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Interrelationship among Corporate Governance, Working Capital Management, and Firm Performance: Panel Study from Pakistan

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Corporate governance and working capital management are considered as critical areas of finance. The objective of this research work is to analyze the interrelationship among corporate governance, working capital management, and performance of firms. Financial data of 140 non-financial firms listed in Pakistan Stock Exchange from 2008 to 2015 constitute the sample for this study. Pooled Ordinary Least Square estimation method is used to estimate the formulated relationships. After examining the direct impact of corporate governance on the performance of the firm, this study revealed that ownership concentration and board size positively affect firm performance, whereas CEO duality has a negative effect on firm performance. The second relationship examined the impact of working capital management on the performance of the firm. This study found a significant negative impact of the cash conversion cycle and positive impact of current ratio on firm performance respectively. The third relationship studied the impact of corporate governance on working capital management. This study found that board size has positive impact, whereas ownership concentration negatively affects the cash conversion cycle. This study also revealed that board size and ownership concentration both affect the current ratio positively.

Keywords: Corporate Governance, Working Capital Management, Firm Performance, Non-Financial, Pakistan Stock Exchange

INTRODUCTION

Corporate Governance deals with the methods in which finance providers satisfy themselves of earning a proper return on their investment (Shleifer & Vishny, 1997). It also refers to those collective efforts by which stockholders shield themselves against expropriations by those who control and manage the firm. Expropriations may take various forms. For instance, the insiders simply take away the profits or in another case, they may sell the assets, output, or additional securities of the organization they command to another organization they own at lower than the market price. In other instances, expropriations may take the form of appointing incompetent family members on key managerial positions or overpayment of executives. In general, expropriations leads to agency problem defined by Jensen and Meckling (1976). In the corporate sector, operational activities are not directly controlled by owners, and this separation in control may result in agency problem, which encourages top-level executives to divert organization resources in their personal benefits, that actually belong to shareholders. To minimize agency problem, the principal implements different monitoring and control mechanisms, which are referred to the agency cost. Agency costs are the aggregate of all those costs, which corporate owners have to tolerate to align the agent's behavior with the principal's interest.

Corporate Governance in Pakistan

Family-owned and state-owned firms dominate the corporate sector in Pakistan. After independence, the corporate sector was regulated under the Companies Act 1913. Until the introduction of Companies Ordinance in 1984, companies were established and operated under the Company Act 1913. The pioneer stock exchange of Pakistan was incorporated in Karachi in 1949, and after that, the other two stock markets of Pakistan, namely Lahore and Islamabad were incorporated. These three stock exchanges (Karachi, Lahore, and Islamabad) were performing their role in the money and capital markets. But in January 2016, these exchanges were merged to form Pakistan Stock Exchange Limited. State bank of Pakistan and Securities and Exchange Commission of Pakistan-SECP are working as two supervisory bodies in Pakistan. SECP is an independent body, which has the authority to regulate the corporations and financial markets in Pakistan. SECP administers the operations of the stock exchange and has the power to direct listed firms of Pakistan under listing requirements of Stock Exchange and also nurture the corporate governance practices.

Working Capital Management

Working capital management is the administration of current assets (like cash, inventory, account receivables, and marketable securities) and the needed finances to back up these current assets. For several reasons working capital management is critical for any firm. A manufacturing firm carries almost half of its total assets as current assets. The proportion of current assets is even higher for a distribution company. A firm may realize substandard returns on invested capital if it makes an excessive investment in current assets. On the other side, firms having a few current assets may struggle to maintain smooth business operations (Horne & John M. Wachowicz, 2008). The ultimate objective of a firm is the owners' wealth maximization whereas, preserving liquidity is also another important objective. Increase in profits by sacrificing liquidity can harm a

firm's performance. Therefore, the firm must make trade-off among these two important objectives. If firms do not care about profits their long-term survival is difficult, while the problem of bankruptcy may also arise if managers do not care about liquidity. For these motives, management of working capital demands proper time and attention (Raheman & Nasr, 2007).

