

Impact of Working Capital Management on Financial Charges: Empirical Evidence of Manufacturing Industry of Pakistan

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Abstract

Conventionally, the researchers in finance realm have principally focused on the long-term financial decisions making, particularly capital structure, dividends, investments, and company valuation decisions. However, short-term assets and liabilities are important components of total assets and needs to be carefully analyzed. Working capital management plays a significant role in better performance of firms worldwide. This paper analyzes the impact of Financial Charges onto working capital management in the firms of Pakistan for the period 2006 to 2011. For this purpose, panel data of 8 Pharmaceutical manufacturing firms is used which are listed on Karachi Stock Exchange. The results indicate that the average collection period, inventory holding period, average payable period, cash conversion cycle, net trade cycle are not single-handedly significantly affecting the working capital of the firms but after taking the lag collective effect of all working capital resulted in significant. The useful policies must be devised for the individual components of working capital but the results lead us that an aggregative effect is expected in working capital management from the perspective of financial charges impact. Furthermore, for handsome reduction in the financial charges efficient management of all working capital components are vital & future study of the same dimension shall bring more insight reviews & make it more reliable.

Keywords: Working Capital Management, Financial Charges, Manufacturing Industry

1. Introduction

1.1 Preamble

A firm's main business activities consist of identifying optimal investments, arranging appropriate financing to sustain the investment, and using the selected investments to generate revenues from which operating expenses, debt obligations, and equity holders' returns are paid. These activities are summarized in a firm's financial statements, which are the set of documents that collect and organize this information (L. A. Preve 2010).

The firm invests in assets that are used to produce goods and services that will be sold to customers, and that this production process has embedded costs. The P&L statement shows the accounting profit generated by the firm's operation. Since investors are paid from such profit, clearly this measure is of interest to investors. However, profit is not the only measure of interest, as it is not always a good proxy for the wealth generated by a given investment. In particular, investors also care about the cash flows of the firm. More specifically, investors consider the amount of cash that they invested and compare this value with the amount of cash that the investment returns to them, or their return on investment.

Successful companies have enough funding to execute their plans and support their operations. Most companies need cash to purchase land, buildings, equipment, and materials. Companies can reinvest a portion of their earnings, but most growing companies must also raise additional funds externally by some combination of selling stock and/or borrowing in the financial markets. (Michael C.E & Eugene F. Brigham 2011)

1.2 Working Capital

1.2.1 Definition

To institute understanding the concept of Working Capital along with its vital constitutes starting with one of the familiar author's explanation that Working Capital mainly represents the current assets of a firm which is the portion of financial resources of business that changes from one type of resources to another during the day-to-day execution of business (Gitman, 2002).

Working capital is usually defined as:

Working Capital = Current Assets – Current Liabilities

Current assets mainly comprise of cash, prepaid expenses, short-term investments, accounts receivable, inventory and other current assets. Net working capital can be measured by deducting current liabilities of a firm from its current assets. If the value of current assets is less than that of current liabilities then net working capital would have a negative value showing a deficit working capital. When a business entity takes the decisions regarding its current assets and current liabilities then it can be termed as working capital management. The management of working capital can be defined as an accounting approach that emphasize on maintaining proper levels of both current assets and current liabilities. It provides enough cash to meet the short-term obligations of a firm.

1.2.2 Broadened Concept

The above traditional definition although suffice the overall need to understand WC phenomenon but still the subtraction of current liabilities from current assets wont be aggregative helpful to sketch a complete picture of working capital. It starts from a supplier's current outstanding payment & extending till availing a line of credit from the financial institution to acquire a fixed asset as the interest is to be paid from cash generated from the operations. As far as the understanding of working capital concerned a generally acceptable literature based definition is: "Working capital shows how much cash (or liquid assets) is available to satisfy the short-term cash requirements imposed by current liabilities" (L. A. Preve 2010). Preve (2010) argues that accounting standards assume that an asset or a liability is a short-term item if it will be converted into cash (in the case of the assets) or become due (in the case of debts) within one year. Based on this assumption, current assets and current liabilities are usually considered short-term concepts. Thus, working capital is also commonly regarded as a short-term concept. The ever increasing complexities of functions & options of financings are not only changing the requirements of finance personals but even it further takes the decisions of finance to a higher tier if compared to a previous era of last decade. In this context the *current* portion of balance sheet is highly rigorous area to a CFO. Working capital management involves managing current assets and current liabilities of firms. The current assets are cash and cash equivalents, marketable securities, accounts receivable and inventories. The current liabilities are accounts payable, expenses payable, including accrued wages and taxes and notes payable. A narrower definition for the working capital is inventory + accounts receivable – accounts payable. So according to this definition, working capital management is managing inventory, accounts receivable and accounts payable. (Gamze VURAL, 2012)

