



Impact of Working Capital Management Policies on Financial Performance of Textile Sector: Evidence from Pakistan Stock Exchange

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Abstract

The study aims at empirically explore the impact of working capital management (WCM) policies on firms performance of most notable and influential sector of textile firms listed in Pakistan stock exchange (PSX). Non-financial sector contributes 13.5% in GDP of Pakistan while textile sector is a major part of this contribution in terms of socio-economic growth in the country. A balanced panel data of 74 Textile sample firms listed on PSX covering the period of 2011-2016 is used for analysis through fixed effect panel data regression approach. The empirical results indicate that adopting a conservative investment policy & aggressive financing policy has a positive impact on firms performance and inventory turnover in days(ITID), average collection period (ACP), SIZE & financial leverage (FL) have negative and significant impact on firms performance whereas, cash conversion cycle (CCC) has positive and significant impact on performance. Finally, average payment period (APP) has negative but insignificant impact on firm's performance. By validating the findings with previous researches, this endeavor may contribute to the existing literature and may be beneficial to the academicians, investors; managers and policy makers while the study present recommendations that in turn bring improvements in the performance of sample firms.

Keywords: Working Capital Management, Investing Policy, Financing Policy, PSX.

1. Introduction

There are number of researchers like Horne & Wachowicz (2004), Stubelj & Laporsek (2016), and Reheman & Nasr (2007) who considered Working capital management (WCM) is one of key and dynamic components of corporate short-term financial management decisions. . Working capital management decision is crucial because it influence the liquidity and performance of the firm. Sarniloglu & Demirgunes, (2008) concluded that WC consist of elements like current assets and current liabilities, the best combination of WCM in turn boost the overall value of shareholders wealth. Furthermore, Nazir & Afza (2009), examined that firms can easily operate their day-to-day conduct if they have significant amount of asset in hand, in contrast if they have less amount in these assets it decrease liquidity position that ultimately provoke the problem of bankruptcy. Managing of working capital components ultimately enhance firms performance therefore the significance of WCM cannot be denied. Similarly, Raheman & Nasr (2007) analyzed that firms that often overlook the balance between current assets and current liabilities cannot survive in long run and may have the problem of bankruptcy as well as liquidation. The tradeoff between profitability and liquidly position can enhance the performance. According to Pakistan Economic Survey (2017), non-financial sector is considered as one of the important segment of the economy and it contributes 13.5% in GDP of Pakistan. In non-Financial Sector, Textile sector is the most important sector in the economy of Pakistan especially in terms of employment generation and exports. Any improvement in the growth and profitability of textile sector is likely to have significant impact on income generation, foreign exchange earnings, reducing poverty, and improving the standard of living of people.

The creation of a proper balance between current assets and current liabilities in the shape of payment ability of its financial obligations especially when it is at due time, is the main purpose of the working capital management policy of a firm (Nguyen et al., 2020). Further, the top priority of every organization's financial decision is basically to earn profit while these decisions may be different in terms of the users of financial statements that reveal the working capital management policies of the concerned firm (Khan et al., 2021). Similarly, a considerable affiliation between the WCM policies of the manufacturing firms and their financial performance

in order to make it more attractive for the investors specific and all other stakeholders in general (ALMOMANI et al., 2021).

In light of the above relevant and up to date literature, this study is useful not only to fill the gap but to give meaningful suggestions to the top management of Textile sector especially and to the stakeholders in general. The study provides the evidence concerning the management of current level of capital and informs financial managers about the management policies and practices used by their subordinates and peers. As they are keen to know the outcomes of a particular decision, they make sure that this information is helpful for them to maintain a strong competition and refine their own organization. In this context, since textile firms, deal with a high proportion of raw materials in their inventories, it is important that the managers have adequate current assets to facilitate the purchases and also be able to pay in time the credit purchases. Failure to pay in time to these obligations will affect credit rating of the firm. Thus, it is imperative for the financial managers to implement a suitable credit policy that leads towards an optimum liquidity position and at the same time lower opportunity cost.

1.1 Research Questions

- Is there any relationship between WCM policies and the financial performance of textile sector in Pakistan?
- Is there any relationship between WCM efficiency and financial performance of textile sector in Pakistan?

1.2 Objectives

The objectives of this study are:

- To examine the relationship between WCM policies and financial performance of Pakistani Textile Sector.
- To examine the relationship between WCM efficiency and financial performance of Pakistan Textile Sector.
- To suggest policy measures for decision makers in order to get inputs in making optimum decisions.

1.3 Hypotheses of the Study

H₁: There is a possible negative relationship of WCM policy (financing policy) on performance of the firm.

H₂: There is a possible positive relationship of WCM policy (investing policy) on performance of textile sector.

H₃: There is negative effect of CCC on performance of textile sector.

H₄: There is a negative effect of average receivable period on the performance of textile sector.

H₅: There is a positive effect of APP on the performance of textile sector.

H₆: There is a negative effect of inventory turnover on the performance of textile sector.

