DO EXECUTIVE COMPENSATION AND CORPORATE GOVERNANCE PRACTICES EXPLAIN EARNINGS MANAGEMENT?

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ABSTRACT

The purpose of this study is to examine whether earnings management is influenced by executive compensation, concentrated/family ownership, or board structure in an emerging market. The study used an unbalanced panel data from non-financial firms listed at Pakistan Stock Exchange (PSX) and employed multiple regression with robust econometric estimation procedures. The study found that CEO compensation does not influence earnings management. Ownership concentration leads to higher earnings management while CEO duality reduces earnings management. In addition, family and concentrated ownership is mainly related to the downward earnings management. Furthermore, the study found that the larger boards lead to higher earnings management while the number of non-executive directors has no impact on earnings management. The study extended the limited research on the relationships between executive compensation, corporate governance and earnings management in Asian context. This study reported an emerging market where stock-based compensation does not exist, and CEOs do not engage in earnings management to increase their compensation. Furthermore, this study posed some challenges to existing studies by showing that ownership concentration, board size and CEO duality do have influences on earnings management in Pakistan.

Keywords: Corporate governance, Discretionary accruals, Earnings Management, Executive Compensation, Family Firms, Ownership Concentration

INTRODUCTION

Efficient compensation contracts may encourage managers to manipulate their performance because their compensation is tied to some pre-specified performance criteria including earning targets generally (Ibrahim et al., 2011; Puffer et al.,1991; Sun, 2012). Similarly, weak corporate governance environment also provides more power and opportunities to managers for management of earnings, evident from financial reporting scandals such as Enron, Prmalat and WorldCom. While several studies (e.g., Bergstresser et al., 2006; Meek et al., 2007) showed that executive pay packages are a result of inflated earnings and stock prices due to discretionary accruals, others (e.g., Bekiris et al., 2011; Hashim et al., 2008; Lo et al., 2010; Patelli et al., 2007) documented that corporate governance characteristics are also related to earnings’ quality. Bayrak Koke et al., (2018) considered the relationship between the corporate image and the organizational identification, and they concluded that there has been a significant positive correlation between perceived internal and external image and
organizational identification; and that both sub-dimensions of corporate image were positively effective on organizational identification.

However, most of these studies are related mainly to Anglo-Saxon countries (e.g., US, UK) where investors are adequately protected by well intact legal systems and high level of transparency, leading to fewer opportunities for diversion from opportunistic behavior. Corporate entrepreneurship can be used in private or public sectors of an organization (Keshvarz et al., 2017). And, emerging markets are characterized by concentrated and family ownership environments, weak legal protection of minority shareholders’ interests, weak corporate governance practices, and corruption (Ghosh, 2006; González et al., 2014; Young et al., 2008) which lead to higher tendency towards opportunistic behavior. Thus, generalizing the findings of the studies on developed markets to emerging markets is difficult. Accordingly, the objective of this study was to examine how compensation of chief executive officer (CEO) and corporate governance practices affect earnings management in an emerging market, i.e. Pakistan, which is characterized by weak legal environment, low quality of governability and high corruption.

Pakistan is getting considerable attention in the world due to China-Pakistan Economic Corridor (CPEC) in which China and other countries would invest billions of dollars in coming future. However, Pakistani economy is considered to be highly vulnerable to unethical behavior due to weak governance and political system (Mujtaba et al., 2011). Accordingly, the Pakistan Stock Exchange (PSX) is perceived to be opaque and highly volatile (Sheikh et al., 2012; Sheikh et al., 2017b). The corporate governance environment in Pakistan is peculiar for a number of reasons. First, the concentrated and family ownership is more common in Pakistan than, for instance, in Japan and Korea (Sheikh et al., 2017a). Similarly, while Chinese firms have more ownership concentration than in Pakistan, the nature of ownership concentration in Chinese firms is different as the State usually holds high stakes in large firms (Bryson et al., 2014). On the other hand, concentrated ownership in Pakistan is maintained by non-government shareholders (Sheikh et al., 2017a). Non-government ownership concentration makes firms like private-owned firms which may have different implications for CEO compensation.

