Impact of Corporate Governance on Firm’s Cash Holdings: A Case of Companies Listed on Karachi Stock Exchange

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Abstract  
The main objective of this study is to determine the impact of corporate governance on firms’ cash holdings for companies listed on Karachi Stock Exchange (KSE). Board size, board independence and CEO-duality are taken as corporate governance measures. Different statistical tools were applied to determine this impact. The findings of the study conclude that corporate governance has a negative and statistically significant impact on cash holdings of the firm.

Keywords: Corporate Governance, Firm’s Cash Holdings, Board Size, Board Independence and CEO-duality

1. Introduction  
By considering the problems confronting by the today’s corporate firms and hence the related questions that what have to be an ideal length of cash a firm need to keep? What should be the board size, the number of independent directors and CEO duality and whether they have any impact on the cash value of a firm or not? Corporate governance can effectively answer all these questions. Cash is an important element of corporate governance, and many corporations try to hold more cash however the question arises that what should be a desirable level/amount of cash a firm a firm ought to preserve? (Bates et al., 2009; Ozkan & Ozkan, 2004; Opler et al. 1999). There are some of the advantages and disadvantages of preserving large amount of cash in a firm. Advantages consist of that through preserving massive sum of money firms can effortlessly lessen the operational fee, save you from investment in terrible tasks and it will make cash flow volatility stable (Chen & Chuang, 2009).Drawback of cash holding is the cash which counts the opportunity cost in which the manager was previously interested, shortfall of future business opportunities and shortfall of cash discounts on purchasing (Adetifa, 2005).

Using international data, previous research found that firms in which managers hold extra cash, shareholders have poor protection for their interest because managers pay low dividends. Dittmar et al., (2003) found that firms in part of the world where shareholders are provided security for their interest, managers grasp less cash. Pinkowitz
et al. (2006) studied that corporations in those part of the world where investors are provided less, cash is of less interest to the minority shareholders. This suggests that corporate governance mechanism is significant to cash holding. Hence this study will focus on ‘What is impact of Corporate Governance (board size, board independence, CEO duality) on firm’s cash holding’? The objective of this study is to determine the impact of corporate governance (board size, board independence, and CEO-duality) on firm’s cash holding. This study has both practical and theoretical significance. Practically, it will help firms to better address their cash and cash related policies, theoretically, it will unfold the theoretical understanding of corporate governance mechanism and cash holding in a new context. Previous studies that are carried out in Pakistan are limited to few sectors, however this study will focus on various companies from major sectors and listed on KSE.

2. Literature Review

2.1 Corporate Governance

Corporate governance is defined as a process by which corporations are managed and controlled. It also refers to a set of rules, laws and regulations to initiate and regulate day to day activities of corporations. It directs the corporation through figuring out the allocation of rights and duties of stakeholders inclusive of directors, managers, shareholders and others. Companies are distinguished by separation of ownership and management. Shareholder’s pursuits are protected through corporate governance mechanisms consisting of effective board of directors which can efficiently play the monitoring and overseeing role, board independence and quality. Effective corporate governance mechanisms can curb managerial tendencies to hold extra cash than is needed and thus helps to reduce the agency costs of holding too much cash.

2.2 Cash Holdings

A tremendous frame of literature exists that has documented that firms keep, at times, an excessive amount of cash than is required (Westhead & Howorth, 2006). Various explanations are provided in the literature including precautionary motive, transaction motive, research and development intensity and agency theory (Dittmar et al; 2003). These motives argue that firms keep cash for operational and investment opportunities while the agency theory of Jensen and Macklin argues that firm’s level of cash holding is influenced by the agency problems as managers have a reason to hold more cash to take up personal benefits (Jensen, 1986). Agency theory also posits that agency issue is more sever in firms with huge amounts of free cash flow (FCF). According to (Jensen, 1986)free cash flow is the cash which is left when all the projects are being financed and all the operational needs are met. FCF is at the discretion of the management, and hence, prone to create agency issues for shareholders as management can use it to investment in sub-optimal projects. Effective corporate governance can diminish the agency costs of FCF as it can discipline managers to maintain a best level of cash holdings.