H₇: There is positive relationship between size and performance of textile sector.

H₈: There is negative effect of financial Leverage on performance (ROA) of textile sector

Research Methodology

1.4 Nature of the study

The current study is quantitative in nature as the data has been collected from the already existing data bank (financial statements) of the sampled firms.

2.2 Data Description, population, Sample size and sampling procedure

Secondary data has been collected from the annual reports of each sample firms and State bank of Pakistan covering the sample period of 2011-2016. The sample size of the study is 74 companies out of total 155 Textile firms listed in Pakistan Stock Exchange (PSX). We have applied the sample selection procedure i.e. firms that have continuous financial statements from 2011 to 2016 are included for the data analysis of current study.

2.3 Theoretical Background and various approaches used in the study

Gitman, (2005); Moyer et al., (2005); and Brigham & Ehrhardt, (2008) reported , in the field of short term financial management, Conservative WCM policy and aggressive WCM policy are two modern alternative strategies. Moreover, the literature encompasses a widespread debate on the risk and return trade-off as far as various WCM policies are concerned. To that respect, Gardner et al., (1986);&Weinraub & Visscher, (1998) stated, in one way, more aggressive WCM

polices are subject to higher return and risk. Whereas, conservative WCM policies offer lower risk and return on the other way around.

Similarly, According to Horn and Wachowicz (2004) stated several theories on WCM approaches including conservative WC approach, Aggressive and Matching. Bringham, (2008) stated that the theories reach agreement to the level that the bigger the investment level in short term assets, lesser the risk, but correspondingly the lesser the performance. The theoretical review stretched that firms should opt one of these policies for their working capital requirements.

2.2.1 Conservative Approach

Bringham, (2008), according to conservative approach firms use long term financing to finance long term assets and part of their non-permanent assets. It is better to invest savings in short term instruments than to keep it in lockers. Numerous financial managers feel much gladder especially, in case of conservative tactic, that the risk is mitigated, smaller and firms can pay payments when they arise. To clarify, that financing through non-current source, covers the total investment of capital assets. Nevertheless, such sort of policy might not be good for the owner of the firm.

According to Eljelly (2004), the short-term capital employed in the short terms securities in order to yield reasonable return. Furthermore, Horne and Wachowicz (2004) observed that too much investment levels in short-term assets might have a convex bearing on firms performance. However, a low investment in short term assets may trigger to a shortage of stock and liquidity consequently, it is herculean to maintain smooth operations. Aggressive WCM polices are linked with greater return and more risk exposer. Moreover, conservative WCM policies are pertained with lesser risk and low return.

2.2.2 Aggressive Approach

Moyer et al., (2005) advocated that if a firm based on overdraft. It would be at risk to a quick withdrawal of that capacity. Besides, if there is a shortage of stock and cash to repay the bank overdrafts consequently the firms bears sever disorders, facing losses in their sales and as well as output production. Additionally, bear extra costs of failure to retain and maintain

sufficient no of outputs that is necessarily required to maintain WC and to enhance firms performance. Hence, Brigham and Ehrhardt, (2008) reported aggressive WCM policy concerned with higher risk and return. Smith (1980) stated with low level of current assets firm may implement aggressive WC management policy.

2.2.3 Matching Approach

According to Gitman (2005), adopting principle of matching policy is commonly used by firms. The core beauty of this policy is to match the maturity value of finance with the maturity of the scheme or assets. At this juncture, the non-current assets and current assets, which has wanted on long-lasting basis, financed through non-current sources of finance. Whereas, short-term asset financing requires very well thought short-term financing. Horne and Wachowicz, (2004) a firm is following the matching or maturity approach is consider to be implementing a moderating standpoint. According to this approach, an escalating level of firmstotal assets has financed predominantly through upturns in non-current finance. It applied to non-current assets and permanent short nature assets. The “irregular short term assets which are related to seasonal variations has financed with short-range funds”.

2.3 The Estimation Model

$$ROA_{it} = \beta_0 + \beta_1(FP)_{it} + \beta_2(IP)_{it} + \beta_3(SIZE)_{it} + \beta_4(FL)_{it} + \beta_5(ACP)_{it} + \beta_6(ITID)_{it} + \beta_7(APP)_{it} + \beta_8(CCC)_{it} + \varepsilon_{it} \dots \dots eq (1)$$

$$ROE_{it} = \beta_0 + \beta_1(FP)_{it} + \beta_2(IP)_{it} + \beta_3(SIZE)_{it} + \beta_4(FL)_{it} + \beta_5(ACP)_{it} + \beta_6(ITID)_{it} + \beta_7(APP)_{it} + \beta_8(CCC)_{it} + \varepsilon_{it} \dots \dots \dots eq (2)$$

β_0 is Intercept, while (ROA) & (ROE) are dependent variables. similarly (IP), Financing (PF), Size (Natural log of sales), Financial Leverage (FL), Average collection period in days (ACP), (APP), (ITID) and (CCC) are independent variables. ε = Error term of the model.
 $\beta_1, \beta_2, \beta_3$ and β_4 = slope co-efficient. In this study, firm size and financial leverage (FL) are used

as control variables. The studies of Deloof(2003), Gill et al.,(2010), and Vahidet al.,(2012) also used these variables as control variables in their study.