Optimum balances of working capital components help firms to reduce working capital requirements, which enhance its free cash flows. Inefficient management of working capital encouraged by inadequate governance practices has a negative effect on the wealth of shareholders. Sound governance practices inspect how management is using the firm's resources. Inventory, receivables, and payables all are essential elements of working capital management but the most sensitive and important is cash, which can easily be used by management to its desire (Gill & Biger, 2013). Because of poor corporate governance practices, firms may accumulate unnecessary cash which may not favor the firm.

To run business operations successfully, a firm must maintain an appropriate level of liquid assets (Afza & Nazir, 2008). How a firm formulates its policies regarding dividends, investments, and working capital requirements determine the cash level a firm should maintain. CEO and board of directors have the authority to formulate organizational policies related to the management of cash, purchase of inventory, setting credit terms for customers and suppliers and all other organizational policies. Therefore, their policies and actions may perform a prime role in maintaining i) a high cash balance ii) high volume of account receivable and payable and iii) a slow cash conversion cycle. Cash conversion cycle is negatively affected by poor policies related to inventory, receivables, and payables management. Excessive cash balance may signal agency issue as it demonstrates management risk aversion by maintaining high cash balances (Gill & Shah, 2012).

LITERATURE REVIEW

Corporate Governance and Firm Performance

Jensen and Meckling (1976) shed light on the governance issue by highlighting two types of issues between owners and management. They hypothesized that differences between owners and management arise as residual claims held by managers are less than one hundred percent. Managers do not capture the complete benefits from corporate activities but they hold the responsibility for all these actions by sacrificing expenditure from which they can get personal benefits. Hence, managers get involved in achieving personal gains instead of maximizing shareholder's wealth. Ghazali (2010) found that no corporate governance variable significantly explains corporate performance. Sheikh and Wang (2013) presented a direct positive effect of board size on the performance of firms in Pakistan. Malik and Makhdoom (2016) reported a positive relationship between corporate governance practices and performance of firms. Whereas, Saeed et al. (2016) demonstrated the fact that corporate governance features (board size and board independence) are negatively related to the performance of firms.

Working Capital Management and Firm Performance

Prior studies from different countries reported a significant impact of working capital management on both liquidity and profitability of the firms. Shin and Soenen (1998) tested the relationship of working capital management with corporate profitability and reported that by shortening the firm's net trade cycle shareholder's value can be enhanced. Lazaridis and Tryfonidis (2006) revealed that managers can enhance the profitability of their organizations by correctly managing the cash conversion cycle and keeping its components at an optimum level. Deloof (2003) demonstrated the significant negative impact of the collection period, payment period and average inventory period on a gross operating income of Belgium firms. The relationship between corporate profitability and management of working capital has also been empirically tested by Gill et al. (2010). They found me) A statistically significant negative impact of account receivable collection time and profitability ii) A positive relationship of cash conversion cycle with the profitability of the firms. This positive relationship of CCC and profitability contradicts with findings of (Deloof, 2003). The research study of Raheman and Nasr (2007) suggested that firms can raise their performance by shrinking the cash conversion cycle to a reasonable level. Results further reported a positive influence of company size on corporate profitability.

Corporate Governance and Working Capital Management

Corporate governance plays a significant role in working capital management by framing reasonable policies. The importance of board size, board independence, independence of the audit committee, CEO duality in management of working capital cannot be overlooked. CEO together with Board of directors make policies regarding the management of cash and all other policies within the firm. Board size and the dual role of CEO can lead to excessive cash balances. Thus excessive cash balances can raise agency problems as BOD's and CEO may not work in maximization of shareholders wealth (Gill & Shah, 2012). CEO can protect the interests of the management holding higher cash balances (Dahya & Travlos, 2000).

Drobetz and Grüninger (2007) examined the underlying forces of firm cash holdings and showed that board size is not related to corporate cash holdings while firms having CEO duality hold significantly higher cash balances implying increased problems from an agency viewpoint. Gill and Biger (2013) studied the role of corporate governance in improving the efficiency of working capital management using a dataset of 180 American manufacturing firms. The main findings of the research were i) Larger board do not improve the efficiency of American firms. ii) CEO duality improves the efficiency of account receivable and accounts payable management hence leads to improvement in the cash conversion cycle.

