

Impact of Working Capital Management on Market Return a Case of Pakistan Chemical Sector

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Abstract: Working Capital Management is an excellent tool that is used by a lot of companies to improve their earnings. This concept is used to manage the arrangement of its short term asset and short term liabilities. The present study is to test the impact of working capital management on market return of chemical sector in Pakistan. The chemical companies listed in the Karachi Stock Exchange (KSE) of Pakistan, were studied for a period of 14 years from 1998 to 2011. In all 30 out of 36 chemical companies from Pakistan were included in the study as a sample with complete financial data. Market return is used as dependent variable and working capital management with its key measures (ACP, APP, ITID, CCC, CATAR, CLTAR, FDR, CR, CATSR and Firm Size) used as independent variables. Statistical measures as descriptive statistics, Pearson's correlation and panel regression methods were used for data analysis. The results of the study showed that there is a positive significant relationship of Average Payment Period (APP), Cash Conversion Cycle (CCC), Financial Debt Ratio (FDR), Current Assets to Total Assets Ratio (CATAR) with market return. Similarly, there is negative significant relationship between Average Collection Period (ACP), Current Assets to Total Sales Ratio (CATSR) with market return. These results show that in improving the market return (shareholder's wealth), the working capital management plays an important role in chemical sector.

Keywords: Working Capital Management, Tobin's Q, Chemical Sector, Pakistan.

I. Introduction

Working Capital Management is the management to finance its day to day operational activities. This is an excellent tool that is used by a lot of companies to improve their earnings. This concept is used to manage the arrangement of its short term asset and short term liabilities. Short term assets involve the short term debtors, cash in hand, cash lying at bank and investment in securities and inventories. Similarly, the current liabilities consist of advances, borrowings and creditors. In the all ages of business, the efficient and effective use of Working Capital is necessary. A number of policies and arrangements are to be followed to ensure the business reliability and minimizing the risks to be involved.

It is the most top priority of all businesses to plan and develop itself with the development and planning of working capital. Broadly speaking, it can be said that all current assets refer to the gross working capital which states all investment in current assets. In other hands, narrowly speaking working capital termed as all current assets less current liabilities. Horne & John (2001) said about the working capital as difference of current assets and current liabilities. The main objective of the research is to examine the impact of working capital management on market return of the chemical companies in Pakistan.

Weston J. and Brigham (1975) examined that the hedging and conservative approaches and policies to be followed while financing and managing working capital to its risks and returns. The aggressive approach states that there should match the fund sources and the financed assets. For analyzing, these assets are categorized broadly as those which require a certain amount and not varied over time and those which varied. Under the conservative approach, firms finance in permanent assets along with current assets. The condition, under which the firms avoid in investing current assets than such firms do invest in trade able securities. This all is to be done to conserve liquidity that is why such approach said to be a conservative approach.

Under the aggressive approach more of the financing is short term than by matching plan. By this approach some of the parts of financing are in permanent current assets. The focus of this study is on market return of chemical sectors and the performance of the working capital management and initiated to answer the question of the impact of working capital management on market return.

The specific objectives of the study are to examine the impact of average collection period, average payment period, inventory turnover, cash conversion cycle, financial debt ratio, current assets to total assets ratio, current liability to total assets ratio, current ratio, current assets to total sales ratio and firm size on market return of the Pakistani chemical companies. It provides guidelines to experts by comparing their sector with the foreign country. It also explains the relationship between various factors and the returns from the industry. This study also provides guidelines to the policy makers' of the financial institutes to formulate an appropriate financial policy for the chemical industry of Pakistan.

1.1 Aims and Objectives

The main objective of the study is to examine the impact of Working Capital Management on the Market return of the Chemical Companies in Pakistan.

1.2 Significance of the Study

This study is much important for the Pakistani chemical sector. It provides guidelines to experts by comparing their sector with the foreign countries. It also explains the relationship between various factors and the returns from the industry. This study also provides guidelines to the policy makers' of the financial institutes to formulate an appropriate management of working capital for the chemical industry of Pakistan

II. Literature Review

Many researchers have focused on the study to indicate the relationship between the working capital management and the returns in the different prospects and environment. Following literatures were cited while conducting the study.