Based on this conjecture, current assets and current liabilities are usually considered short-term concepts. Thus, working capital is also commonly regarded as a short-term concept. The ever increasing complexities of functions & options of financings are not only changing the requirements of finance personals but even it further takes the decisions of finance to a higher tier if compared to a previous era of last decade. In this context the *current* portion of balance sheet is highly rigorous area to for all stakeholders.

The effective working capital management is very important because it affects the performance and liquidity of the firms (Taleb et al., 2010). The main objective of working capital management is to reach optimal balance between working capital management components (Gill, 2011). The efficient management of working capital is a fundamental part of the overall corporate strategy to create shareholders' value (Nazir and Afza, 2008). Therefore firms try to keep an optimal level of working capital that maximizes their value (Deloof, 2003).

Niaz A. B et al (2011) stated the approaches of working capital management, in finance literature the researchers approaches Working Capital management from two distinct aspects: static or dynamic views (Moss and Stine, 1993; Lancaster *et al.*, 1999; and Farris and Hutchison, 2002). The static view of Liquidity analysis measures liquidity at a given point in time, on the contrary ongoing liquidity of firms operations is measured by dynamic view. As a dynamic measure of liquidity Cash Conversion cycle is used that measure cash outflow and cash inflow in days for a given period of time. Using static view researchers used traditional ratios calculated from balance sheet e.g. current and quick ratio and analyzed the working capital management and financing policies. In a study on retail firms by Moss and Stine (1993) showed that the firm size has a significant negative relationship with CCC i.e. larger the size of the firm shorter the CCC and vice versa. They also found a significant positive relation between length of the CCC and current and quick ratios. In another study conducted on non-financial firms of Istanbul Stock Exchange (ISE) by Uyar A. (2009) found a significant negative relationship between the length of CCC and firm size and its profitability.

Cash conversion cycle (CCC) is most popular measurement of working capital management which is the time lag between purchase of raw materials or render of services and the collection of cash from the sale of goods or services rendered. If the time lag is longer, it means greater investment to working capital components and this causes greater financing needs. So interest expenses will be higher which leads to higher default risk and lower profitability. Use of profitability as an indicator of firm performance, there can be a reverse relationship between CCC and firm performance.

1.3 Advantages of Working Capital management

Profitability can also be termed as the rate of return on investment. If there will be an unjustifiable over investment in current assets then this would negatively affect the rate of return on investment (Vishnani & Shah, 2007). The basic purpose of managing working capital is controlling of current financial resources of a firm in such a way that a balance is created between profitability of the firm and risk associated with that profitability (Ricci & Vito, 2000).

Every business requires working capital for its survival. Working capital is a vital part of business investment which is essential for continuous business operations. It is required by a firm to maintain its liquidity, solvency and profitability (Mukhopadhyay, 2004). The importance of managing working capital of a business efficiently cannot be denied (Filbeck & Krueger, 2005). Working Capital management explicitly impacts both the profitability and level of desired liquidity of a business (Raheman & Nasr, 2007). If a firm will invest heavily in working capital i.e. more than its needs, then the profits which can be generated by investing these resources in fixed or long term assets will be diminished. Moreover the firm will have to endure the cost of storing inventory for longer periods as well as the cost of handling excessive inventory (Arnold, 2008).

On the other hand, if a firm will invest heavily in fixed assets to generate profits by neglecting its short-term capital needs then it is quite possible that it may have to face bankruptcy because of insufficient funds. The profitability as well as adequate level of liquidity is required to be maintained for the survival of a business, so if a firm will not pay sufficient attention to its working capital management, then it is quite possible that the firm would have to face bankruptcy (Kargar & Blumenthal, 1994). Shortage of working capital is normally attributed as a major cause of failure of many small businesses in various developing and developed countries.