To describe the attributes of cash holding many previous studies have been used (Ozkan & Ozkan, 2004). They have explained it with the help of three theoretical models. First, cash holding is elaborated by using the theory of trade-off model (Myers, 1977) means that firms set their best possible level of cash holding as a trade-off between marginal cost and marginal benefits of cash holding as cash acts as an instrument for the
firm to prepare a policy of highest possible investment by holding more cash and can decrease the cost which is rising up due to raising funds from outside or by converting existing assets into cash. Pecking order theory (Myers, 1984) suggests funds from outside becomes costly and difficult so corporations have a preference on retained earnings instead of raising funds from outside. According to Pinkowitz et al. (2006) pecking order theory is contradicting to trade off model as this theory does not deal with the best possible level of cash holding but somewhat reinforce excessive cash holdings. The free cash flow theory of (Jensen, 1986) suggests that when a company holds a large amount of cash they can increase the amount of assets and allow managers to manipulate the decision of investment. In addition, by holding cash, pressure from the managers is reduced and they try to invest in profitable projects without shareholders knowing about any project information, better investment decisions would be taken by firms, but may not be best in the interest of shareholders (Ferreira & Vilela, 2004).

Nadiri (1969) studied to find the best possible level of cash holdings using data of the US firms from 1948-1964. The findings showed that cash is determined by the economic factors which makes fluctuations in cash. Campbell, and Brendsel (1977) extended the work of Nadiri, and studied manufacturing firms to find the effect of compensating balance requirements on the cash holdings which showed that compensating balance necessities are not compulsory. Harford et al. (2012) used a sample of US firms from the period 2006 to 2010 of all acquisition made. Results found that those corporations in comparison to the other corporations which had more cash are more likely to head for acquisitions. It is evidenced by return of stock that acquisitions by firms having more cash are value decreasing. Dittmar et al (2003) studied firms from 45 countries and used a pattern of 11,000 or greater and explored that firms in nations where rights of shareholders are not secured they preserve cash double of as much corporations in countries hold where shareholder rights are secured. The results also showed that when shareholder is given less protection, features that usually come out are the need for cash holdings, such as investment in new projects in future and incomplete or misleading information declines. In addition to this, the study show results that corporations have amount of cash when funds are easily accessible.

Ozkan and Ozkan (2004) studied UK firms which are publically traded from 1984-1999 and pattern of 1029 explored that ownership structure is an essential determinant of cash holding, he also found a link among ownership and cash holding which is non-monotonic. In his study the analysis for cash flows and corporation growth opportunities were positively related while with the level of cash holdings other variables i.e. liquidity, bank and, leverage were negatively related. Later on [16] from 1987-2000 with pattern of 400 EMU corporations explored that bank debt liquidity, cash flow, has an adverse link and there is a positive link between cash and investment opportunity. Additionally they also explored that capital development is negatively related to cash holding and investor protected economies is positively related to cash holding.

Nguyen (2006) used records from the stock Exchange of Tokyo for the period of 1992-2003, accrued the pattern of 9168 corporate year observations, and investigated that precautionary motive of cash might be used to decrease the instability of operating earnings. He found through the regression analysis that size of the firm and debt ratio has a positive link with cash holding and industrial risk has a negative relation with cash
holding. Further he found that cash balance of a firm declines with the size of the firm’s and debt, and profitability, growth prospects and dividend payout ratio increases cash balance of a firm.

Saddour (2006) studied 297 French firms from 1998-2002, by using two theories of trade-off theory and the pecking order. He investigated through the regression analysis, that when their tasks get uncertain they lift up the level of cash, and when they get highly debited they decrease the level of cash. Those corporations which are growing at present and have more opportunities to invest in hold more cash than corporate who have reached at their maturity level. For growing corporations, the relationship is negative between cash and the following corporate attributes: size, short term debt and liquid assets. When mature corporate size increases, the level of cash raises up the level of their investment and the distribution of cash to their shareholders, and the level of cash declines with their trade credit and when the firm is bearing expenses on research and development.

Afza and Adnan (2007) focused on the aspect that the non-financial Pakistani firms level cash holdings, on various corporate sizes and industries. They gathered record from 1998-2005 from non-financial firms indexed on KSE, of sample 203. They explored that there is a poor association between i) market-to-book ratio, net working capital, leverage, dividends, and cash holdings, and ii) effective relationships between i) firm size, cash flow, and cash holdings. In addition to this recently (Gill & Shah, 2012) study from the year 1996 to 2008 used static panel data with the sample of 280 non-financial KSE listed firms, found that corporations with quick conversion cycle and longer they debt maturity hold less cash and corporations with more cash inflows are growing, dividend paying and hold large amount of cash. Rizwan and Javed (2011) collected pattern of 300 non-financial KSE corporations and explored that the relation of cash holding is positive market book ratio and negative with leverage and networking capital. There are various mechanisms of corporate governance; these include board size, independent directors in the board, CEO-duality, i.e. whether the same person acts and has a position of CEO and chairman of the board.