Hypotheses Development

Based on reviewed studies in the previous section (see, e.g. Ghazali, 2010; Sheikh and Wang, 2013; Malik and Makhdoom, 2016; Arora and Sharma, 2016; Saeed et al. 2016), this study

formed the hypothesis about the impact of corporate governance on firm performance.

H_1: Corporate governance has a positive impact on firm performance.

Based on reviewed studies in the previous section (see, e.g. Shin and Soenen, 1998; Deloof, 2003; Lazaridis and Tryfonidis, 2006; Raheman and Nasr, 2007; Gill et al. 2010) the study hypothesized the second relationship as the impact of working capital management on firm performance.

H_2: Working capital management positively affects firm performance.

As discussed and asserted by prior published research studies (see, e.g. Drobetz & Grüninger, 2007; Gill & Shah, 2012; Gill & Biger, 2013), next hypothesis formulates the relationship between corporate governance and working capital management.

H_3: Corporate governance measures a have significant impact on working capital management

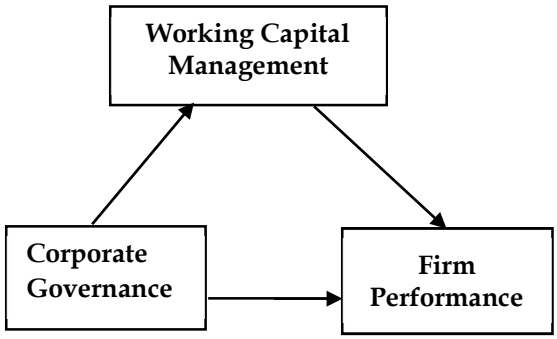

Figure I: Research Model

RESEARCH METHODOLOGY

All the non-financial listed firms on the Pakistan Stock Exchange (PSX) comprised the population for the study. Data of 140 non-financial firms for a period of eight years (2008-2015) has been collected from the secondary sources i.e. audited annual reports of the companies. These reports have been downloaded from websites of the respective firms. The study used pooled OLS to estimate the relationship between explanatory variables and performance measures. Pooled OLS was used because after using the Fixed Effect Model, the F-test, provided insufficient evidence to reject the null hypothesis of homogeneity among the cross sections.

Variables of the Study

Variables for corporate governance are board-size, board independence, CEO duality, audit committee independence, ownership concentration. Working capital variables include the cash conversion cycle and the current ratio. Firm Performance is measured in terms of return on assets whereas leverage served as a control variable in the study. Profit before tax has been taken as a proxy of profitability as this study focuses on the Cash Conversion Cycle. A similar approach has been used by a number of previous studies including Jackling and Johl (2009) and Gaur et al. (2015).

Two proxies of working capital management are taken in this study. Equation 3 and equation 4 (given below) show the impact of explanatory variables on Cash Conversion Cycle and Current ratios of working capital management, respectively.

Table 1: Operationalization of variables

Variable Name	Symbol Used	Operational Definition
Board Size	BS	The total number of directors on the board
Board Independence	BI	The ratio of non-executive/independent directors to a total number of directors on board.
CEO Duality	CD	A dummy variable that takes the value of 1 if the CEO is also acting as chairman of the board, otherwise 0.
Audit Committee Independence	ACI	The ratio of non-executive/independent directors to a total number of directors in the audit committee.
Ownership Concentration	OWC	The ratio of common shares held by five individual largest shareholders to a total number of outstanding shares.
Cash Conversion Cycle	CCC	It is calculated as by adding inventory holding period and average collection period and deducting average payment period
Current Ratio	CR	Ratio of current assets to current liabilities
Leverage	LEV	The ratio of total debt to total assets
Return on Assets	ROA	The ratio of net profit before tax to total assets

Econometric Models of the Research

Impact of Corporate Governance on Firm Performance

$ROA_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 CD_{it} + \beta_4 ACI_{it} + \beta_5 OWC_{it} + \beta_6 LEV_{it} + \mu_{it}$..... (Equation 1)