Korankye (2013) examined the working capital management effect on the firm's profitability. For such purpose, study was conducted using a sample of 6 out of 7 manufacturing companies of Ghana stock exchange. The data was collected by using the company's reports and final accounts during 2004 to 2011. The working capital cycle was used as a proxy for the measurement of working capital and for measuring profitability gross operating profit margin was used. Financial leverage, interest coverage ratio and aggressive investment policy as measured by CATAR (current assets to total assets ratio) were involved as control variables in the research. Pearson's co-relation and ordinary least square regression methods were used for analysis. The result indicated the significant negative effect of the working capital cycle on the profitability. The study also suggested from the correlation analysis the negative relationship between the collection days, payment days, and inventory in days and the firm's profitability. While there was a positive significant relationship among interest coverage, current assets to total assets (CATAR) ratio and the firm's output.

Alvinasab and Davoudi (2013) worked out for the association between the WCM and the firm's profitability. A Sample of companies listed on the Tehran stock exchange was studied. There were 147 listed companies included in the study. Panel Data for 2005-2009 was selected in the study. Various variables for the working capital management just like current assets to total assets ratio (CATAR), Current Ratio (CR), current liabilities to total assets ratio (CLTAR), Cash Conversion Cycle (CCC), and debt to assets (DTA) ratio were studied as independent variables and for the measurement of profitability return on asset (ROA) and return on equity (ROE) were taken. For the analysis purpose regression and correlation analysis were taken in the study. The observations concluded that there were negative significant association of the CCC with the ROA and ROE. On the other hand there were insignificant relationships between the CR and ROE.

Adina (2010) analyzed the efficiency of working capital management. For analyzing such efficiency, 20 Alba country companies' financial statements were studied. The study period was from 2004 to 2008. The profitability indicators used in the study were Assets return (ROA), Return on Equity (ROE) and the Sales Return. Period for cash receivables, storage period, periods of paying debts and the cash conversion cycle was the proxy variables used for measuring the working capital management. For analyzing data, a method of Regression analysis was used. The analysis concluded the weak negative association between the firm's profitability and the working capital management.

David (2009) studied to investigate the association between the profitability of the firms and the working capital management. A number of 30 listed companies from the Nairobi Stock Exchange were selected to accomplish the goal. There was a study period from 1993 to 2008. For the analysis of the data regression model was used in the study. The collection days, inventory conversion days and the payment period were three variables used to measure the working capital management. Results indicated that there was high profit with the short collection period. There is a highly significant positive relationship of inventory conversion period and also a significant positive association of the payment period with the firm's profitability. There is also a significant positive relationship between average payment period and the profitability.

Zafar and Athar (2012) examined the effect of the management of working capital on the profitability of a firm. For the study purpose sugar industry in Pakistan was selected. A sample of 19 sugar companies was selected which were listed on the KSE (Karachi Stock Exchange). The secondary data was for a period of 1999 to 2009. Trade credit policy, payment policy and the inventory policy were used as components of Working Capital which were considered as independent variables. Net Operating Income (NOI) as the dependent variable was used to measure the profitability. Pearson's correlation and regression model used to analyze the data. The result showed that sales growth, current ratio, account payable in days and inventory have a significant relationship with the profitability. Similarly on the other hand collection period, sales and the gearing ratio have the insignificant relationship with the profitability.

2.1 Hypothesis

The firm under study suffers from inadequacy of working capital and poor and ineffective working capital management practices. So the research is based on the following hypothesis.

- 1 H₀: There is no significant relationship between Tobin's Q and ACP.
H₁: There is a significant relationship between Tobin's Q and ACP.
- 2 H₀: There is no significant relationship between Tobin's Q and APP.
H₁: There is a significant relationship between Tobin's Q and APP.
- 3 H₀: There is no significant relationship between Tobin's Q and ITID.
H₁: There is a significant relationship between Tobin's Q and ITID.
- 4 H₀: There is no significant relationship between Tobin's Q and CCC.
H₁: There is a significant relationship between Tobin's Q and CCC.
- 5 H₀: There is no significant relationship between Tobin's Q and FDR.
H₁: There is a significant relationship between Tobin's Q and FDR.
- 6 H₀: There is no significant relationship between Tobin's Q and CATAR.
H₁: There is a significant relationship between Tobin's Q and CATAR.
- 7 H₀: There is no significant relationship between Tobin's Q and CLTAR.
H₁: There is a significant relationship between Tobin's Q and CLTAR.
- 8 H₀: There is no significant relationship between Tobin's Q and CR.
H₁: There is a significant relationship between Tobin's Q and CR.
- 9 H₀: There is no significant relationship between Tobin's Q and CATSR.
H₁: There is a significant relationship between Tobin's Q and CATSR.
- 10 H₀: There is no significant relationship between Tobin's Q and Firm Size.
H₁: There is a significant relationship between Tobin's Q and Firm Size.