2.3 Board Size and Firm’s Cash Holdings

When the board size is small the decision making process becomes more effective (Yermack, 1996; Lipton & Lorsch, 1992). According to Gill and Shah (2012) and Kusnadi (2004) companies whose board size is large has more cash holdings. But, on the other side [Mak & Li, 2001; Kula, 2005; Drobetz & Gruninger, 2007] suggest that board size is irrelevant to cash holding. [28] Suggests that there is an inverse association between Tobin’s Q as a proxy and board size of firm cash holding. The same was found by [34] in study of Finnish firms. Faccio and Lasfer (1999) found result from UK 1650 companies that firms have the highest cash holding when boards are larger than the average size. On the basis of above literature, we develop hypothesis that:

Hypothesis 1: Board size has positive impact on firm’s cash holdings.

2.4 Board Independence and Firm’s Cash Holdings

Previous studies suggested board can be monitored effectively when there are unbiased directors on the board. Directors are more independent since relationship between inside management and outside directors does not appear to be close which leads to a better control from outside directors and monitor function (Kesner & Dalton, 1986). Weisbach (1988) and Huson et al; (2001) studied and found manager who perform poor
is expected to resign if major seats in the board are taken by independent directors. However, according to agency theory, it is expected the dominant directors i.e. the outside director decrease agency cost and keep less money in the firm (Ozkan & Ozkan, 2004). Chen and Chuang (2009) showed an effective association among non-executive directors and cash holdings as firms going for high technology needs more cash for investment in future. Keeping in view above, we suggest following hypothesis.

_Hypothesis 2: Board Independence has negative impact on firm’s cash holdings._

### 2.5 CEO-duality and Firm’s Cash Holdings

CEO-duality means that same person acts as a CEO and chairman in the company (Rechner & Dalton, 1991). The duality on one hand generates a better leadership and on the other hand decreases the board effectiveness (Finkelstein & D'Aveni, 1994). Gill and Shah (2012) study from the year 2008 to 2010 on a pattern of 166 Canadian indexed companies results showed that CEO-duality affects cash holdings positively. Reason being that CEO-duality does not look for the shareholder best interests. Drobetz and Gruninger (2007) studied from the year 1995 to 2004 on a pattern of 156 Swiss non-financial firms have shown similar results. CEO-duality leads to insider dominance in the company which resembles family control. The reason for ineffective governance is poor checking of board since managers are not monitored properly and it is difficult to fire the directors who are performing badly. Previous studies show that CEO-duality seems to be ineffective in corporate governance. Corporations who have ineffective management has low amount of cash with them as directors use it rapidly (Harford et al; 2012). Dittmar et al. (2003) study shows that more cash holdings decline the incentive to manage cost or increase profit margins, and results in those projects whose scope is low and needs over investment. Following hypothesis is proposed.

_Hypothesis 3: The presence of CEO-duality has positive impact on firm’s cash holding._

### 3. Research Methodology

This is a quantitative study which is descriptive and cross sectional in nature, more specifically. Data for this research consists of firms listed on Karachi Stock Exchange for a period from 2002 to 2012. Firm specific data such as total assets, total debt and equity, cash and cash equivalents were taken from analysis of Balance Sheet of Listed Companies published by State Bank of Pakistan. While corporate governance variables such as board size, number of directors and CEO information were taken from annual reports of companies. Corporate governance and firm’s cash holding has been examined through descriptive statistics and linear regression model. Firms have been taken from all major sectors of the economy, such as textile, cement, sugar and allied, tobacco, Technology and communications, refinery, power generation and distribution, Engineering, automobile, transport, Fertilizers, food and personal care products etc. We adopt model of Harford et al; (2012) to study the impact of corporate governance on firm’s cash holdings. Model is given by this following equation.

\[
Cash\ holding = \alpha + \beta_1 \cdot Board\ Size + \beta_2 \cdot Board\ Independence + \beta_3 \cdot CEO-duality + \beta_4 \cdot Leverage + \beta_5 \cdot Size + \beta_6 \cdot Market\ Book + \epsilon_t
\]

Cash holding means cash and cash equivalents divided by assets, CEO’s duality is a dummy variable equal to 1 if CEO is also chairperson of the board of directors. Board independence refers to number of independent directors divided by total number of directors. Board size is total number of directors on the board. Firm’s size is
defined as natural log of total assets. Leverage is total debt divided by total assets. Market Book Ratio is \((\text{Market Value of Equity} + \text{Book Value of Asset} - \text{Book Value of Equity} / \text{Book Value of Asset})\), while \(e\) is Error Term. We have also included some control variables which are firms-specific accounting variables that have been previously used by different studies. These control variables are described as under.

