

## **CORPORATE GOVERNANCE, WORKING CAPITAL MANAGEMENT AND FIRM PERFORMANCE: Evidence from Non-financial Sector of Pakistan**

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Received: 20 May 2020; Revised: 3 August 2020; Accepted: 7 August 2020; Online: 28 December 2020

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### **ABSTRACT**

This study explores the effects of working capital management and corporate governance on firm performance by using the non-financial listed firms of Pakistan. For analytical purpose this study used data of 159 firm balance panel for the period of 2008-2017. GMM method is utilized for the purpose of analysis. Results of the study indicates that director's remuneration has positive effect on firm performance. Payment period and board size have negative effect on firm performance. This study findings suggest that combined effect of working capital management and corporate governance on firm performance is used to check the short term and long-term performance.

**Key words:** working capital management, corporate governance, firm performance

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### **1. INTRODUCTION**

Efficient management of current assets and current liabilities is called the working capital management. Working capital management ensures the smooth running of day to day entity operations like short-term financing requirement and management of short-term current assets. Gitman (2005) classified following important working capital proxies: management of cash, management of inventory, debtor's management and short-term financing. Ahmad *et al.* (2014) discuss the working capital factors that has effect on firm performance are inventory conversion cycle, payment period, collection period and cash conversion cycle.

Corporate governance are the protocols and procedure for monitoring the activities of firm. Most of the literature on corporate governance based on

agency theory. Agency theory discuss the agency problem between owners and managers. Agency problem is elaborate the conflict of interest between owners and managers. In the presence of agency problem, managers work for their personal benefits rather than owners. Good governance ensures to reduce the conflict of interest between owners and managers.

Literature suggest two types of firm performance indicators which are short term and long term. Short term performance is related to the management of working capital while long term performance is related to the with corporate governance. Most of the literature investigated the individual effect of working capital management and corporate governance on firm performance. These studies ignored the joined effect of working capital management and corporate governance on firm performance (Kayani *et al.*, 2018). Tsagem *et al.* (2014) argued that working capital management and corporate governance has effect on firm performance, but there is negative effect of weak corporate governance and inefficient working management on firm performance. Ross *et al.* (2008) said that key source of firm internal financing is profit. Also, Debt and equity provide financing for day to day operating cost and working capital management provide finance for these costs. For maximizing the firm performance, firms must consider the joined effect of working capital management and corporate governance on firm performance.

This study followed the work of Kayani *et al.* (2018) and investigate the combined effects of working capital management and corporate governance on firm performance of non-financial listed firms of Pakistan. by including more variables of corporate governance like remuneration (i.e., CEO, directors and auditors), CEO duality, five largest block holders, insider ownership and institutional ownership. This study used the following working capital proxies like inventory conversion cycle, payment period, collection period and cash conversion cycle. This study used following corporate governance proxies such as CEO duality, board size, director's remuneration, auditor remuneration, executive's remuneration, CEO remuneration, board independence, insider ownership, institutional ownership and largest 5 block holders' shareholdings. This study used TobinQ as firm performance proxy.

Very few studies found from literature those investigated the combined effect of working capital management and corporate governance on firm performance. Kayani *et al.* (2018) explore the joined effect of working capital and corporate governance on firm performance by using the data of US firms. Their findings suggest that cash conversion cycle, collection period and inventory

conversion cycle have negative impact on firm performance. Additionally, board independence and board size have negative effect on firm performance whereas women representation on board, average board age and executive compensation have positive effect on firm performance.

This is first study from Pakistan, which explores the combined effect of working capital and corporate governance on firm performance.

Reminder of the paper discuss the data, variables and methodology, finding and conclusion of the study.

## 2. DATA, VARIABLE, METHODOLOGY

### 2.1. Data

This study used the data of non-financial listed 159 Pakistani firms for the period of 2008-2017. Total listed firms are 369 till 2017, so sample of the study is 43.08%. This study excluded the firms with incomplete data, outliers and negative equity firms from analysis. This study collected the data from annual reports, only market share prices data collected from publication of Pakistan Stock Exchange.