Impact of Working Capital Management on Firm Performance

$ROAit = \beta 0 + \beta 1 CCCit + \beta 2 CRit + \beta 3 Levit + \mu it$..... (Equation 2)

Impact of Corporate Governance on Working Capital Management

$CCCit = \beta 0 + \beta 1 BSit + \beta 2 BIit + \beta 3 CDit + \beta 4 ACIit + \beta 5 OWCit + \beta 6 LEVit + \mu it$ ..... (Equation 3)

$CRit = \beta 0 + \beta 1 BSit + \beta 2 BIit + \beta 3 CDit + \beta 4 ACIit + \beta 5 OWCit + \beta 6 LEVit + \mu it$ ..... (Equation 4)

Where subscript *i* represents the firms and *t* denotes the time period in annual frequency, as nature of data is panel. Equation 4 has been devised to test the impact of corporate governance on the second proxy of cash management i.e. Current Ratio.

Results

Descriptive statistics of all variables used in this study are presented in table 1. ROA ranges from a minimum of -0.521 to a maximum of 0.533 with an average of 0.060. The mean return of 0.060 for the sample firms shows that maximum firms listed in the PSX are generating profit. The mean board size for sampled firms is 8. It ranges from a maximum board size of 15 to a minimum size of 6 board members. Deviation from mean of only 2 is also not high. It suggests that firms in Pakistan have almost similar board sizes and tend to have smaller boards.

Table 1: Descriptive Statistics

Variable	Mean	Min	Max	SD
ROA	0.060	-0.521	0.533	0.106
BS	8	6	15	1.415
BI	0.655	0	1	0.203
CD	0.204	0	1	0.403
ACI	0.853	0	1	0.204
OWC	0.625	0.031	0.971	0.183
CCC	43.95	-726.5	1057.8	116.5
CR	1.494	0.0009	17.390	1.482
Leverage	0.575	0.006	2.629	0.241

The study reported the board independence of 65.5% on average with a standard deviation of 0.203. These statistics show the level of compliance of sampled firms with the suggestions of Pakistani code of corporate governance (2012) which stipulates that there should be at least two third

representation of non-executive directors on corporate boards. The statistics about CEO duality showed that 80% firms in the sample have an outside director as chairman of the board while only 20% cases in the sample reported CEO duality which suggests that majority of firms in Pakistan have separate CEO and chairman. The study suggested audit committee independence of 85.3% on average with a standard deviation of 0.204. The sample includes both type of firms, with 100% independent directors and on the other side no independent director in the audit committee. The average holding of shares by the five largest shareholders is 62.5% which confirms a high concentration of ownership. The cash conversion cycle has an average value of 43.95 days which suggest that it takes an average of one and half month time' between the sale of inventory along with cash receipt from customers and cash paid to suppliers. The mean value of 1.49 for current ratio indicates that listed firms in Pakistan are moderately liquid.

Table 2: Correlation Analysis

	BS	BI	CD	ACI	OWC	CR	CCC	LEV	ROA
BS	1	.142***	-.109***	0.135***	-.232***	.077**	.092***	-.074**	.117***
BI		1	-.174***	0.605***	.020	-.002	-.011	-.013	.013
CD			1	-0.149***	-.008	-.152***	-.051	.235***	-.230***
ACI				1	.050	.022	-.014	-.003	-.009
OWC					1	.087***	-.097***	-.004	.035
CR						1	.138***	-.486***	.320***
CCC							1	-.159***	.005
LEV								1	-.444***
ROA									1

*, **, *** denotes significance at the level of 10%, 5% and 1% respectively. The correlation matrix does not suggest any multicollinearity problem since the coefficient values are well below the specified limit of 0.8.

Regression Analysis (Interrelationship)

At the first stage, the study examined the direct impact of corporate governance on firm performance. Results of this regression are shown in table 3 which demonstrates that the size of board and ownership concentration showing a significant and positive impact. In addition, CEO duality and leverage indicating a significant negative relationship with ROA.