2.4 Measurement (formulas) of Variables and Empirical Evidences

Table 1. Measurement of Variables

Variable	Operationalize	Measurement	Empirical Evidence
Performance	Return on Asset (ROA)	$\frac{\text{EBIT}}{\text{Total Assets}}$	Vahid., et al (2012)
	Return on equity (ROE)	$\frac{\text{EBIT}}{\text{Equity}}$	(Ali,2011;Malik and Bukhari,2014)
Working capital Policies	Financing Policy (FP)	$\frac{\text{Currnt liabilities}}{\text{Total Assets}}$	(Nazir&Afza,2009; Vahid., et al (2012)
	Investing Policy (IP)	$\frac{\text{Currnt Assets}}{\text{Total Assets}}$	(Nazir&Afza,2009; Vahid., et al (2012)
Size	Proxy of size	Natural Log of Sales	Deloof, (2003)
Financial leverage (FL)	Measure level of debt	$\frac{\text{Total debt}}{\text{Total Assets}}$	(Nazir&Afza,2009; Vahid., et al (2012)
Average payment period in days	APP	$\frac{\text{Payables}}{\text{C.G.S}} * 365$	Tauringana and Afrifa (2013)
Average collection period in days	ACP	$\frac{\text{Receivables}}{\text{Sales}} * 365$	Tauringana and Afrifa (2013)
Inventory turnover in days	ITID	$\frac{\text{inventory}}{\text{C.G.S}} * 365$	Tauringana and Afrifa (2013)
Cash conversion		(ACP + ITID –APP)	Tauringana and Afrifa

The current study follows the methodology adopted by Weinrauband Visscher (1998) to measure the relation of WCM policies such as investing policy and financing policy on firm's performance. They proposed that these two measures of working capital management polices used by firms to manage their working capital. Investing Policy (IP) was measured by total current asset to total assets ratio of the firm. The increase in ratio indicates that firms invest more in the current assets so following conservative investing policy to manage the current assets. In contrast, if the value of investing policy is decreasing it shows that financial managers are following aggressive approach for managing their current level of investment.

2.5 Model Specification

In this study, we used panel fixed effect and random effect analysis. To prefer either fixed or random effect model, Hausman (1978) test is used. The null hypothesis of the Hausman test assume that the random effect is more suitable than fixed effects model. Other hand, Alternative hypothesis of the Hausman test assume that the fixed effect is more appropriate than random effects model. If p-value is less than 0.05 then Null hypothesis is rejected & vice versa (Hill, Kelly&Highfield, 2010).

In this study, the p-value of Hausman test is less than 0.05, which shows that fixed effect is more suitable. Hence, fixed effect estimator if used to estimate Equations (i) & (ii). Fixed effect estimator is preferred due to reason that it provide assistance in controlling the heterogeneity in the data, predominantly, when it remain unchanged over time. The fixed and random effect model based on the supposition that, parameters are fixed in model. Furthermore, it also assumed there is association exist among the individual-specific effects and the predictors that incorporated in the model. In divergence, for random effects point of view, it is assume that individual specific effects not correlated with independent variable used in model. However, this assumption of no correlation between individual specific effect and independent variable does not hold, so random effect model provide inconsistence results of the estimates. In contrast, the

fixed effect provides consistent results of the estimates. Therefore, the fixed effects estimator looks more suitable to measure the effects of working capital management and firms performance. For further Quantitative analysis to data, we applied descriptive statistics, correlation and regression to establish relationship and to measure the impact of WCM on firms performance. (Raheman&Nasr 2007). E-views software has used to analysis data.

3. Empirical Results and discussion

3.1 Descriptive Statistics

Table 2. Descriptive Statistics of Textile Sector

Variables	N	Minimum	Mean	Maximum	Std. Dev
ROE	444	0.0002	0.1140	1.2552	0.1356
ROA	444	0.0001	0.0640	0.2876	0.0577
FP	444	0.0174	0.3935	1.1868	0.1701
IP	444	0.0406	0.4140	0.9901	0.1410
SIZE	444	6.2093	8.9019	10.701	1.1645
FL	444	0.1528	1.0409	3.2567	0.4655
APP	444	1.6193	39.197	168.97	24.714
ACP	444	10.310	45.462	245.78	39.781
ITID	444	11.176	72.458	202.52	36.804
CCC	444	3.8356	78.722	230.93	46.640

Table 2 presents descriptive statistics of 74 textile sector firms for a study period of six years ranges 2011- 2016 while total observations are 444. The average mean value of return on equity is 11.4% of total equity, this implies that on average firms, earns 11.4% of their total equity. It indicates that for each Rs.1 invested in the equity stocks, these firms may produce 0.114 rupees of earnings on average and degree of volatility is 13.5%. This indicates that value of the profitability may diverge from average to both sides at 13.5%. The high value for the return on equity is 125.5% for a firm in a year and 0.02% is the lower. Other variable that is use to check the profitability of the firms is return on asset. This implies that on average firms earns

6.4% of total asset. This implies that for each Rs.1 invested in the assets these firms can produce Rs.0.064 of earnings on average. Which is less as compare to return on equity? Furthermore, the standard deviation shows volatility of 5.77% with a range between 28.7% and 0.01%.