Second, legal and political environment in Pakistan is weaker and the overall governance is poor (Rehman et al., 2012). In addition, Pakistani economy is plagued with more corruption than many other Asian countries. According to Transparency International, the Corruption Perception Index never crosses 30 for Pakistan (100 shows no corruption). Therefore, people in Pakistan (including executives) are more prone to unethical and opportunistic behavior (Mujtaba et al., 2011). Third, the disclosure requirement about CEO compensation is stronger in Pakistan. Companies are required to report all the components of CEO compensation. This is not the case for most of the other Asian countries (Conyon et al., 2011; Sheikh et al., 2017a).

Given the above peculiarities in Pakistan, this study aimed to investigate the following research questions. First, is earnings management related to CEO compensation? This is particularly interesting as CEOs tend to be more powerful than the boards, and their compensation has been reported to be positively associated with firm accounting performance in Pakistan (Sheikh

1 According to Transparency International, the Corruption Perception Index (CPI) never cross 30 for Pakistan (100 shows no corruption), indicating highly corrupted economy. Also, government effectiveness index and regulatory quality index estimated by World Bank remained negative in the last decade or so.
et al., 2017a). Second, is there any relation between concentrated/family ownership and earnings management? Third, how does board structure influence earnings management? Specifically, the focus was on board size, board independence and CEO duality in this study. The present study contributed to the growing body of literature in many ways. First, it extended the limited research on the relationships between executive compensation, corporate governance and earnings management in Asian context. Second, it provided evidence by analyzing a market where legal systems are not well intact, institutions are weak, interlocking directorship, direct owner-manager relationships are common, and most of the firms are run by controlling family members. Thus, this study can provide important managerial, practical and political implications for emerging markets as corporate governance systems are evolving in these markets. Third, it is reported for first time in Pakistan that despite CEO compensation has a positive relationship with firm’s earnings, it does not influence earnings management decisions. Fourth, inconsistent with existing studies, it was shown that concentrated ownership, board size and CEO duality do have influence on earnings management. Thus, this study posed some challenges to existing studies in Pakistan, which are limited in scope.

**LITERATURE REVIEW AND HYPOTHESES**

**CEO Compensation and Earnings Management**

A bunch of studies found relation between earnings management and executive bonuses or cash compensation (e.g., Balsam, 1998; Carter et al., 2009; Gaver et al., 1995; Guidry et al., 1999; Healy, 1985; Holthausen et al., 1995; Shuto, 2007; Ye, 2014), while others reported that companies in which large equity incentives are offered to the executives are more prone to have large discretionary accruals or abnormal earnings (Bartov et al., 2004; Bergstresser et al., 2006), meet or beat analyst expectations (Cheng et al., 2005), a differential propensity to misreport (Armstrong et al., 2010; Burns et al., 2006), time the abnormally larger exercise of options and inflate earnings before exercising these options (Bartov et al., 2004). However, Burns and Kedia (2006) do not find any significant impact of cash compensation, restricted stock, equity and long term incentive on the tendency to misreport the financial statements.

In a corporate governance environment like Pakistan’s where direct relations between controlling shareholders/families and management are common which result in weak corporate governance system internally. Though, some measures have been taken to improve the quality of corporate governance in Pakistan, but the implementation of such corporate governance system is still quite preliminary (Javid et al., 2008; Kamran et al., 2014). Such a corporate governance environment provides CEOs more power relative to the boards especially when a CEO is in close relation with controlling shareholders, or one of the controlling family members. Therefore, CEOs may behave opportunistically (Jensen et al., 1976; Morck et al., 2003) and may involve in the rent extraction. However, contrary to the rent extraction, a recent study (Sheikh et al., 2017a) found that both CEO cash and total compensations are positively related to a firm’s accounting performance in Pakistan. Therefore, given that, CEOs may behave opportunistically, and there is positive association between CEO’s pays and the firm accounting performance, CEOs may engage in earnings management activities to increase their compensation. Thus, it was hypothesized that:

