal of economics 110, 407-443.

Raheman, A., and M. nasr, 2007, working capital management and profitability-case of Pakistani firms, international review of business research papers 3, 275-296.

Raheman, A., Afza, T., Qayyum, A., & Bodla, M. A. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. International Research Journal of Finance and Economics, 47(1), 156-169.

Rappaport, a. (1986). Creating shareholder value: the new standard for business performance, Michigan: free Press.

Rika, N., Finau, G., Samuwai, J., & Kuma, C. (2016). Power and performance: Fiji rugbys transition from amateurism to professionalism. Accounting History, 21(1), 75-97.

Rindfleisch, A., & Heide, J. B. (1997). Transaction cost analysis: Past, present, and future applications. the Journal of Marketing, Vol. 61, No. 4 (Oct., 1997),30-54.

Ross, S. A., Westerfield, R., & Jordan, B. D. (2008). Fundamentals of corporate finance. Tata McGraw-Hill Education.

Samiloglu, F., & Demirgunes, K. (2008). The effect of working capital management on firm profitability: Evidence from Turkey. The International journal of applied Economics and Finance, 2(1), 44-50.

Sartoris, W., & Hill, N. (1983). Cash and working capital management. Journal of Finance, 38, 349-360.

Shadrack, M., Jane, M., & William, K. (2015). Effects of Working Capital Management Practices on the Financial Performance of Tourist Hotels in Mombasa County, Kenya. International Journal of Management and Commerce Innovations, 3(1), 421-435.

Schiff, M., & Lieber, Z. (1974). A model for the integration of credit and inventory management. Journal of Finance, 29, 133-140.

Shipley, D., & Davis, L. (1991). The role and burden-allocation of credit in distribution channels. Journal of Marketing Channels, 1, 3-22.

Shin, H. H., & Soenen, L. (1998). Efficiency of working capital and corporate profitability. Financial Practice & Education, 8, 37-45.

Singh, H. P., Kumar, S., & Colombage, s. (2017). Working Capital Management and firm Profitability: A Meta-analysis. Qualitative Research in Financial Markets, 9(1), 221-232.

Smith, K. V. (1973). state of the art of working capital management. Financial Management, Vol. 2, No. 3 (Autumn, 1973), pp. 50-5550-55.

Smith, J. K. (1987). Trade credit and informational asymmetry. Journal of Finance, Vol.42, 863-872.

Stiglitz, J., & Weiss, A. (1981). Credit rationing in markets with imperfect information. American Economic Review, 71, 393-410.

Subramanyam, K. R., & Wild, J. J. (2009). Financial statement analysis. McGraw-Hill.

Thorelli, H. B. (1986). Networks: between markets and hierarchies. Strategic management journal, 7(1), 37-51.

Tran, H., Abbott, M., & Jin-Yap, C. (2017). How does working capital management affect the profitability of Vietnamese small and medium-sized enterprises? Journal of Small Business and Enterprise Development, Vol. 24 Issue: 1, 2-11.

Uchenna, W., Mary, I., & okelue, D. (2012). effects of Working Capital Management on Profitability: evidence from the top five Beer Impact of Working

Capital Management on Firm Profitability 111 Brewery firms in the World. Asian Economic and Financial Review, Vol. 2(8), 966-973.

Ukaegbu, B. (2014). the significance of working capital management in determining firm profitability: evidence from developing economies in africa. Research in International Business and Finance, 31, 1-16.

VanHorne, g.J., & Wachawicz, M.J. (2008). Fundamentals of Financial Management, (13th ed.). Harlow: Prentice Hall

Vural, G., Skmen, A. G., & etenak, E. H. (2012). Effects of working capital management on firms performance: evidence from Turkey. International Journal of Economics and Financial Issues, 2(4), 488-495.

Wainaina, C. N. (2010). Relationship between profitability and working capital of small and medium enterprises in Kenya (Doctoral dissertation, University of Nairobi, Kenya).

Waithaka, A. (2012). The relationship between working capital management practices and financial performance of agricultural companies listed at the Nairobi Securities Exchange (Doctoral dissertation).

Wang, Y. J. (2002). Liquidity management, operating performance, and corporate value: Evidence from Japan and Taiwan. Journal of Multinational Financial Management, 12, 159-169.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. Administrative science quarterly, 269-296.

Wilner, B. S. (2000). The exploitation of relationship in financial distress: The case of trade credit. Journal of Finance, 55, 153-178.