Moreover, the average value of Financing Policy (FP) gauged by (CL/ TA) is 39.3%, suggesting that the Pakistani textile firms adopt conservative financing Policy, by using less current liabilities to finance their total assets. The standard deviation indicates that on average the mean value of FP may diverge from mean to both sides at 17.01%. Furthermore, the volatility ranges from 1.74% to 118.6%. In contrast, the mean value of the Investment Policy (IP) gauged by (CA/ TA) is 41.4%, implies that the Pakistani textile firms attempts to take on low level of investment in current assets so adopt aggressive Investment Policy. The standard deviation 14.10% shows that the on average the mean value of IP can deviate between 4.06% and 99.01%.

Here, natural log of sales is a proxy of the size of the firm. The mean value of size is 8.90 while the degree of volatility is 1.16 ranging from 6.20 to 10.70. To check the financial Leverage (Debt) used by the firms (total debt/TA) ratio is taken as control variable. The findings indicate that the average debt ratio for the Pakistani textile firms is 104.09%.Which shows that on average 104.09% of firms total asset being financed by debts with a degree of volatility 46.55%.The maximum value of debt used by firms is 325% that is uncommon however this can be probable if the value of the firm's equity goes negative then this may be possible otherwise not.. The minimum value of the debt is 15.28% this indicates that firm use little debt in its operations.

For APP firms waited an average of 40 days to creditors to make payments to them with degree of volatility (S.D) 24.71 days. Here, the minimum period to pay the creditors is 1 day and maximum time taken for payment is 168 days. Moreover, firms take an average 45 days to receive payments from its debtors (receivables) with a degree of volatility (S.D) 39 days. Furthermore, the least time taken by a firm to gather from its debtors is 10 and the maximum period taken for this purpose is 245 days. There is an inconsistency or variance among account receivables in days and account payables in days, it indicates, that firm may undergo liquidity problem. It also implies that firms pay the payables before the maturity time and receive from

their debtors after the maturity time. However, on average 72 days is taken by firms to trade their inventories with instability of 36 days. The least time required by a firm to convert is 11 days and the maximum is 202 days, that is considered a long period to convert its inventory into sales.

As a comprehensive measure to gauge the efficiency of the management of WC, CCC being used. The mean value of CCC is 78 days implies that textile firms may take a period of more than two months to repurchase stock and receive from their receivables. The standard deviation is 46 days.

3.2 Correlation

The measuring tool used to check the causal association/relation and linear relationship between two units. The correlation test is used to explore the relation between WC components & firms performance. Table 3 and Table 4 provides the correlation coefficients between independent and dependent variables used in study. It is important that variables do not highly correlated or there should be minimum correlation among each of the variable with other variables. A great correlation among independent variables influences their mutual power in explaining the explained variable. . Moreover, the correlation coefficients may be use as an sign of the occurrence of Multicollinearity problem. Gujarati, (2003) proposed that the value of correlation among variables should be less than 0.85 .The results existing in Table 3 suggests that there is no Multicollinearity in the model.

Table 3: Pearson Correlation Matrix between ROE and WCM Measures

	ROE	FP	IP	SIZE	FL	APP	ACP	ITID	CCC
ROE	1								
FP	-0.065*	1							
IP	-0.004**	0.214	1						
SIZE	-0.004**	0.063*	-0.029*	1					
FL	0.387	0.007**	-0.013**	0.017**	1				
APP	0.006**	0.352	-0.119	-0.095*	0.068*	1			
ACP	0.055*	0.145	-0.070*	-0.130	0.156	0.523	1		
ITID	-0.101	0.118	0.301	-0.139	-0.037*	0.230	0.025*	1	
CCC	-0.036**	0.031*	0.240	-0.170	0.068	0.098*	0.595	0.689	1

Note: ***, ** and * indicates Significant at 0.01, 0.05 and 0.10 level, respectively.

Table 3. Correlation matrix implies that financing policy is significantly negatively correlated (-0.065) with firms profitability (ROE). This implies that firms that are extra aggressive in financing their need from current liability may negatively influence the firm's profitability (ROE). On the other hand investing policy is also significantly negatively correlated (-0.004) with firms profitability (ROE). This implies that firm follows conservative approach of investment. Firms invest more in current assets so that it may negatively influence the firm profitability. Furthermore, results also suggest that firms investing policy and financing policy both are positively correlated (.214) with each other. This is consistent with the results of Afza & Nazir (2008).