WC management concept reflects the overall liquidity of organization. Liquidity is a precondition to ensure that firms are able to meet its short-term obligations. The liquidity position in a company is measured based on the 'current ratio' and the 'quick ratio'. The current ratio establishes the relationship between current assets and current liabilities. Normally, a high current ratio is considered to be an indicator of the firm's ability to promptly meet its short term liabilities. The quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Low liquidity leads to the inability of a company to pay its creditors on time or honour its maturing obligations to suppliers of credit, services and goods. This could result in losses on account of non-availability of supplies and lead to possible insolvency. Also, the inability to meet the short term liabilities could affect the company's operations and in many cases it may affect its reputation as well. Inadequate cash or liquid assets on hand may force a company to miss the incentives given by the suppliers of credit, services, and goods as well. Loss of such incentives may result in higher cost of goods which in turn affects the profitability of the business. Every stakeholder has interest in the liquidity position of a company. Suppliers of goods will check the liquidity of the company before selling goods on credit. Employees should also be concerned about the company's liquidity to know whether the company can meet its employee related obligations, i.e., salary, pension, provident fund, etc. Thus, a company needs to maintain adequate liquidity.

Thus, a financial manager has to ensure, on one hand, that the firm has adequate cash to pay for its bills, has sufficient cash to make unexpected large purchases and cash reserve to meet emergencies, while on the other hand, he has to ensure that the funds of the firm are used so as to yield the highest return. This poses a dilemma of maintaining liquidity or profitability.

(Rafuse, 1996). Effective management of working capital consists of two steps which are planning for resources and controlling them. Both of these are required to facilitate the firm in meeting its short term obligations and also to let the firm avoid wastage of resources by over investment in current assets (Eljelly, 2004). Effective management of working capital decreases the need for lending funds to pay back the short term debts of the firm. There are different approaches for the management of working capital. Two basic policies of working capital management are namely aggressive working capital management policy and conservative working capital management policy. An aggressive investment policy with high levels of fixed assets and low investment in current assets may generate more profits for a firm. On the other hand it also accompanies a risk of insufficient funds for daily operations and for payment of short term debts. A conservative investment policy is opposite to it with less investment in fixed assets and more in current assets. For financing of working capital aggressive policy implies that current liabilities are maintained in a greater portion as compared to long-term debts. High level of current liabilities requires more resources to be in liquid form to pay back debts earlier. But current payouts bear less rate of interest and hence can cause more savings. In conservative working capital financing policy a greater portion of long-term debts is used in contrast to current liabilities. Working capital management and profitability certainly have some relation with each other. Much research work is available on this relationship. Working capital is very important part of business activities of any firm. So, the aim of this study is to find out "Does efficient working capital management have any impact on the financial charges of firms of Pakistan?" The remaining study is based on an analysis of previous literature which provides the theoretical background for the study, research methodology which includes description of all variables included

in the study and sample size. Chapter 4 comprises of the empirical analysis and regression results of the study. Chapter 5 provides the conclusion on all above.

This study empirically investigates the effects of working capital management on financial charges for the sample includes 8 Karachi Stock exchange market pharmaceutical manufacturing firms. There is limited research which considers effects of working capital management on firm's performance & its relation with other attributes of P&L for manufacturing firms listed on KSE and these studies measure only profitability as an indicator of firm performance. This paper contributes to the literature by identifying firm's borrowing cost an indicator of firm's efficient working capital management in Karachi. The collection period of accounts receivable, average days in inventories and accounts payable are used as components of Working capital (WC). Gross operating profit will also be analyzed descriptively to support the basic objective of this paper which is measured by sales minus cost of good sold (COGS).

The importance of working capital management became clear to us several years ago. There were reasons for this fact. We live, do research, teach, and work with firms in an emerging market, in which a sound working capital management can explain the difference between a financially distressed and a profitable firm (L. A. Preve 2010). Working capital management efficiency is vital especially for manufacturing firms, where a major part of assets is composed of current assets (Horne and Wachowitz, 2000).

The composed firms whether how big or small they are manage working capital for many reasons. Among them the profitability may be rated high. It directly affects the profitability and liquidity of firms (Raheman and Nasr, 2007). Researchers proved that the worth of working capital management efficiency is indisputable. Working capital is the most crucial factor for maintaining liquidity, survival, solvency and profitability of business.