III. Research Methodology

This study is based on the data of chemical companies of Pakistan from a period of 1998-2011. For the analysis of such data to accomplish the goal Panel Data Regression Model is estimated in the study. The estimation is

$$MarketReturn = a + b(WCM) + e$$

$$Y = a + \sum_{k=1}^n bX + e$$

Model involved the Market Return. Tobin's Q (measure of Market Return) will be used as a dependent variable with ten explanatory variables. The impact can be checked of the working capital management on the market return in the following equation form.

$$Y_{Tobin's\ Q} = a + b(ACP) + b(APP) + b(ITID) + b(CCC) + b(CATAR) + b(CLTAR) + b(Firm\ Size) + b(FDR) + b(CR) + b(CATSR) + e \dots\dots\dots(1)$$

Average Collection Period in days (ACP), Firm Size measured by the logarithm of sales, Financial Debt Ratio (FDR), Current Ratio (CR), Average Payment Period in days (APP), Cash Conversion Cycle (CCC), Inventory Turnover in days (ITID), Current Assets to Total Assets Ratio (CATSR), Current Liabilities to Total Assets Ratio (CLTAR), and Current Assets to Total Assets Ratio (CATAR) will be used as a proxy measure for the working capital management in the model.

Market return will be measured by the term Tobin's Q. Tobin's Q was introduced by James Tobin and William Brainerd in 1969. It is an "Economic Theory of Investment Behavior". Tobin's Q is a ratio of the market value of the firm's existing shares to the replacement cost of firm's physical assets. The advantage of using Tobin's Q is that the difficult problem of estimating either rate of return or marginal costs is avoided. On the other hand, for Q to be meaningful, one needs accurate measures of both the market value and replacement cost of a firm's assets. It is usually possible to get an accurate estimate for the market value of a firm's assets by summing the values of the securities that a firm has issued, such as stocks and bonds. It is much more difficult to obtain an estimate of the replacement costs of its assets, unless the used equipment still exists in the market.

Moreover, expenditures on advertising and research and development create intangible assets that may be hard to value. Typically, researchers who construct Tobin's Q ignore the replacement costs of these intangible assets in their calculations. This ratio states that if Q (representing equilibrium) is greater than one (Q > 1), additional investment in the firm would make sense because the profits generated would exceed the cost of firm's assets. If Q is less than one (Q < 1), the firm would be better off selling its assets instead of trying to put them to use. The ideal state is where Q is approximately equal to one denoting that the firm is in equilibrium. Tobin's Q can be computed by the following formula.

$$Tobin's\ Q = \frac{Market\ Value\ of\ the\ Firms}{Book\ Value\ of\ the\ Firms} \dots\dots\dots(2)$$

Working capital management would be considered as independent variable. The proxy variables with the formula and abbreviations used for the working capital management measures are presented in the table.

Table 1: Variables Abbreviations

Variables	Measures	Abbreviation
Average Collection Period	Account Receivables / sales * 365	ACP
Average Payment Period	Account Payables / purchase * 365	APP
Inventory Turnover in days	Inventory / C.G.S * 365	ITID
Cash Conversion Cycle	ACP + ITID – APP	CCC
Financial Debt Ratio	Total Liabilities / Total Assets	FDR
Current Assets To Total Assets	Current Assets / Total Assets	CATAR
Current Liabilities To Total Assets	Current Liabilities / Total Assets	CLTAR
Current Ratio	Current Assets / Current Liabilities	CR
Current Assets To Sales Ratio	Current Assets / Sales	CATSR
Firm Size	Logarithm of sales	LOS

Here the study is in the struggle to establish the relationship of the working capital management measures with the performances for a sample of 30 companies which were within the range of entire window period that is 1998 to 2011 over a period of 14 years or 420 firm's year observations. In this study only empirically test is being conducted to solve the problem. Therefore, it is an applied type of research. Fertilizer companies listed in KSE (Karachi Stock Exchange) of Pakistan have been selected for study. The secondary data have been collected from financial reports of the companies for a period of 1998 to 2011 and structured questionnaire and interview from Managers and high ups have been conducted for further clarification. All chemical companies listed on the Pakistani stock exchanges are treated study population. It is very hard to get all populations, so a criteria is selected through which every company should have to examine in order to include in the sample.