Moreover, Result from analysis also provides that Size of the firms is also significantly negatively correlated (-0.004) with firms profitability (ROE). It indicated that larger the size of the firm, profitability of the firm decreases and vice versa. Furthermore, financial leverage (FL) is positively correlated (0.387) with firms profitability. It implies that firms using long-term debts to finance its assets have a concave impact on their profitability (ROE). The results are contradictory with Vahid et al., (2012) and Raheman & Nasr (2007) but consistent with Dong & su (2010).

However, the positive relationship (0.006) between ROE and APP is explained by the truth that delayed payments to creditors justifies that the firms have some cash to purchase more

inventory to sell accordingly rising its sales level hence its profitability increases (Dong &su , 2010). Furthermore, ROE is significantly positively correlated (0.055) with ACP. This positive relation of ROE and ACP is inconsistent with the analysis that more the time consumed by borrowers to pay their account payables will results an increase in performance of the firms. The table also provides the negative relationship between ROE and ITID. This relationship can be explained by the truth that, firms which keep bulky inventory lower the cost of likely interruptions in the manufacturing process. This helps firms in protecting business loss as a result of scarcity of products & fluctuations and ultimately increases the firm’s profitability. This can be explained in another way that the less taken by the firms to convert their inventory in to sales ultimately increase firm performance Blinder & Maccini, (1991).

The results also show a significant negative correlation between CCC & ROE. This relationship is dependable with the truth that the time lag between the costs for the purchase of unprocessed materials & collection of sales of finished goods is extensive so, may decrease profitability of the firms and if by decreasing time lag, increases the profitability (Deloof, 2003).However, inventory turnover in days in positively correlated with CCC. This shows that the firms takes long time to dispose of inventory hence, resultantly it increases the cash conversion cycle as well. This implies that the increase in time lag of CCC may increase firm’s performance. Table also suggest a significant positive relationship between ACP and CCC, this implies that if a firm, takes longer time to collect cash for the credit sales it will increase its CCC so hence increase in firms performance. Furthermore, ACP and ITID both are highly correlated with CCC, which is obvious because of fact that CCC is obtain by summing both of them.

Table 4:Correlation Matrix between ROA and WCM Measures

	ROA	FP	IP	SIZE	FL	APP	ACP	ITID	CCC
ROA	1								
FP	-0.133	1							
IP	0.198	0.214	1						
SIZE	-0.017**	0.063*	-0.029*	1					
FL	-0.044*	0.007**	-0.013**	0.017**	1				
APP	-0.071*	0.352	-0.119	-0.095*	0.068*	1			

ACP	-0.111	0.145	-0.070*	-0.130	0.156	0.523	1		
ITID	-0.022*	0.118	0.301	-0.139	-0.037*	0.230	0.025*	1	
CCC	-0.074*	0.031*	0.240	-0.170	0.068	0.098*	0.595	0.689	1

Note: ***, ** and * indicates Significant at 0.01, 0.05 and 0.10 level, respectively.

Table 4 Indicates an inverse relationship between FP and ROA. This implies that firms that are using short-term sources to finance their needs have negative impact on firms profitability. On the other hand, IP has a positive relationship with ROA. This indicates that firms that are investing more in current assets have a positive impact on their performance. Furthermore, size of the firm has significant negative correlation with firm performance (ROA). This implies that larger firms have a negative impact on their firms' performance and vice versa. Financial leverage is significantly negative correlated (-0.044) with ROA. This is consistent in the view that, firms that are using more debts to finance the assets has a negative impact on their performance Vahid et al., (2012).

However, the negative relationship (-0.071) between ROA and APP can be explain by the fact that prompt payments to creditors ensures that the firms has paid the creditor in time. For this, firms often receive substantial discount from creditors hence its profitability increases. Furthermore, ROA is negatively correlated (-0.111) with ACP. This negative relation of ROA and ACP is consistent with the view that less the time taken by debtors to pay their bills, the more cash is available to refill the inventory hence leading to more sales, which results an increase in profitability of the firms (Reheman& Nasr, 2007).

Moreover, it also indicates the negative relationship between ROA and ITID. It means that less the no of days to convert inventory in sales the profitability of the firm increases. This relationship can be explained by the fact that firms, which maintain bulky inventory, lower the cost of possible interruptions in the production process. This helps firms in preventing loss of business because of scarcity of products & fluctuations and ultimately increases the firms' profitability Blinder & Maccini, (1991). The table also provides a significant negative correlation (-0.074) between CCC and ROA. This is in line with the view that if the time lag between the

purchase cost of raw materials and collection of sales of finish goods is long, it will decrease profitability and by decreasing this time lag increases profitability (Deloof, 2003).