Considering the importance of working capital management the researchers focused on evaluating the working capital management and profitability relationship such as Uyar, 2009; Samiloglu and Demirgunes, 2008; Vishnani and Shah, 2007; Teruel and Solano, 2007; Lazaridis & Tryfonidis, 2006; Padachi, 2006; Shin and Soenen, 1998; Smith et al., 1997 and Jose et al., 1996 among others. However, there are a few studies with reference to Pakistan like Afza and Nazir 2007 & 2008; Raheman and Nasr 2007 and Shah and Sana 2006. Afza and Nazir (2007, 2008) focused only on the working capital management financing policies. Other two studies focused on the relationship between profitability and working capital management in Pakistan. Shah and Sana (2006) concentrated on the oil and gas sector and estimated the relationship using small sample of 7 firms. Raheman and Nasr (2007) analyzed profitability and working capital management performance of only 94 firms listed on Karachi Stock Exchange for the period 1999-2004 only by using Ordinary Least Square and Generalized Least Square.

However this study focuses on to the cost which is directly resulting in not managing working capital properly; the financial cost. Studies on the firm's performance and working capital management with reference to Pakistan provide a strong motivation for evaluating the relationship between working capital management and other attributes in detail.

As far as the manufacturing is concerned, it is the second largest sector of the economy of Pakistan and it accounts for approx 20% of GDP. In the manufacturing sector, large scale manufacturing plays a vital role and accounts for approximately 70 percent of overall manufacturing (Government of Pakistan, 2006-07). As an important sector in the overall economic growth, manufacturing sector requires in depth analysis at industry as well as firm level. The sector is dominated by textile, oil and gas, cement and automobile sectors in terms of assets size and credit allocation. In addition to these sectors, pharma is the sector of interest for many reasons. The foremost can be the growth in every corner of financial statement i.e. revenues, assets, costs, expenses etc. Other reasons can be the availability of data & reliability of the same. Constraints of time allow this study to be focused on single industry, later studies can be conducted including the overall manufacturing industry representation.

Therefore the current study focused on evaluating the impact of working capital management and the performance, in terms of financial costs, of Pakistani pharma firms listed on KSE and to identify important variables that are influencing working capital management efficiency. Moreover the objective is also to witness the investment and financing policies of working capital for the manufacturing firms. This study has included a large sample of 8 firms listed on Karachi Stock Exchange (KSE) for the period 2003 - 2013.

1.4. Research Problem

Although working capital management itself focuses onto the proper utilization of current assets & current liabilities but on the other hand this proper handling pays off on many other venues such as the one which is this research paper's focus; financial charges.

"This research will investigate that whether or not the proper management of working capital shall impact the financial charges & result in shape of benefit/cost for the firm or no impact. Focusing the manufacturing industry of pharma & taking the KSE listed companies

as the frame of reference.”

1.4.1 Research Question

Through this research, the answers of the following questions will be answered:

- a) What are the various impacts management of working capital shall pose to financial charges from an organization perspective?
- b) Does management reckon it necessary to have stress upon capital structure decision keeping in view the working capital management?

1.5. Objectives of the Study

- To identify the importance of working capital management
- To determine that whether the management understands the financial value of working capital management
- To rationalize a firm to either put stress upon working capital management or not.
- What role do financial charges play while acquiring financings.
- To find out the relative importance of working capital management's components in views of management.

1.6. Justification

Working capital comprises of not only current portion of balance sheet but it also takes into account the short term expenditures & liquidity requirements. And even it does not end here and it impacts the long term needs of financing. This raises a query to inquire about. Effectively managed working capital reduces your need of borrowing and this ultimately reduces the borrowing cost & taking the profitability at a higher side without employing more assets and taking more risks.

On the above grounds this paper takes into account the working capital of manufacturing firms of Pakistan & by the analysis of their financial statements trying to establish a relationship between effective working capital & borrowing cost of debts. The conclusions of this paper shall bring another dimension to the aspects of looking at working capital. The aspect will be managing the WC for the sake of a long term vision. The stakeholder & beneficiary of this research's outcome are the firms which are doing business in the Pakistani economic environment, putting focus onto the manufacturing industries which are having more requirements to manage short term as well as long term items of balance sheet.