The study consists of 36 companies related to chemical sector listed on Karachi Stock Exchange. Final companies for data analysis were selected by some selection criteria which stated that the companies which were within the range of entire window period that is 1998 to 2011. So finally, a sample of 30 companies related to KSE over a period of 14 years and a total of 420 firm's year observations were selected. To accomplish the goal, the data was collected from Karachi Stock Exchange (KSE), State bank of Pakistan (SBP), Internet and web sites.

In addition to the results concluded from the secondary data, it was also conducted the structured questionnaire and personal interview with the Managers and high-ups just for further result clarification. For the purpose, five number of managers and financial analysis of chemical companies which were easy to access and available in the Lahore (Pakistan) regions Descon Chemical Limited, Nimir Industrial Chemical Limited, Sardar Chemical Industries Limited, Shaffi Chemical Industries Limited and Pak Arab Fertilizer (Multan).

IV. Results Of The Study

Table 2 shows the descriptive statistics of the companies listed in Karachi Stock Exchange of Pakistan.

Table 2: Descriptive Summary Statistics

	ACP	APP	CATAR	CATSR	CCC	CLTAR	CR	FDR	Firm Size	Inventory Turnover	TOBINSQ
Mean	41.62	449.84	0.58	0.96	-354.79	0.47	1.65	0.55	7.81	49.77	0.45
Maximum	298.20	1286.88	0.97	35.60	135.49	4.53	10.55	3.55	49.70	992.98	1.008
Minimum	0.00	0.00	0.007	0.00	-12692.9	0.048	0.009	0.099	-40.3	0.00	-2.557
Std. Dev.	47.82	1228.79	0.25	2.92	1217.70	0.37	1.27	0.277	13.50	72.47	0.297
Jarque-Bera	356.21	5987.03	34.60	14691.82	6225.301	7546.94	3234.37	2067.07	11.90	8066.18	1884.97
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0025	0.00	0.00
Sum	17480.56	188933.7	246.5408	406.69	-149014	197.98	696.44	232.28	3281.71	20906.38	191.67
Sum Sq. Dev.	958375.2	6.33E+08	26.44	3589.04	6.21E+08	59.33	683.26	32.37	76420.21	220103.6	37.105
Observations	420	420	420	420	420	420	420	420	420	420	420

The result indicated the average collection period for an average of 42 days with a minimum of zero and a maximum of 298 days. This means that the firms granted a credit period of 42 days to their customers for the collection of credit. The average payment period for the firms was 450 days that means the firms pay to creditors for an average period of 450 days. This concluded that firm enjoyed a time exceed of 408 days in

payment than collection. The Inventory took an average for sales were 50 days. The time lag between purchase and sales was for an average period of 355 days. The current assets formed 58% of total assets and 96% of sales. Similarly, current liability formed for an average 47% of total assets. The firms included 45% market return in the sample.

Model analyzes the effect of Working capital management on market return in Pakistan. For the purpose dependent variable Tobin's Q and independent variable working capital management were selected. The dependent variables Tobin's Q and the independent variables as ACP, APP, ITID, CCC, CATAR and CATSR, Firm Size, FDR, CR and CATSR. The study employed a panel least square method on 30 Pakistani chemical firms. Tables structured in the models clearly depict the results.

Table 3 shows the correlation matrix of the Pakistani data for the model.

Table 3: Correlation Matrix

Variables	ACP	APP	CATAR	CATSR	CCC	CLTAR	CR	FDR	FIRMSIZE	INVTURNOVR	TOBINSQ
ACP	1	0.123	0.081	0.118	-0.164	0.151	-0.209	0.206	-0.146	-0.081	-0.221
APP		1	0.169	0.284	-0.444	0.255	-0.106	0.056	0.001	-0.476	-0.088
CATAR			1	0.121	0.199	-0.109	0.508	-0.279	-0.052	0.168	0.312
CATSR				1	-0.27	0.136	-0.008	0.128	0.039	-0.022	-0.131
CCC					1	-0.509	0.214	-0.384	-0.003	0.276	0.461
CLTAR						1	-0.406	0.568	-0.029	-0.114	-0.838
CR							1	-0.521	0.132	0.229	0.522
FDR								1	-0.075	-0.154	-0.826
FIRMSIZE									1	-0.047	0.057
INVTURNOVR										1	0.16
TOBINSQ											1

The table 3 shows the coefficient correlations for the Pakistani chemical firms. Results show that Tobin's Q is positively related to the CATAR, CCC, CR, Firm Size and ITID but negatively related with ACP, APP, CATSR, CLTAR and FDR.