### 2.2. Variables

This study followed the work of Kayani *et al.* (2018) by including more variables of corporate governance like remuneration (i.e., CEO, directors and auditors), CEO duality, five largest block holders, insider ownership and institutional ownership, table 1 discuss the variables and their definition investigated in this study.

**Table 1: Measurement of variables**

<i>Variable</i>	<i>Proxy</i>	<i>Definition</i>
<b>Dependent variable</b>		
TobinQ	TBINQ	[(No. of shares outstanding* year end share price) + total debt] / Total assets.
<b>Working capital proxies</b>		
Payment period	ACCP	(Trade creditor / cost of goods sold) *365.
Collection period	ACCR	(Trade debt / net sales) *365.
Inventory conversion cycle	INV	(End year inventory value / cost of goods sold) *365.

*contd. table 1*

<i>Variable</i>	<i>Proxy</i>	<i>Definition</i>
Cash conversion cycle	CCC	(Collection period+ Inventory period) – payment period.
<b>Corporate governance variables</b>		
Auditor remuneration	ADRM	Natural logarithm of auditor remuneration.
Chief executive remuneration	CHRM	Natural logarithm of chief executive remuneration.
Director remuneration	DRRM	Natural logarithm of director remuneration.
Executive remuneration	EXRM	Natural logarithm of executive remuneration.
CEO duality	CD	Value 1, if CEO hold the position of chairman or managing director.
Five largest block holders	BLCK5	Ratio of five largest block holder's shareholding.
Board size	BS	Natural logarithm of no. of directors on the board.
Independent directors	IND	Ratio of no of independent directors on the board
Insider ownership	INSO	Ratio of shareholding, CEO, directors and their spouses
Institutional ownership	INSTO	Ratio of shareholding of intuitions
<b>Control variables</b>		
Firm size	SIZE	Natural logarithm of total assets in thousands Pak rupees
Tangibility	TAN	Ratio of fixed to total assets
Debt ratio	TBDR	Total debt to total assets
Firm age	AGE	Natural logarithm of years since establishment

### 2.3. Methodology

This study adopted the method of Kayani et al (2018). Kayani *et al.* (2018) argued that due to endogeneity, best technique is GMM for corporate governance studies, but for baseline analysis and comparison purpose OLS and fixed model also utilized.

Equation 1 is used to check the individual effect of working capital management proxies on firm performance.

$$TBINQ_{it} = ACCP_{it} + ACCR_{it} + INV_{it} + CCC_{it} + AGE_{it} + SIZE_{it} + TAN_{it} + TBDR_{it} + \varepsilon_{it} \quad (1)$$

Equation 2 is used to check the individual effect of corporate governance proxies on firm performance.

$$TBINQ_{it} = ACCP_{it} + ACCR_{it} + INV_{it} + CCC_{it} + ADRM_{it} + BLCK5_{it} + BS_{it} + CD_{it} + CHRM_{it} + DRRM_{it} + EXRM_{it} + IND_{it} + INSO_{it} + INSTO_{it} + AGE_{it} + SIZE_{it} + TAN_{it} + TBDR_{it} + \varepsilon_{it} \quad (2)$$

Equation 3 is used to check the combined effect of working capital and corporate governance proxies on firm performance.

$$\begin{aligned} \text{TBINQ}_{it} = & \text{ACCP}_{it} + \text{ACCR}_{it} + \text{INV}_{it} + \text{CCC}_{it} + \text{ADRM}_{it} + \text{BLCK5}_{it} + \text{BS}_{it} \\ & + \text{CD}_{it} + \text{CHRM}_{it} + \text{DRRM}_{it} + \text{EXRM}_{it} + \text{IND}_{it} + \text{INSO}_{it} \\ & + \text{INSTO}_{it} + \text{AGE}_{it} + \text{SIZE}_{it} + \text{TAN}_{it} + \text{TBDR}_{it} + \varepsilon_{it} \end{aligned} \quad (3)$$

### 3. FINDINGS

#### 3.1. Descriptive statistics

Table 2 shows the descriptive statistics of the study. Average value of TobinQ is 1.35, which indicates Pakistan firms performing well in market compare with booked value. Mean value of payment period is 30 days. Average collection period is 40 days. Inventory conversion cycle is 82 days. Cash conversion cycle