1.7. Limitations

As this is already stated that the study is of a term paper for the ARMT course so it shall not be taking a long time frame. On the contrary it shall only encompass the manufacturing firms listed on the KSE and involved in business of pharma related products.

1.8. Scope

The scope is very much limited as this study is for pure academic purpose and serves only for pure/basic research. This can not be generalized for all the manufacturing industries around the world. For generalization a further comprehensive study is required & this also opens the door for future research. The research will take into account the companies' perspective; as to how they carry out working capital planning in their firm and not the Investor's perspective.

1.9 Acronyms

KSE (Karachi Stock Exchange), WC (Working Capital)

2. Literature Review

2.1 Diverging view from the World

Filbeck and Krueger (2005) highlighted the importance of efficient working capital management by analyzing the working capital management policies of 32 non-financial industries in the US. Their findings reveal that significant differences exist among industries in working capital practices over time. Moreover, these practices, themselves, change significantly within industries over time. Similar studies were conducted by Gombola and Ketz (1983), Long *et al.* (1993), Soenen (1993) and Maxwell *et al.* (1998). Soenen (1993) investigated the relationship between the net trade cycle as a measure of working capital and return on investment in the US firms. The results of chi-square test indicated a negative relationship between the length of net trade cycle and return on assets. Furthermore, this inverse relationship was found to be different across industries. A significance relationship for about half of industries studied indicated that results might vary from industry to industry. Deloof (2003) analyzed a sample of large Belgian firms for the period 1992-96 and the results confirmed that Belgian firms can improve their profitability by reducing the inventories and the outstanding period of accounts

receivables. Teruel and Solano (2005) also suggested that managers can create value by reducing the firms' outstanding period of accounts receivables, and inventories. Similarly, shortening the cash conversion cycle also improves the firm's profitability.

Lazaridis and Tryfonidis (2006) used a sample of 131 companies listed in the Athens Stock Exchange (ASE) for the period of 2001-2004. They founded a significant negative relationship between cash conversion cycle and gross operating profit. The findings reveal that managers can create profits for their companies by handling correctly the cash conversion cycle and keeping each component (accounts receivable, accounts payable and inventory) to an optimal level.

To extend Lazaridis and Tryfonidis's findings, Gill et al., (2010) used a sample of 88 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007. They found statistically significant relationship between cash conversion cycle and profitability, measured through gross operating profit as in Lazaridis and Tryfonidis's research.

Sen. M (2009) examined the ISE (Istanbul Stock Exchange) listed firms and checked out the relationship with the working capital. According to them there is negative relationship among variables. His research uncovered the importance of the finance directors who act as moderators or catalysts to increase the productivity of the firm in other words they positively affect the firm's performance.

Dong (2010) reported that firm's profitability & liquidity are affected by working capital management in his analysis. Pooled data are selected for carrying out the research for the era of 2006-2008 for assessing the companies listed in stock market of Vietnam. He focused on the variables that include profitability, conversion cycle and its related elements and the relationship that exists between them. From his research it was found that the relationships among these variables are strongly negative. This denote that decrease in the profitability occur due to increase in cash conversion cycle. It is also found that if the number of days of account receivable and inventories are diminished then the profitability will increase numbers of days of accounts receivable and inventories.

Taghizadeh Khanqah Vahid et al. (2012) in Working capital management and corporate performance: evidence from Iranian companies analyzed 50 companies of medicine & cement listed in Tehran Stock Exchange for the period covered 2006-2009. Through statistical verification of correlation & regression found that Operating Profitability is negatively associated with measures of working capital management. The correlation coefficients for all measures of working capital management showed significant except for Cash Conversion Cycle. Their three variables jointly form Cash Conversion Cycle and there exists negative relationship between CCC and operating profitability but it was not found significant. Because all the three components of CCC has negative association with the profitability and Average Payment Period was subtracted from sum of ACP and ITID to form Cash Conversion Cycle. So that as the average collection period, inventory turnover in days, Net Trading Cycle and Average payment period increases it would lead to decreasing profitability of the firm, and authors debate that managers can create a positive value for the shareholders by reducing the, average collection period, inventory turnover in days, Net Trading Cycle and Average payment period to a possible minimum level.