However, inventory turnover in days is positively correlated with CCC. This implies that the firm takes longer time to sell inventory, resultantly increases the CCC as well. Hence, this relationship suggests that by increasing CCC firm performance may be enhanced that is unusual. Table also shows a significant positive relationship between the ACP and CCC, this indicates that if a firm takes more time to collect cash for its credit sales, it will increase its CCC. Furthermore, average collection period and inventory turnover in days both are highly correlated with CCC, that is obvious because of fact that CCC is obtained by summing both of them.

4.3 Regression

Regression is a quantitative technique used for the estimation of relationship among variables. More specifically, regression analysis supports how value of the dependent variable changes when any one of the independent variables varies, while the other independent variables are held fixed. In this technique, the value of the dependent variable is estimated from a set of independent variables. Regression analysis also helps to remove biases in results. This study uses the fixed effects and random effect analysis approach in order to check the impact of WCM on firms' profitability.

Table 5 indicates the fixed effect estimation results for the impact of WCM measures and firm performance (ROA). The results suggest that the adjusted R-square value is (.854). Moreover, the significant value of F-stats implies that the entire estimated model is a good fit to the data and the estimated model explains a considerable variation in the dependent variable. Whereas, Durbin-Watson statistics lies between 1.5 to 2.5 that indicate less correlation among the independent variables of the estimation model.

Table 5: Fixed Effects Estimation for WCM Effect on Firms Performance

Dependent Variable: ROA				
Independent variable	Coefficient	t-stats	p-value	Std. Error
FP	0.493	10.248	0.000***	0.048
IP	0.937	34.841	0.000***	0.026

SIZE	-0.168	-9.595	0.000***	0.017
FL	-0.150	-11.427	0.000***	0.013
CCC	0.103	12.568	0.000***	0.082
ACP	-0.339	-1.856	0.064**	0.018
APP	-0.455	1.528	0.127	0.029
ITID	-0.335	-1.922	0.055*	0.017
Constant	-0.283	-10.085	0.000***	0.028
Adjusted R^2	0.8534			
Hausman.Stat	0.0045			
F-statistic	70.61			
Prob (F-stat.)	0.0000			
D. Watson	1.9735			

Notes: (constant), financing policy (FP), investing policy (IP), size, financial leverage (FL), (CCC), (ACP), (APP), (ITID). *, **, and *** provides significant at the 10 percent, 5 percent, 1 percent level significance, respectively.

Estimating the coefficients of all the variables it is find that financing policy is significant at 0.01 level of significance. The coefficient suggests that financing policy is positively related to firms performance (ROA). This indicates that if others thing being fixed in the regression model, one unit increase in the financing policy (short term Liabilities to total Assets ratio) will increase the firms performance by 0.493 on average. This concave relation suggests that firms that are more aggressive in financing their need from current liabilities has a positive influence on their performance measured by ROA. It also make economic sense in way that firms that use short-term sources for financing has to pay less interest payments on long-term debts that ultimately increase performance. These results are inconsistent with the results of Thakur and Mukit (2017)suggested negative relation with firms financing policy and performance. However, these results are consistent with the results of Mwangi, Makau and Kosimbei, (2014)suggested that firms aggressive financing policy is positively influence the financial performance. This result disagrees with our hypothesis so we reject over H_1 and concluded that aggressive financing policy is positive influence on ROA.

Furthermore, the results suggest that firms investing policy has a significant positive relation with firm performance (ROA) with significant level at 0.01. The coefficient of investing policy suggest that if other things being held constant, one unit increase in the investing policy (current Assets to total Assets ratio) may increase the firms performance by 0.973 on average. This positive relation suggest that firms that are more conservative in investing in current assets has a positive influence on their performance, measured by ROA. This positive relation indicates that aggressive investing policy has convex relation with firms' performance. It also make economic sense in a way that firms that maintain high levels of inventory may reducing the cost of products by employing economies of scale and also protects the firms against price fluctuations that eventually enhance firm performance. This result is contradictory with the results of Vahid, Mohsen & Mohammadreza, (2012), suggested negative relation with firms investing policy and performance. However, these results are aligned with the results of Mwangi et al., (2014); Sohail, Rasul, and Fatima (2016) revealed that firms conservative investing policy is positively influence the financial performance. The result agree with our H_2 and concluded that conservative investing policy is positive influence on ROA.

Moreover, the significant negative coefficient of firm size suggest that if firms size increase by one unit, the financial performance of firms (ROA) decreases by 0.168 on average. The results are also suggest that the more the size of the firm it has negative influence on ROA. The results are consistent with the results of Panda and Nanda (2018); Thakur and Mukit (2017). However, inconsistent with the results of Ng, Ye, Ong and Teh (2017). The findings of firms size are inconsistent with our hypothesis H_7 so we concluded that firms size ha negative influence on ROA. On the other hand, consistent with Afrifa,(2016), a significant negative relationship exist between the financial leverage and ROA and p-value (0.000). This result suggests that firms that are using more debt financing has a negative influence on ROA. If other things being same, increase of one unit in FL it may negatively influence the ROA by .150 on average. The result accepts our Hypothesis H_8 and suggest that there is a negative influence of FL on ROA.