- **Size**: Natural log of overall assets.
- **Leverage**: Interest bearing debt whether short term (overdraft) and or long-term (bonds, loans etc.) taken as proportion to total assets known as leverage.
- **Cash Ratio**: Cash dividend by total assets.
- **MB**: It is firm’s Market to book ratio and is defined as:
  \[\text{MB} = (\text{assets – book value of equity + market value of equity}) / (\text{total assets}).\]
- **CF**: It is firm’s cash flow and is defined as:
  \[\text{CF} = (\text{Operating income + depreciation}) / (\text{total assets})\]
- **LEV**: It is firm’s leverage and is defined as:
  \[\text{LEV} = (\text{total debt}) / (\text{total assets}).\]
- **CAPEXP**: It is the Capital Expenditure and is defined as:
  \[\text{CAPEXP} (\text{Change in fixed asset + depreciation}) / (\text{total assets})\]
- **NWC**: It is the Net working capital and is defined as:
  \[\text{NWC} (\text{Current Assets – Current Liabilities}).\]

\[T = \text{Time dummies}\]
\[e = \text{Error term}.\]

### 4. Findings

#### 4.1 Descriptive Statistics

Table 1 presents descriptive statistics for corporate governance variables, firm’s cash holding variables and control variables. We use three measures of corporate governance, namely board size, board independence, CEO-duality. Board size is the total number of unbiased directors on the board while board independence is the percentage of independent directors out of total number of directors. CEO-duality is a dummy variable. Such variables take value of 1 if CEO is also chairperson of the board. This variable is equal to one if CEO and Chairperson of the board are two different persons. Table 1 reports mean median, minimum and maximum values for these variables along with some of the control variables. Table 1 shows that average cash holding level for all firms in our sample is 13.6043 per cent of total assets for the period from 2002 to 2012. A minimum and maximum value of cash holdings for our sample is 0.03 and 90.599 per cent, respectively. Board size, on average is 8 persons per board. Board independence shows that, on average, 26 per cent of the board members are independent directors. Firm’s leverage ratio shows that firms, on average, hold 30 per cent debt in their capital structure.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>1302</td>
<td>0.136043</td>
<td>0.0003</td>
<td>0.90599</td>
</tr>
<tr>
<td>Board size</td>
<td>2047</td>
<td>8.176844</td>
<td>0.0003</td>
<td>16</td>
</tr>
<tr>
<td>Board independence</td>
<td>1204</td>
<td>0.262444</td>
<td>0.285538</td>
<td>1</td>
</tr>
<tr>
<td>Leverage</td>
<td>1293</td>
<td>0.302774</td>
<td>0.24755</td>
<td>1.631335</td>
</tr>
</tbody>
</table>
Table 2 provides results for our estimation methodology which was used to examine impact of corporate governance on firm’s cash holdings. Besides, main measures of corporate governance, we also used several control variables which have been reported by previous studies to affect firm’s corporate cash holdings. These well-known control variables were included in the model to account for model misspecification because if we had excluded those variables that would have caused model misspecification and the empirical results would have been difficult to interpret statistically. Our main interest is with the statistical significance of the measures of corporate governance variables. As the table shows that all three variables, namely board independence, board size and CEO-duality are statistically significantly different from zero. These results are consistent with some of the previous studies that show that corporate governance does have an impact on how much firms hold cash. In other words, firm’s corporate cash holding policy is influenced by the strength of the firm’s corporate governance measures. Examining the individual impact of each corporate governance measure, Table 2 shows that CEO-duality has negative impact on firm’s corporate cash holdings.

This implies that those CEOs who are also the chairperson of the board exercise greater control over the board and influences managers to hold less cash and be efficient in the management of corporate cash holdings. The second variable is the board size. The coefficient of board size, as reported by Table 2, is negative and statistically significant. This negative coefficient for board size implies larger boards has an impact on firm’s cash holding policies in terms of disciplining management not to keep cash holdings more than what is required for an optimal level. Our third variable of interest is the board independence. This variable was measured as percentage of independent directors to total directors. Higher ratio of this variable implies that there are a greater proportion of independent directors on the board. This variable has a negative and statistically significant coefficient with corporate cash holdings. This implies that effective boards has an influence on the firm’s cash holding policies. Independent boards can discipline managers and prevents management from hoarding unnecessary cash to allow wasteful spending. Independent boards keep an effective check on management and reduces the agency cost of free cash flows where management have a tendency to utilize funds to further their self-interests.