Table 3: Impact of Corporate Governance on Firm Performance

Variable	Coefficient
C	0.115***
	(0.024)
BS	0.007***
	(0.002)
BI	-0.002
	(0.017)
CD	-0.034***
	(0.007)
ACI	-0.022
	(0.017)
OWC	0.032**
	(0.016)
LEV	-0.179***
	(0.012)
R^2	0.224
Adjusted R^2	0.219
F-Statistics	53.02
Prob. (F-Statistics)	0.000

*, **, *** denotes significance at the level of 10%, 5%, and 1% respectively.

Table 4: Impact of Working Capital Management on Firm Performance

Variable	Coefficient
C	0.146***
	(0.010)
CCC	-0.000064***
	(0.000)
CR	
	0.010***
	(0.002)
LEV	-0.171***
	(0.013)
R2	
	0.217
Adjusted R^2	0.215
F-Statistics	7.56
Prob. (F-Statistics)	0.000

*, **, *** denotes significance at the level of 10%, 5%, and 1% respectively.

The results regarding working capital management, the coefficient of cash conversion cycle showing a generalizable relationship with dependent variable i.e. return on assets at 1% significance level. The analysis also shows that the slope coefficients are very small having a beta of (-0.0000064). The table also highlighted that the current ratio has a significant positive impact on ROA. The independent variables of the model jointly explain 21.7% of variations independent variable.

Table 5: The Impact of Corporate Governance on the Cash Conversion Cycle

Variable	Coefficient
C	89.511***
	(29.666)
BS	5.265**
	(2.536)
BI	-8.863
	(21.336)
CD	-3.887
	(0.007)
ACI	-6.845
	(0.017)
OWC	-52.178***
	(0.016)
LEV	-73.494***
	(0.012)
R^2	0.039
Adjusted R^2	0.034
F-Statistics	61.79
Prob. (F-Statistics)	0.000

*, **, *** denotes significance at the level of 10%, 5% and 1% respectively.

In equation 3 cash conversion cycle is regressed against corporate governance measures. Board size is positively related to CCC at 5% level. It shows that the increase in board size will extend the cash conversion cycle of firms. The coefficient of ownership concentration is negative and significantly related to cash conversion cycle at 5% level of significance. This suggests that block holders tend to induce management to shrink the cash conversion cycle. The relationship between leverage and cash conversion cycle is negative and highly significant at 1% level which means that debt has a negative influence on the cash conversion cycle for sampled firms.

Table 6: The Impact of Corporate Governance on Current Ratio

Variable	Coefficient
C	2.206***
	(0.333)
BS	0.066**
	(0.028)
BI	-0.311
	(0.240)
CD	-0.133
	(0.100)
ACI	0.203
	(0.238)
OWC	0.800***

	(0.217)
LEV	-2.914***
	(0.165)
R2	0.250
Adjusted R^2	0.246
F-Statistics	10.02
Prob. (F-Statistics)	0.000

*, **, *** denotes significance at the level of 10%, 5%, and 1% respectively.

The negative significant coefficient of leverage suggesting that companies which rely on debt to finance daily operations may face a lower current ratio as debt will increase the current liabilities which is the denominator in the current ratio. These results are aligned with the findings of (Saddour, 2006) who argued that cash holdings decrease with leverage.

Mediation Impact

This study is not testing moderation impact of any variable. Similarly, it is not about formal verification of mediation of cash management between corporate governance and firm performance as the application of SEM is required to serve that purpose. Whereas, this study is about the empirical analysis of the interrelationship among the variables. However, results suggest that there may be the existence of partial mediation because corporate governance has a direct as well as indirect impact on profitability.