The findings also suggest a considerable positive relation between cash conversion cycle & ROA at 0.01 level. This concave relation indicated that keeping the other factors constant, if

CCC increase by one day, ROA may increase by 0.103 on average. The result of CCC supports the work of Ng, Ye, Ong and Teh (2017). The positive relation between the firms CCC and ROA may explain that increasing the level of investment in short term assets can help in increasing profits. This implies that the increase in stock firms receive sufficient amount of discount from the creditors and it is used to make profits for the firm. Based on the above results we reject H_3 and conclude that CCC has positive effect on ROA. Furthermore, the estimated coefficient of ACP reveals that it has negative and significant influence on ROA. Consistent with Tauringana and Afrifa (2013); Rehemana and Nasr (2007); Ng, Ye, Ong, Khan et al., (2021) and Teh (2017), a negative relation suggest that firms may improve the performance by decreasing the no of days AR are recovered. The results also make the economic sense that, the less the time taken by debtors to pay their payables, additional cash is available to refill inventory. Hence, the increase in sales enhances performance of the firm. The negative coefficient of ACP also suggest that if the number of days bills receivables decrease by 1 day is linked with an increase in ROA (0.339) on average and vice versa. The result agrees with our hypothesis H_4 so we conclude that ACP has negative influence on ROA.

Moreover, the coefficient on the average payment period negatively related with ROA. However, the relationship is statistically insignificant. Result suggests that if the number of days accounts payables increase by 1 day is associated with a decrease in ROA (0.455) on average. These results are consistent with Bagh, Nazir, Khan and Razzaq, (2016). This result disagrees with H_5 so it is conclude that APP is negatively insignificantly influence on ROA. On the other hand, estimated coefficient of inventory turnover in days is negative related at 0.05 level with ROA. This convex relation makes economic sense in a way that less the time taken by the firms to convert inventory, increases the performance of the firm. Furthermore, Result suggests that if the number of days taken to convert inventory into sales decrease by 1 day, ROA increases by (0.335) on average. The results consistent with Tauringana & Afrifa (2013) and Ng, Ye, Ong and Teh(2017). Hence, we accept H_6 and conclude that ITID is negatively influence on ROA.

4.4 Robustness check

We applied robustness check to validate the results ROA. In this, we take another performance measure ROE and check the effect of WCM on firms performance measure by

ROE. The results of previous table 5 indicated that the coefficient of financing policy and investing policy have positive impact on firm performance. Furthermore, coefficients of SIZE, FL, ACP, APP and ITID have significant negative relationship with firms ROA except APP that is insignificant. Whereas CCC has positive relation with ROA.

The estimation results reported in Table 6 consistent with the pervious results. Results indicate the fixed effect estimation results for the impact of WCM measures and firm performance (ROE).The results suggest that the adjusted R-square value is (.470). Moreover, the significant value of F-stats implies that the entire estimated model is a good fit to the data and the estimated model explain a considerable variation in the dependent variable. Whereas, Durbin-Watson statistics (1.82) lies between 1.5 to 2.5 that indicate less relationship between the independent variables of the estimation model.

Table 6: Fixed Effect Estimation for WCM Effect on Firms Performance

Dependent Variable: ROE				
Independent variable	Coefficient	t-stats	p-value	Std. Error
FP	0.975	7.629	0.000***	0.127
IP	3.119	43.631	0.000***	0.071
SIZE	-0.576	-12.347	0.000***	0.046
FL	-0.146	-4.192	0.000***	0.034
CCC	0.367	16.828	0.000***	0.021
ACP	-0.878	-1.807	0.071*	0.048
APP	0.948	1.198	0.231	0.079
ITID	-0.427	-0.919	0.358	0.046
Constant	-1.1843	--16.074	0.000***	0.073
Adjusted R ²	0.4705			
Hausman.Stat	0.0087			
F-statistic	84.554			
Prob (F-stat.)	0.0000			
D. Watson	1.8237			

Note:*, **, and *** indicate significant at the 10 percent, 5 percent, 1 percent level significance, respectively.

Estimating the coefficients of all the variables used in model. The findings suggest that financing policy is positively related with firm ROE with significant at 0.01. The coefficient of FP indicate that if others thing being fixed in the model, one unit increase in the financing policy (short term Liabilities to total Assets ratio) may increase the firms performance by 0.975 on average. This positive relation proposed that firms that follow aggressive financing policy has a positive influence on their ROE. It make economic sense in way that firms that are using short-term sources to finance their assets has to pay less interest payments on long-term debts that ultimately increase performance. These results are consistent with the results previous results.