The independent variables are checked on dependent variable Tobin's Q for the model.

$$Y_{\text{Tobin's Q}} = a + b(\text{ACP}) + b(\text{APP}) + b(\text{ITID}) + b(\text{CCC}) + b(\text{CATAR}) + b(\text{CLTAR}) + b(\text{LOS}) + b(\text{FDR}) + b(\text{CR}) + b(\text{CATSR}) + e$$

Table 4 shows the regression analysis with fixed effect for the Pakistan chemical data and accepted for the model after a test check through fixed, random and OLS effect model. To check which model is most appropriate either fixed effect or random effect, Hausman test is used. The results concluded that probability value is very small that is less than 5 percent so the fixed effect model is more appropriate. Now further Wald test is used to check whether fixed effect or OLS model which one is most appropriate. The results concluded that fixed model is most appropriate. So here the author selected the fixed effect model as most appropriate for analysis.

Table 4: Panel Least Square (Fixed Effect)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACP	-0.662387	0.046400	-14.27559	0.0001***
APP	0.809337	0.021354	37.90022	0.0000***
INVTURNOVR	5.668653	15.74535	0.360021	0.7190
CCC	0.819813	0.021753	37.68654	0.0000***
CATAR	31.17053	13.71867	2.272125	0.0237*
CLTAR	-8.393026	9.173285	-0.914942	0.3608
FIRMSIZE	-0.001818	0.119965	-0.015157	0.9879
FDR	22.61282	9.909313	2.281977	0.0231*
CR	1.855233	1.722768	1.076891	0.2822
CATSR	-6.405132	0.592914	-10.80280	0.0000***
C	-22.15676	16.49615	-1.343148	0.1801
Effects Specification				
Cross-section fixed (dummy variables)				
Period fixed (dummy variables)				
R-squared	0.893382	Mean dependent var	49.77710	
Adjusted R-squared	0.878276	S.D. dependent var	72.47805	
S.E. of regression	25.28688	Akaike info criterion	9.415937	
Sum squared resid	234669.5	Schwarz criterion	9.925778	
Log likelihood	-1924.347	Hannan-Quinn criter.	9.617449	
F-statistic	59.13853	Durbin-Watson stat	2.283467	
Prob(F-statistic)	0.000000			

* $p < .05$, ** $p < .01$ and *** $p < .001$ levels

Table 4 shows that the result of panel regression analysis with fixed effect model, it is examined by the table that the model in Pakistan shows the value of R Square that is 0.8933 which means that 89.33% is the total

variation explained by the predictors. This model shows p value 0.000 and F-static value 9.1385. The model explained the adjusted R-square of 0.8783 which states that 87.83% of the variance is accounted for by the model in the dependent variable market return (Tobin's Q) and 12.17% of the variance remained unexplained. The P value of F-static is below 0.05, so the Pakistani model would be significant.

The model included ACP as a measure of collection policy, APP as a measure of payment policy, Inventory turnover as inventory management tool, CCC as a measure of time lag from purchase to sale, CATAR as aggressive investment policy, CLTAR as measure of aggressive financing policy, CR as a measure of liquidity, FDR as a measure of company's leverage and CATSR to check the efficiency of the assets with sales.

This section presents two regression outputs one for whole regression including all variables together and the second the results for each independent variables regressed by dependent variable to see the time impact on the output.

So the Pakistani model analyzed a significance level of (0.000) regression regarding the relationship between dependent and all independent variables explained by 59.138 given on F-statistics. The model also analyzed the results for each independent as ACP, APP, CCC, CATAR, FDR and CATSR have significant impact on Tobin's Q with p-values 0.0001, 0.0000, 0.0000, 0.0237, 0.0231 and 0.0000 respectively and ITID, CLTAR, Firm Size and CR have no significant impact on market return.

The variable slope shows that if Pakistani chemical companies reduce ACP by 66.23, CLTAR by 8.39, FS by 0.18, CATSR by 6.40 that will lead to 1 unit increase the market return.

Table 5 shows the average results for more clear and authenticated, It was conducted personally the interview with the financial analyst and financial managers in the form of questionnaire with nearly 5 numbers of managers of chemical companies which were easily available in the Lahore and Multan region.