# Appendices

CAPITAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

ISLAMABAD

**Department of Management Sciences**

# Annexure I

| S# | Company | S# | Company |
|----|---------|----|---------|
| 1 | AL- Abbas Sugar Mills Limited. | 50 | Grays Of Cambridge (Pakistan) Ltd. |
| 2 | AL-Abid Silk Mills Limited. | 51 | Gulshan Spinning Mills Ltd. |
| 3 | Abbot Laboatories (Pakistan) Ltd. | 52 | General Tyre and Rubber Co. of Pak. Ltd. |
| 4 | Attock Cement Pakistan Ltd. | 53 | Gharibwal Cement Ltd. |
| 5 | Artistic Denim Mills Limited | 54 | HinoPak Motors Ltd. |
| 6 | Agriautos Industries Limited | 55 | Highnoon Laboratories Limited |
| 7 | AL-Ghazi Tractors Ltd. | 56 | Hub Power Company Limited |
| 8 | Ahmed Hassan Textile Mills Ltd. | 57 | Ibrahim Fibre Limited |
| 9 | Al-Noor Sugar Mills Ltd | 58 | I.C.I Pakistan Ltd. |
| 10 | AL-Qadir Textile Mills Limited. | 59 | Indus Motor Company Limited |
| 11 | Aruj Industries Limited | 60 | International Industries Ltd. |
| 12 | Atlas Battery Limited | 61 | Ismail Industries Ltd. |
| 13 | Attock Refinery Ltd. | 62 | J. K. Spinning Mills Limited |

| 14 | Bawany Air Product Limited | 63 | Jubilee Spinning and Weaving Mills Ltd. |
|----|----------------------------|----|------------------------------------------|
| 15 | Bhanero Textile Mills Ltd. | 64 | Javedan Corporation Limited |
| 16 | Bannu Woollen Mills Limited | 65 | Kohat Cement Limited |
| 17 | Buxly Paints Ltd. | 66 | Kohinoor Energy Limited |
| 18 | Bestway Cement Ltd | 67 | Lucky Cement Limited |
| 19 | Baluchistan Wheels Limited | 68 | Mari Petroleum Company Limited |
| 20 | Century Paper and Board Mills Ltd. | 69 | Mahmood Textile Mills Limited |
| 21 | Yousaf Weaving Mills Limited. | 70 | Merit Packaging Ltd. |
| 22 | Chashma Sugar Mills Limited. | 71 | Masood Textile Mills Ltd. |
| 23 | Cherat Cement Company Limited | 72 | Murree Brewery Company Ltd |
| 24 | Clover Pakistan Limited | 73 | Mirza Sugar Mills Limited. |
| 25 | Colgate Palmolive (Pakistan) Ltd | 74 | Nagina Cotton Mills Ltd. |
| 26 | Crescent Textile Mills Ltd. | 75 | National Foods Limited. |
| 27 | Crescent Steel & Allied | 76 | Nimir Industrial Chemicals Ltd. |
| 28 | Dadex Eternit Limited. | 77 | N. P. Spinning Mills Ltd. |
| 29 | Dawood Lawrencepur Ltd. | 78 | National Refinery Ltd. |
| 30 | D. G. Khan Cement Co. | 79 | Olympia Spinning and Weaving Mills Ltd. |
| 31 | Diamond Industries Limited | 80 | Pak Datacom Limited |
| 32 | Din Textile Mills Limited | 81 | Pakistan Tobacco Co. Ltd. |
| 33 | Dewan Khalid Textile Mills Limited | 82 | Pakistan Cables Ltd. |
| 34 | Dewan Mushtaq Textile Mills Limited | 83 | Pioneer Cement Limited |
| 35 | Dewan Salman Fibre Limited | 84 | Pakistan National Shipping Corporation |
| 36 | Dewan Sugar Mills ltd. | 85 | Pakistan Services Ltd. |
| 37 | Ellcot Spinning Mills Ltd. | 86 | Pakistan Synthetic Ltd. |
| 38 | Fauji Fertilizer Bin Qasim Ltd. | 87 | Reliance Weaving Mills Ltd. |
| 39 | Faisal Spinning Mills Ltd. | 88 | Saif Textile Mills Limited |
| 40 | Ferozsons Laboratories Ltd. | 89 | Security Paper Ltd. |
| 41 | Frontier Ceramics Limited | 90 | Shadman Cotton Mills Ltd. |
| 42 | Fazal Cloth Mills Ltd . | 91 | Shezan International Ltd. |
| 43 | Gadoon Textile Mills Ltd. | 92 | Sitara Chemical Industries Ltd. |
| 44 | Gatron Industries Limited | 93 | Sui Southern Gas Co. Ltd. |
| 45 | Gul Ahmed Textile Mills Ltd. | 94 | Suraj Cotton Mills Ltd. |
| 46 | Ghani Glass Mills Limited | 95 | Telecard Limited |

| 47 | Ghandhara Nissan Limited | 96 | Treet Corporation Ltd. |
|----|--------------------------|----|------------------------|
| 48 | Glaxosmithkline (Pak) Ltd. | 97 | Wah-Nobel Chemicals Limited. |
| 49 | Gillette Pakistan Limited | 98 | Wyeth Pak Ltd. |