Availability of free cash flow exacerbates the agency costs and allows managers to utilize surplus cash in such activities as investing in negative Net Present Value (NPV) projects, over-spending such as empire building or utilizing the surplus cash on perquisites. If boards are effective and independent, they can curb manager’s tendency to use surplus cash to further their own interests and invest in projects that only increase CEO and management entrenchment but leads to destroy shareholder value through inefficient investment and financing decisions. Results of control variables such as leverage, networking capital, size, cash flows and capital expenditures are all statistically significant and show that we have correctly used them in our analysis. We also used time dummies in our regression model to account for the changes in the firms financing and investment decisions affected by the economic environment over time. Results of coefficients for dummies shows that some of the dummies are statistically significance.
which appropriately captures changes in firm’s cash holdings policies which are affected by overall macroeconomic environment.

Table 2: Regression Results for Corporate Governance and Firm’s Cash Holding

| Variables               | Coefficient | Std. Err. | T     | P>|t| |
|-------------------------|-------------|-----------|-------|-----|
| CEO-duality             | -0.02716    | 0.01561   | -1.7463 | 0.0369 |
| Board size              | -0.01672    | 0.003155  | -5.30 | 0.000 |
| Board independence      | -0.04146    | 0.026342  | -1.57 | 0.053 |
| Net Working Capital     | 0.419709    | 0.052289  | 8.03  | 0.000 |
| Leverage                | -0.098197   | 0.0356581 | -2.75 | 0.006 |
| Size                    | 0.035163    | 0.005076  | 6.93  | 0.000 |
| Cash flow               | 0.489005    | 0.127918  | 3.82  | 0.000 |
| Capital expenditure     | -0.64661    | 0.120417  | -5.37 | 0.000 |
| timedumy1               | -0.00266    | 0.040441  | -0.07 | 0.948 |
| timedumy2               | 0           | (omitted) |       |       |
| timedumy3               | 0.029336    | 0.056425  | 0.52  | 0.603 |
| timedumy4               | 0.025284    | 0.049924  | 0.51  | 0.613 |
| timedumy5               | 0.089358    | 0.070391  | 1.27  | 0.205 |
| timedumy6               | 0.028333    | 0.056268  | 0.5   | 0.615 |
| timedumy7               | 0.027037    | 0.053669  | 0.5   | 0.615 |
| timedumy8               | -0.03       | 0.037024  | -0.81 | 0.418 |
| timedumy9               | -0.06163    | 0.036139  | -1.71 | 0.088 |
| timedumy10              | -0.05014    | 0.038077  | -1.32 | 0.188 |
| timedumy11              | -0.05455    | 0.037704  | -1.45 | 0.148 |
| timedumy12              | -0.09131    | 0.037661  | -2.42 | 0.015 |
| timedumy13              | -0.08958    | 0.038776  | -2.31 | 0.021 |
| timedumy14              | -0.08695    | 0.039712  | -2.19 | 0.029 |
| _cons                   | -0.00594    | 0.052312  | -0.11 | 0.91  |

5. Conclusion

Many studies have been carried out to observe the affiliation among corporate governance measures and cash holdings of the firm however, the conclusion of these research is varied. This specific study has been carried out to examine the impact of corporate governance variables on firms’ cash preserving from the corporations indexed
in Karachi Stock Exchange. In order to examine this study three considerable variables have been recognized. These variables incorporated board size, board independence and CEO-duality. A sample size of 271 firms listed on KSE from 2002-2012 is used. Data has been selected by KSE 30; and balance sheet analysis published by State bank of Pakistan. Table 1. The table reveals the descriptive summary of the corporate variables. Table 2. The table reveals the following results on the groundwork of statistical analysis of study by using regression model, it has been concluded that the corporate governance mechanism has a negative and statistically significant association with the cash holdings of as firm. First hypothesis of this study states that board size positively affects cash holding and was found that the coefficient of board size is negative and statistically significant. Second hypothesis of my study states that board independence has negative impact on cash holding and was found that variable has a negative and statistically significant coefficient with corporate cash holding. Third hypothesis of my study states that CEO-duality has a positive impact on cash holding and was found that CEO-duality has negative impact on firm’s corporate cash holdings which are consistent with some of the old studies. The table also examines the control variables such as leverage, networking capital; size, cash flows and capital expenditure are all statistically significant.

References