Gamez Vural (2012) In this paper, Vural strived to develop five models to make an empirical research on the associations between working capital management with firm's performance. Tobin Q and gross operating profit were measured as a proxy of firm value and profitability of the firms with other independent variables for 75 selected listed companies on the Istanbul Stock Exchange in Turkey for the period 2002-2009. On the basis findings of the research, Vural conclude that there are significant relations between working capital management and firm performance.

Vural's results show that collection period of account receivables and cash conversion cycle are negatively related with firm's profitability and this means by shortening collection period and cash conversion cycle firms can increase their profitability. According to results, relationship between other working capital management components and firm's profitability is insignificant. Relationship between leverage and firm's profitability is negative while the relationship between firm size and Firm's profitability is positive. The results for firm value (TOBINQ) are insignificant except cash conversion cycle and leverage. According to results of the regression analysis, there is a positive relationship between cash conversion cycle and firm value while there is a negative relationship between leverage and firm value. This means, extending the cash conversion cycle will increase the firm value and lower leverage will lead to increasing of the firm value.

2.2 Converging on to the National Level

(Raheman & Nasr 2006) carried out a research on the listed companies of Karachi Stock Exchange concerning profitability & working capital. Conclusion depicts that Most of the Pakistani firms have large amounts of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on profitability of those firms. Finding of a significant negative relationship between net operating profitability and the average collection period, inventory turnover in days, average payment period and cash conversion cycle for a sample of Pakistani firms listed on KSE. These results suggest that managers can

create value for their shareholders by reducing the number of days accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Rehman & Nasr's analysis further concluded that their results could be further strengthened if the firms manage their working capital in more efficient ways. Management of working capital means "management of current assets and current liabilities, and financing these current assets". If these firms properly manage their cash, accounts receivables and inventories in a proper way, this will ultimately increase profitability of these companies.

In the Pakistani context, Rehman (2006) investigated the impact of working capital management on the profitability of 94 Pakistani firms listed on the Islamabad Stock Exchange (ISE) for the period 1999-2004. He studied the impact of different variables of working capital management, including average collection period, inventory turnover in days, average payment period, and CCC on the net operating profitability of firms. His study concluded that there is a strong negative relationship between working capital ratios and profitability of firms. Furthermore, managers can create a positive value for the shareholders by reducing the CCC up to an optimal level. Similar studies on working capital and profitability include: Smith and Begemann (1997), Howorth and Westhead (2003), Eljelly (2004), Ghosh and Maji (2004), and Lazaridis and Tryfonidis (2006).

Their conclusions are in confirmation with (Deloof 2003), (Eljelly 2004), (Shin and Soenan 1998) who found a strong negative relationship between the measures of working capital management including the average collection period, inventory turnover in days, average payment period and cash conversion cycle with corporate profitability.

(S.M.Amir Shah & Aisha Sana 2006) while analyzing Oil & Gas Sector of Pakistan for working capital relationship on profitability they declared working capital management is an integral part of financial management that's why most of the firms make huge investments in their working capital. They investigated through correlation analysis and Regression analysis using fixed effect model to analyze the relationship between working capital management and the profitability of oil and Gas sector of Pakistan. And the results illustrate a negative relationship between gross profit margin and number of day's inventory and number of day's accounts receivable cash conversion cycle and sales growth. Where as there is positive relation between gross profit margin and the number of day's accounts payables.

Further more, the study also explained the existence of firm effect, which is a different management style of the companies and different working capital needs. Through regression analysis their study described that joint effect of all coefficients is significant which means working capital management effects profitability of the firm. The independent variables jointly have strong explanatory power. This indicates that working capital management practices adequately explain changes in profitability of the firm.

S.M.Amir Shah & Aisha Sana also found cash conversion cycle negative. On the surface it would seem that a relatively short cash cycle would be a sign of good management. A firm is quick to collect cash from sales once it pays for purchases. But here the catch is that negative cash conversion cycle is due to pending payments of bills on time. That is why the payment cycle is longer than operating cycle. This measure reflects both operating and financing decisions of the firm. Sales growth show negative correlation with profitability which apparently show abnormal results but it does not seem abnormal in Oil and Gas Sector as its demand is more than supply, for more sales the company has to invest a lot initially which reduces the profit. However, results for sales growth may be confirmed by conducting research on data for long time period.