**Table 2: Descriptive analysis**

	<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std. Dev.</i>	<i>Obs.</i>
TBINQ	1.353	0.939	25.425	0.228	1.467	1590.000
ACCP	30.061	14.488	838.566	0.000	187.245	1590.000
ACCR	41.358	20.603	1254.782	0.000	98.993	1590.000
INV	81.687	66.167	1119.445	0.000	227.548	1590.000
CCC	90.584	79.878	1117.441	-632.291	111.153	1590.000
ADRM	1917.346	1160.000	39812.000	0.000	2517.702	1590.000
CHRM	12843.830	7207.000	535995.000	0.000	21438.310	1590.000
DRRM	9858.312	4128.525	290416.700	0.000	20422.830	1590.000
EXRM	249009.600	34913.000	12620756.000	0.000	863990.500	1590.000
CD	0.125	0.000	1.000	0.000	0.331	1590.000
BLCK5	0.663	0.679	2.002	0.080	0.198	1590.000
BS	8.047	7.000	16.000	4.000	1.551	1590.000
IND	0.144	0.111	0.880	0.000	0.183	1590.000
INSO	0.573	0.600	0.995	0.000	0.234	1590.000
INSTO	0.184	0.153	1.000	-0.781	0.198	1590.000
SIZE	15.431	15.239	20.257	12.096	1.402	1590.000
TAN	0.525	0.533	0.993	0.000	0.201	1590.000
TBDR	0.535	0.550	1.888	0.007	0.208	1590.000
AGE	3.237	3.219	4.220	0.000	0.548	1590.000

*Notes:* This table displays the raw values of remuneration of auditor, CEO, directors & executives and board size.

is 90 days. Mean of auditor remuneration is 1917.35 thousand Pak rupees. Average of CEO remuneration is 12843.830 thousand Pak rupees. Mean of directors' remuneration is 9858.312 thousand Pak rupees. Average executive remuneration is 249009.600 thousand Pak rupees. Mean of CEO duality is 0.125 which shows that 12.5% of sample firms CEO hold the position of chairman. Average largest 5 block holders shareholding is 66.3%. Average 8 numbers of directors' sample firms hold on the board. Mean of independent director is 14.4 %. Average shareholding of CEO, directors and executives and their spouses is 57.3%. On average institutional ownership is 18.4%.

### **3.2. Correlation analysis**

Table 3 shows correlation analysis of the study. TobinQ has positive and significant relationship with auditor remuneration, 5 largest block holders, board size, CEO remuneration, director's remuneration, executive remuneration, insider ownership, and size. TobinQ has significant and negative relationship with institutional ownership and tangibility.

### **3.3. Regression result and discussions**

Panel 1 of table 4 displays the result of equation 1. Payment period and cash conversion cycle are negatively and significantly related to the firm performance. This finding is consistent with the findings of Gill et al (2010), Enqvist et al (2014) and Kayani et al (2018). Negative effect of payment period on firm performance indicates that firm reduce its payment period which can create its positive image in market so that firm performance may be improved. Panel 2 of table 4 shows the results of equation 2. Directors remuneration has positive however board size has negative and significant relationship with firm performance. Jiraporn and Nimmanunta (2017), Dang A et al. (2017), Kayani et al (2018), Aslam et al (2019) and Harymawan et al (20). Positive effect of directors' remuneration on firm performance indicates that agency problem between owner and managers should be reduced through fair incentive to the directors. Negative impact of board size on firm performance shows that when more directors are involved in decision making, it takes more time for decision making which effect negatively on firm performance.

Panel 3 of table 4 shows the results of equation 3. Director remuneration has positive, but Payment period and board size are negative and significant relationship with firm performance. Combined effect of working capital management and corporate governance on firm performance shows similar