Discussion

Results in Table 1 reported that the mean board size is eight directors with a standard deviation of 1.5 (approx). These findings are in line with the recommendations of Lipton & Lorsch (1992) who suggested a board size of eight or nine directors and postulated that ten should be the maximum digit. This finding is consistent with other studies including (Jaafar and El-Shawa, 2009; Sheikh and Wang, 2013; Saeed et al., 2016; Yasser and Mamun, 2017). The study presented board independence of 65.5% on the average. The average composition of the board having 65.5% of non-executive directors shows the level of compliance of sampled firms with the recommendations of Pakistani code of corporate governance (2012) which stipulates there should be at least two third representation of non-executive directors on corporate boards. This finding is in line with other studies including (Javeed et al., 2014; Darko et al., 2016). Findings regarding CEO duality on the average is 20%. Comparable results were found by Sheikh & Wang (2013) and Javeed et al. (2014). The study suggested audit committee independence of 85.3% on average. These numbers can be matched with the results of Lin et al. (2006) who also reported 85.8% mean for audit committee independence using a sample of 212 USA firms. Findings regarding ownership concentration show a mean value of 62.5%. The matching result was found by (Mak and Kusnadi, 2005; Sheikh and Wang 2013; Javeed et al., 2014). Leverage showed a mean value of 58% (approx). These findings are congruent with research studies of other authors including (Ammann et al., 2011; Sheikh and Wang, 2013). Statistics revealed a mean value of 6% for return on assets. These results get support from studies conducted by other authors such as Sheikh and Wang, 2013; Guo and KGA., 2012; Darko et al., 2016). Findings regarding working capital management variables, the average current ratio of firms in the sample are 1.494. Comparable results were found by authors including Rahman and Nasr, 2007; Enqvist et al., 2014). In the present study, the mean value of CCC is 44 days with a standard deviation of 116 days for the analyzed Pakistani firms. Deloof (2003) also described a mean cash conversion cycle of 44.4 days by studying a data set of 1009 Belgium firms over a period of five years.

In Equation 1, the direct impact of corporate governance on return on assets is estimated. Results indicated that board size has a significant and positive impact on the return to assets. This result shows that an increase in a number of board members will lead to improved performance because larger boards may not only bring a wealth of knowledge and professional expertise but also enable the firm to have easy access to various needed resources. Moreover, large boards provide better counseling than smaller boards. A similar positive relationship between board size and ROA was reported by (Ehikioya, 2009; Jackling & Johl, 2009; Gaur et al., 2015).

Coefficient of ownership concentration also showing a statistically significant and positive impact on return to assets implies that in comparison to dispersed shareholders, blockholder owners possess greater ability to induce executives to take actions which in turn leads to maximization of shareholders wealth. Authors such as (Ehikioya, 2009; Sheikh and Wang 2013; Gaur et al., 2015) also found a positive relationship between ownership concentration and ROA.

Results of the study reveal that CEO duality has negatively impact on ROA. This result corroborates the findings of (Bhagat & Bolton, 2008; Lam & Lee, 2008; Ehikioya, 2009). Such a result is in line with the view of agency theorists who advocate that the role of CEO and chairman must be separated. Agency theorists argue that with the dual role the same person will be held responsible for organization performance as well as evaluation of executives efficiency. In other words, CEO duality will enable the CEO to control the board and reduce the board monitoring function for his own benefits at the cost of the principals. Therefore, it is more likely that CEO duality mark negative influence on the board monitoring function as the benefits of managers and shareholders are not aligned hence leading to agency problems.

The coefficient of leverage (control variable) is negative and significantly correlated with return on assets demonstrating that the higher debt level will cause a decrease in firm performance. Putting it differently, the higher the debt ratio, the lower the ROA. The reason might be that the higher debt level increases the cost of operations for firms. Hence, making it difficult for firms to manage their liabilities to pay higher interest rates. Additionally, increased debt level might limit firms' capability to raise new credits which in turn can become a cause of losing valuable investment opportunities. This negative relationship is in line with the results of (Sheikh and Wang, 2013; Al-Saidi and Al-Shammari, 2015). Cash conversion cycle is significantly negatively related to return on assets which suggest that a reduction in the cash conversion cycle improve ROA. These results lend some support to the findings of authors such as (Deloof, 2003; Lazaridis & Tryfonidis, 2006; Raheman & Nasr, 2007; Lyngstadaas & Berg, 2016). To put it simply, as cash

conversion cycle is calculated by adding average days of account receivable and average days of inventory and deducting average days of account payable. Hence, firms' can increase profitability by reducing inventory holding period and collection period while lengthening its payable period to a reasonable level without leaving a negative mark on its credibility. Moreover, this negative relationship implies that corporate managers can boost the profitablity of their firms by shortening the time interval between [a firm's expenditure for the purchase of raw material and collection from the sales of finished goods.