(Mian Sajid Nazir and Talat Afza 2009) conducted a study on determining factors of WC. M.S. Nasir & Talat Afza described that working capital management is highly important in firms as it is used to generate higher returns for the stakeholders; however, it has not elicited much attention from researchers and practitioners. When the working capital requirements are not properly managed and are allocated more than required, it renders the management inefficient and reduces the benefits of short-term investments. On the other hand, if the working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity crisis, leading to the degradation of company credit, as it cannot respond effectively to temporary capital requirements. There may be various external and internal factors that may induce the firms to strike a balance between meeting unforeseen capital requirements and avoiding inefficient management of capital. Their study uses some of those external and internal factors to explore the determinants of working capital requirements of a firm. They used operating cycle, operating cash flows, leverage, size, ROA, Tobin's q and growth as internal company-related factors, and Industry dummy and level of economic activity as external macroeconomic factors. Their study concluded that operating cycle, leverage, ROA and Tobin's q are the internal factors which are influencing the working capital requirements significantly. The working capital management practices are also related to the industry, and different industries are following different working capital requirements. Findings of the M.S.Nasir's study are partly in contradiction to some of the earlier studies on the issue. This phenomenon may be attributed to the developing market of Pakistan.

2.3 A More Imminent View

Most of the above researchers used the profitability or other same variables to ascertain the relationship of Working Capital management with different components of financial statement. Non of the study focused onto finding another relationship which can depict the efficiency of working capital management. This gap is filled by this study which strives to find a relationship of financial charges with working capital management.

Working capital management although deals with the short term assets & liabilities but it impacts onto the long term assets & liabilities. Proper management of short term Assets & liabilities leads to less stress or more relaxations, in financial term, onto long term assets & liabilities. From the same aspect financial charges are used as an indicator to gauge the efficient utilization of current assets & liberty of short term liabilities which is spontaneous mood of credit. The theories of Finance implicitly interpret that apposite management of working capital not only provide a room of investment in short run & earns more for the company but this phenomenon also reduces the cost of finance which is taken mostly for the long run.

Gitman L.J. (2002) relates that sources are from resources of Finance. And all are related to each other. He also gives relationship justification & uses. This conclusively end at the opinion that all sources are somehow somewhere relates to the resources. So, adding onto this that while managing the current portion of both sides of balance sheet not only reduction of financial charges will occur but it will definitely have handsome decline in the debt borrowing. This can be the further dimension of this research.

3 Research Methodology

3.1. Research Design

The design of this study is quantitative. And the process of operationalization of this research is completed by acquiring data regarding listed companies and performance of analytical tests on it. No primary data is collected to conduct this study the key focused area is to perform descriptive statistics & inferential tests on the same data to obtain valuable information from the systematic process.

3.2. Procedure

Operationalization is done by acquiring the data of KSE for the period of 2003 – 2013 and only pharmaceutical firms shall be taken for this study. Empirical models are tested through Correlation. And conclusions are based on that as all the study will be focused on the secondary data.

3.3. Population

Population covers the all manufacturing industries in Pakistan.

3.3.1 Frame of reference

The frame of reference is all registered companies listed in KSE & involved in production of goods of any form, nature & kind.

3.4. Sample and Sampling Methods

Shah and Sana (2006) concentrated on the oil and gas sector and estimated the relationship using small sample of 7 firms. On the same basis taking small sample & due to time & management constraints of the tool taking 8 firms from pharmaceutical sector. The sampling method is non-probability base & purposive homogenous.

3.5. Instrument selection

This study focuses only secondary data. No other instrument is used to collect data.

3.6. Variables

Dependent variable of the study is Borrowing cost / Financial charges. Independent variables are components of working capital. Working capital consists of current assets & current liabilities. For that purpose Average Collection Period (ACP), Inventory Turnover in Days (ITID), Average Payment Period (APP), Cash Conversion Cycle (CCC) and Net Trading Cycle (NTC) are used as vector of working capital (A.R et al 2010). If we reduce number of days in receivables (ACP), inventory (ITID), Cash Conversion Cycle (CCC) and Net Trade Cycle (NTC), it will enhance the working capital performance. Furthermore, Average Payment Period is inversely affecting the working capital. ACP, ATID, APP, CCC, NTC are collectively forming the independent variable of Working capital & this shall lead analyzing the Financial charges as dependent variable.