Furthermore, the results of firms investing policy provide a significant positive relation with ROE at 0.01 level. The coefficient of investing policy suggest that if other factors remain constant, increasing investing policy (current Assets to total Assets ratio) by one unit may increase the firms performance by 3.119 on average. This positive relation suggests that firms that are more conservative in investing in current assets has a positive influence on their performance. This positive relation indicates that aggressive investing policy has convex relation with firms' performance. It also make economic sense in a way that firms that maintain high levels of inventory may reducing the cost of products by employing economies of scale and also protects the firms against price fluctuations that eventually enhance firm performance. The results aligned with the previous results and matched with hypothesis.

Moreover, the coefficient of firm size has a significant negative relation with ROE with 0.01 levels. The results suggest that that if firms size increase by one unit, the financial performance of firms' decreases by 0.576 on average. The relation indicates that larger the size of the firm it will negatively influence on performance of firms. On the other hand, consistent with Afrifa, (2016), a significant negative relationship exists between the financial leverage and ROE with p-value (0.000). This result suggests that firms that are using more debt financing has a negative influence on their performance. This makes economic sense in a way that firms that trend to use more debt financing has to pay fixed cost of interest that will ultimately negatively

influence on performance of firms. In other words, if no change done in other factors, one unit change in FL may negatively influence the performance by .146 on average.

Furthermore, the coefficient of CCC suggests that a significant positive relationship exist between cash conversion cycle and ROE at 0.01 level. This concave relation indicated that keeping the other factors constant, if CCC increase by one day, ROE will increase by 0.103 on average. The result of CCC supports our hypothesis. Moreover, the estimated coefficient of ACP reveals that it has negative and significant influence on ROA of firms. Consistent with previous results a negative relationship suggest that firms may improve the performance by decreasing the no of days AR are recovered. The results also make the economic sense that, the less the time taken by debtors to pay their bills, more cash is available to refill inventory. Hence, the increase in sales enhances performance of the firm. The negative coefficient of ACP also suggest that if the number of days accounts receivables decrease by 1 day is associated with an increase in ROE (0.878) on average.

Moreover, the coefficient of average payment period suggests that APP positively related with ROE. However, the relationship is statistically insignificant. Result suggests that if the average payment period increases by 1 day it may increase the performance by (0.948) on average. This result also make economic sense in way that the more time taken by a firm to pay its creditor payments, the reserve for WC increase and may use to enhance the performance of firm. However, the relationship is statistically insignificant. Similarly, estimated coefficient of inventory turnover in days is negative related with ROE. However, this relation is statistically insignificant. This makes economic sense that less the time taken by the firms to convert inventory into sales, increases the performance of the firm. Furthermore, Result suggests that if the number of days taken to convert inventory into sales decreases by 1 day, ROE increase by (0.335) on average. The results are consistent with previous results.

4. Conclusion and Recommendations of the study

The estimated model on the basis of theoretical background conclude that textile firms can enhance their performance by using short term financing rather than long term financing for their needs. Moreover, the results are consistent with the results of Mwangi et al., (2014); Sohail et al., (2016) and Khan et al., (2021). In particular, the results also suggest that cash conversion

cycle have positive influence on ROA and ROE of firms. Whereas, account receivable period and inventory turnover in days has negative relation with ROA and ROE. However, ITID relation with ROE is statistically insignificant. In contrast, the influence of APP on ROA is negative and with ROE is positive. However, this relationship is insignificant. Firm size and financial leverage both have negative impact on two performance measures ROA and ROE. The results provided that larger textile firms and firms that are more prone towards Debt financing have a negative impact on the performance.

The key finding of the study may be helpful for the policy makers and financial manager of textile sector and other non-financial firms operating in Pakistan in order to maximize the shareholders wealth. Pakistani firms normally invest a sufficient amount in their working capital. This employs that there is a significant impact of WCM on firm's performance. This study will provide significant amount of confidence to the small & medium size investors to invest in Pakistan. Most of the firms in Pakistan used short terms loans for their operations due to less established bond market. Firms can manage and reduces their liquidity requirements if they efficiently and properly manage their working capital by employing the right working capital investing and financing policies.

The findings also suggest that firms can enhance their profits by reducing the account receivables period so that debtors are bound to pay prompt payments that used in buying inventory for sales. Moreover, the management can increase the firm performance by increasing the Account payables period without affecting the relationship with creditor. Firms can get advantage on other firms by efficiently managing working capital. For this, if the firms reduce their cash conversion cycle and utilizing all their resources efficiently the performance of firm expected to rise. Furthermore, the managers should make a balance between the aggressive financing policy and conservative investing policy so that overall performance can increase. Hence, tradeoff between return in investment and cost of financing will ultimately enhance firm's performance.

5. Limitations of the study and future directions

It is an unavoidable fact that each study has limitations, so for the current study is also limited to various elements like sample size, time frame, variables of interest and one sector specifications.

Therefore, research can be conducted in multi-sectors of the PSX and time frame can be increased also because the current study is limited to it due to data availability factor. Furthermore, one can also opt for cross-country analysis in the same area of interest in order to maximize the scope across the border to get more generalize results for better policy recommendations and implementations.

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