The coefficient of current ratio is positive and highly significant implying that the higher current ratio leads to an increase in profitability. Such findings are congruent with the results of (A.Ajanthan, 2013; Ismail, 2016; Khidmat & Rehman, 2014). Current assets are valuable for firms to resist and survive in a financial distress situation. In addition, business growth plans need adequate cash and cash equivalents to maintain day to day operations alongside the long term external financing. Moreover, cash enriched firms can make use of opportunities such as the sudden decline in prices of raw material. Further, firms maintaining sufficient liquidity levels can easily deal with cash troubles. Another possible reason for this positive relationship may be because to achieve growth more profitable firms need more short term finances and they need more current assets to back up their sales.

Considering the impact of corporate governance on the cash conversion cycle results suggesting that an increase in board size extend cash conversion cycle whereas, block holder owners tend to reduce cash conversion cycle. The possible explanation of this positive relationship is that to increase sales, the board of directors may formulate soft credit policies for customers which results in an increase of average collection period and this increase in collection period leads to an extension of the cash conversion cycle. On the other hand, board size and ownership concentration have a positive impact on the current ratio, signaling the fact that larger boards and block holder owners increase the liquity of the firms.

R^2 of the regression analysis in this study is relatively low because there are many explanatory factors, other than corporate governance, affecting the variations independent variables (i.e.cash management and profitability).

CONCLUSION

This study is conducted to investigate the relationship between corporate governance and firm performance of non-financial listed firms in Pakistan. Findings reveal a significant positive impact of board size with performance. These results are compatible with the predictions of resource dependency theory which states that larger boards provide more ease in accessing external resources and give firms more opportunity to grow. Considering the relationship of CEO duality and firm performance, findings described the significant negative impact of CEO duality on ROA. This finding confirms the predictions of agency theory that combining both roles in one person place a negative impact on firm performance. Regarding ownership concentration study found a positive relationship with ROA, suggesting that blockholder owners possess greater ability than dispersed owners to compel management to take actions which that increase firm performance. In terms of board independence and audit committee independence, findings fail to reveal any significant relationship. These results demonstrate that change in a number of independent directors on board and audit committee does not have any significant contribution on listed firms in Pakistan. It can be said that corporate governance variables have a material effect on the performance of firms.

The other objective of the study is to investigate the impact of working capital management on firm performance. Cash conversion cycle documented significant negative relationship with ROA, which signifies that shorter the time span between the purchase of raw material and collection of receivables from customers from the sale of finished goods the higher will be the profitability. The positive relationship of current ratio with ROA suggests that keeping an adequate level of cash assets, enable the firm to exploit short-lived opportunities which in turn increase profitability. As far as the control variable (leverage) is concerned the significant negative relationship with performance suggest that using a higher than the appropriate level of debts in capital structure decrease the firm's ability to generate profits. The study also examined the impact of corporate governance measures on working capital management and concluded that board size extends cash conversion cycle whereas block holder owners tend to shorten the CCC. On the other side liquidity of the firms is increased with an increase in board members and with concentrated ownership.

Practical Implications

Considering the negative relationship between CCC and ROA, research recommends that shortening the CCC by minimizing inventory holding period, collecting receivables from customers earlier, and paying suppliers a bit longer all these play an important role in increasing firm's performance. Stakeholders should keep an eye on working capital management too, while considering the impact of corporate governance on firm performance. Owners should have a complete understanding of the way in which they will use their voting rights while choosing a governance mechanism for the corporation.

Limitations

This paper is about the interrelationship among corporate governance, cash management, and firm performance. Future studies may be conducted on verifying mediation and moderation relationships. Similarly, the current study only deals with direct relationships. Indirect relationships and bidirectional causality may be tested in the future.

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