3.6.1 Hypothesis

Ha1: There is significant statistical relationship between working capital & financial charges

Ha2: There is significant statistical impact of working capital on financial charges

3.6.2 Statistical Model

$FC = a + b_1(ACP) + b_2(ITAD) + b_3(APP) + b_4(CCC) + b_5(NTC)$

3.7 Analysis

Dependent Variable: FC

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACP	-2583.348	2085.615	-1.238650	0.2222
IHP	-1444.163	1739.169	-0.830376	0.4109
APP	1738.965	1698.734	1.023683	0.3117
CCC	-1305.672	1430.448	-0.912771	0.3665
NTC	4366.071	1858.007	2.349868	0.0234
R-squared	0.122060	Mean dependent var		45673.96
Adjusted R-squared	0.040391	F-statistic		1.494567
Durbin-Watson stat	0.636069	Prob(F-statistic)		0.220658

$$FC = a + b1(ACP) + b2(ITAD) + b3(APP) + b4(CCC) + b5(NTC)$$

In above table generated from our model, only co-efficient of NTC is significant as its p value 0.02 means one day increase in net trading cycle will increase financial charges by Rs. 4.366 millions. Moreover, we can see that our model is capturing only 4% of variation from independent variable as Adjusted R square is 0.04 and significance level of our model is weak because F-statistics is only 1.49. Even Durbin-Watson statistics of 0.636 showing serial autocorrelation means there is something which we have miss to include in our model and has remained in error term.

To improve the efficiency of our model we have included lag value of our dependent variable which is financial charges and revise our model as:

$$FC = a + b1(ACP) + b2(ITAD) + b3(APP) + b4(CCC) + b5(NTC) + b6(\text{Lagged FC})$$

Dependent Variable: FC

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACP	-881.2690	1393.703	-0.632322	0.5314
IHP	-610.8766	1157.128	-0.527925	0.6010
APP	620.5141	1127.638	0.550278	0.5857
CCC	-160.3213	952.0048	-0.168404	0.8673
NTC	1185.060	1284.557	0.922543	0.3627
FC(-1)	1.085741	0.136682	7.943527	0.0000
R-squared	0.684326	Mean dependent var		49197.50
Adjusted R-squared	0.637903	F-statistic		14.74119
Durbin-Watson stat	1.859924	Prob(F-statistic)		0.000000

Now this table showing our revised model is more consistent than our previous model as it is capturing 63.7% shown by Adjusted R Square. The joint significance of our this new model is also supported by F-Statistics of 14.74. However, from this analysis we can conclude that our independent variable of ACP, IHP, APP, CCC and NTC are individually insignificant only Lagged Financial Charges as independent variable is significant with t statistics of 7.94 but our overall impact of these independent variables is significance.

3.8 Interpretation:

A collective policy of working capital management may help us to revise /control our financial charges rather than individual focus on Receivable management, Inventory Management and Payable Management.

This particular study empirically proves that although individual components of working capital are not significant but jointly it is showing significant in the model. The results reconciles with Abdul Raheman Et al (2010). He also incorporated this through vector of ACP, ITID, APP, CCC, NTC to acquire working capital joint effect. The main difference in both the studies are that Abdul used Working capital as vector jointly & took dependent variable as NOP Net Operating Profit. But not with alignment to Abdul Rehman et al (2006) which resulted in individual significant of all the variables. Approx. same case is with Dr Ioannis Lazaridis.

SMA Shah (2006) reported the same sort of result for his study based on working capital management. Fixed effect model was used to capture the firm effect. Regression analysis shown that P- values of Independent variables individually are not significant. However, joint effect of all coefficients is significant which again reconciles that working capital management has joint effects. Adjusted R- squared= 0.578. The independent variables jointly have strong explanatory power. This indicated that working capital management practices adequately explain changes in dependent variable of the firm.

3.9 Software Employed

The co-efficient of above Regression Statistical Models will be calculated by using Ordinary Least Square Technique through spreadsheets or SPSS or E-Views.

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