Table 5: Summary of the average results of Interview with Managers

Variables	If	Market Return (Tobin's Q)
ACP	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
APP	Increase	<input checked="" type="radio"/> Increase <input type="radio"/> Decrease <input type="radio"/> No effect
ITID	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
CCC	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
CATAR	Increase	<input checked="" type="radio"/> Increase <input type="radio"/> Decrease <input type="radio"/> No effect
CLTAR	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
Firm Size	Increase	<input checked="" type="radio"/> Increase <input type="radio"/> Decrease <input type="radio"/> No effect
FDR	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
CR	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect
CATSR	Increase	<input type="radio"/> Increase <input checked="" type="radio"/> Decrease <input type="radio"/> No effect

The average result summary table drawn from the personnel interviews of different financial managers shows that there is

- Negative relationship between ACP and Market Return
- Positive relationship between APP and Market Return
- Negative relationship between ITID and Market Return
- Negative relationship between CCC and Market Return
- Positive relationship between CATAR and Market Return
- Negative relationship between CLTAR and Market Return
- Positive relationship between Firm Size and Market Return
- Negative relationship between FDR and Market Return
- Positive relationship between CR and Market Return
- Negative relationship between CATSR and Market Return

V. Conclusions & Recommendations

The above findings are base to accept or reject the hypothesis. Based on findings the table 6below describes the clear picture about the hypothesis results.

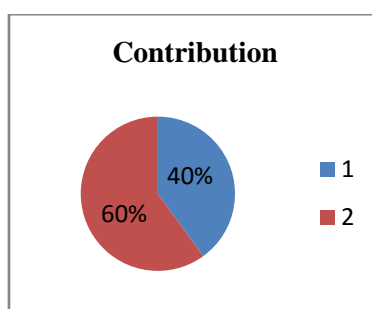
Table 6:Hypothesis Assessment Summary

Variables	T Static Value	P Value	Sig/In-sig	Result	Hypothesis (H ₁)	
ACP	-14.27559	0.0001	Significant	-ive Significant	1	Accepted
APP	37.90022	0.0000	Significant	+ive Significant	2	Accepted
INVTURNR	0.360021	0.7190	In-Significant	+ive In-Significant	3	Rejected
CCC	37.68654	0.0000	Significant	+ive Significant	4	Accepted
FDR	2.281977	0.0231	Significant	+ive Significant	5	Accepted
CATAR	2.272125	0.0237	Significant	+ive Significant	6	Accepted
CLTAR	-0.914942	0.3608	In-Significant	-ive In-Significant	7	Rejected
CR	1.076891	0.2822	In-Significant	+ive In-Significant	8	Rejected
CATSR	-10.80280	0.0000	Significant	-ive Significant	9	Accepted
Firm Size	-0.015157	0.9879	In-Significant	-ive In-Significant	10	Rejected

*t-static value > 1.64 OR p-value <0.05; significant *significant level 0.9

Table 6 and the pi-chartshows the clear picture of the results relating to Pakistani chemical data.Following charts show the picture of contribution of working capital management on market return.

5.1 Pi-Chart-Contribution of Working Capital Management on Market Return



1* WCM contribution60% and 2* WCM not-contribution40%

Chart shows the 60% working capital management measures have impact on market return while 40% not-contributed of working capital management on market return during a period of 1998-2011.The table is a clear picture of the results that shows the relationship between the measures of working capital management and the market return observed by the Pakistan and personal interview analysis with the managers.

In this study, relatively a sample data has been used relating to the period from 1998 to 2011. Secondly, the future longitudinal research may well focus on the related aspects of liquidity management to gain a deep insight into the determinants and impact of working capital management at large. The proposed study is one of the unique researches on the subject conducted in Pakistan and also supposed to guide the firms to evaluate their working capital financing, turnover performance in terms of days and its effective management. The study has several implications and is supposed to be very beneficial for the industries, academics and analysts, as it is supposed to describe the working capital management performance of the selected sector and its findings can help in setting some useful benchmarks in the related sector.

It is hoped that further research can usefully test the points raised in this study across a large representative sample of firms representing a larger set of industries. In particular, to identify the circumstances in which the firms change their attitudes towards particular sources of working capital, and that in the different phases of growth cycle, the longitudinal studies may prove more helpful. The research may also be conducted from the perspective of designing a growth oriented optimal working capital financing policy for firms.

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