Table 3: Pearson Correlation analysis

	ACCP	ACCR	AGE	ADRM	BLCK5	BS	CCC	CD	CHRM	DRRM	EXRM	IND	INAO	INSTO	INV	SIZE	TAN	TBDR	TBINQ
ACCP	1																		
ACCR	0.59***	1																	
AGE	-0.001103	-0.08***	1																
ADRM	-0.030197	0.05**	0.08***	1															
BLCK5	0.06**	0.04**	-0.02	0.20***	1														
BS	0.01	0.22***	0.00	0.24***	0.02	1													
CCC	-0.06***	0.49***	-0.03	-0.06***	-0.04**	0.12***	1												
CD	0.01	-0.06**	0.01	-0.06***	-0.00	-0.15***	-0.09***	1											
CHRM	-0.01	0.03	0.05**	0.41***	0.05**	0.25***	-0.03	-0.033	1										
DRRM	-0.07***	-0.20***	0.04	0.12***	-0.03	0.00	-0.11***	0.03	0.20***	1									
EXRM	-0.03	0.03	0.05**	0.56***	0.13***	0.26***	0.00	-0.06***	0.37***	0.02	1								
IND	0.00	0.01	0.06**	0.06***	0.08***	0.10***	-0.03	-0.03	0.02	-0.13***	0.08***	1							
INAO	0.05**	-0.04*	0.01	0.09***	0.51***	-0.04*	-0.02	-0.02	-0.03	0.08**	-0.06**	-0.10***	1						
INSTO	-0.03	0.08	-0.06***	0.150***	-0.12***	0.15***	0.01	-0.01	0.13***	-0.09***	0.20***	0.10***	-0.66***	1					
INV	0.68***	0.56***	0.03	-0.09***	0.01	-0.02	0.34***	-0.02	-0.04*	-0.05**	-0.03	-0.03	0.06***	-0.06***	1				
SIZE	-0.02	0.08***	-0.04*	0.72***	0.11***	0.29	-0.04**	-0.03	0.31***	0.01	0.56***	0.111***	0.05**	0.16**	-0.10***	1			
TAN	-0.06**	-0.21***	-0.00	-0.18***	-0.10***	-0.07***	-0.26***	0.15***	-0.06***	-0.03	-0.09***	0.01	-0.09***	-0.03	-0.10	0.01	1		
TBDR	0.02	0.01	-0.07***	-0.11***	0.11***	-0.01	-0.1***	0.09***	-0.14***	-0.04*	-0.07***	-0.02	0.12***	-0.18***	-0.04*	-0.01	0.09***	1	
TBINQ	-0.00	-0.00	0.00	0.22***	0.23***	0.10***	-0.01	-0.01	0.16***	0.04*	0.19***	0.017	0.13***	-0.05**	0.01	0.11***	-0.18***	0.00	1

Note: \*\*\*, \*\*\*, \*\*\*, \* represent least to most significant level.





results like individual effect of each on firm performance. One important observation noted this study that coefficient of working capital management of Pakistani non-financial listed firms is too small, which indicates the weak effect of working capital management on firm performance of Pakistan. For improvement of firm performance, non-financial listed firms must reconcile its management policies and formulate mechanism for activism of working capital management. Further, this study utilized 10 corporate governance proxies, after correcting endogeneity only board size and director's remuneration have significant effect on firm performance. These investigations recommend that policy makers must takes steps for improvement and effectiveness of corporate governance code of Pakistan.

#### 4. CONCLUSION

This study explores the effects of working capital management and corporate governance on firm performance by using the non-financial listed firms of Pakistan. For analytical purpose this study used data of 159 firm balance panel for the period of 2008-2017. GMM method is utilized for the purpose of analysis. Combined effect of working capital management and corporate governance on firm performance shows similar results like individual effect of each on firm performance. One important observation noted this study that coefficient of working capital management of Pakistani non-financial listed firms is too small, which indicates the weak effect of working capital management on firm performance of Pakistan. For improvement of firm performance, non-financial listed firms must reconcile its management policies and formulate mechanism for activism of working capital management. Further, this study utilized 10 corporate governance proxies, after correcting endogeneity only board size and director's remuneration have significant effect on firm performance. These investigations recommend that policy makers must takes steps for improvement and effectiveness of corporate governance code of Pakistan. This study findings suggest that combined effect of working capital management and corporate governance on firm performance is used to check the short term and long-term performance.

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**To cite this article:**

Muhamamd Imran Khan and Rehana Kouser. Corporate Governance, Working Capital Management and Firm Performance: Evidence from Non-financial Sector of Pakistan. *Global Journal of Accounting and Economy Research*, Vol. 1, No. 2, 2020, pp. 99-108