Hypothesis 1: CEO compensation is positively related to earnings management.
Corporate Governance and Earnings Management

A number of studies (e.g., Bekiris et al., 2011; González et al., 2014; Kamran et al., 2014; Liu et al., 2007; Lo et al., 2010) have examined the relationship between the corporate governance and earnings management. But, there is lack of consensus on the impact of different corporate governance mechanisms on the earnings management. Since concentrated and family ownership is an important feature of corporate governance environment in Pakistan with a focus on board composition as a code of corporate governance in order to mitigate agency conflicts (see, SECP, 2002, 2012), the emphasis was on concentrated/family ownership and board structure (Board size, Board Independence and CEO duality) in this study. The following lines describe the hypotheses related to these variables.

• Ownership Concentration and Earnings Management

In a concentrated ownership structure, large shareholders have strong incentives to oversee the agents’ activities (Jensen et al., 1988). Therefore, the concentrated ownership generally suggests that shareholders are better able to protect their interests in their companies, leading to higher quality of earnings (de Bos et al., 2004). Many studies (e.g., de Bos et al., 2004; González et al., 2014) found that concentrated ownership is an effective mechanism in restraining earnings management. However, concentrated ownership may lead to the expropriation of minority shareholders’ interests, leading to increase in earnings management practices (Kamran et al., 2014; Liu et al., 2007). As discussed earlier, Pakistani firms are characterized by high concentrated ownership, and most of the companies are controlled by families. They are managed through pyramidal structure and cross shareholdings. In such firms, controlling shareholders have the power to expropriate minority shareholders in order to satisfy their private interests (La Porta et al., 1999). In addition, the chances of expropriation of minority shareholders’ interest were amplified in the presence of weak legal systems and investor protection. Thus, given the contextual framework of Pakistan, it was hypothesized that:

Hypothesis 2: Ownership Concentration is positively associated with earnings management.

• Family Ownership and Earnings Management

Concentrated family ownership provides strong monitoring incentives, managers from family as being insiders can improve monitoring by providing information to other family members outside (see, Harris et al., 2008; Villalonga et al., 2010), strong commitment and firm specific knowledge of family members make them better monitors (Bertrand et al., 2006; Martinez-Ferrero et al., 2016). Furthermore, unlike non-family firms, family firms tend to maximize the firms’ value in the long run (González et al., 2014). Thus, family firms are less likely to engage in earnings management due to the better monitoring, long term orientation and reputation concerns (Ali, Chen et al., 2007; Veider et al., 2016; Wang, 2006). Many studies (e.g., Prencipe et al., 2011; Wang, 2006) found that family firms have lower level of earnings management as compared to non-family firms. However, Chi, Hung, Cheng, and Lieu (2015) documented that family ownership is positively related to earnings management in Taiwan where family firms outnumber non-family firms. Adigüzel (2013) argued that managers in close family or personal relationship with controlling family members can manipulate earnings in the interests of the controlling family. The family desires to minimize taxes or political costs and meet the long objectives inducing earnings management (Ali et al., 2007).
The conflicts between family and non-family firms are particularly of more concern in Pakistan where the possibility of deviation from ethical behavior is higher due to higher corruption and lower quality of governance. In such an environment, these conflicts are more likely to end up in expropriation of the minority shareholders’ interests. Therefore, it was hypothesized that:

Hypothesis 3: Family Ownership is positively related to earnings management.

**Board Size and Earnings Management**

Larger boards are generally considered to be ineffective, dysfunctional and a sign of compromised monitoring because of being more prone to be controlled by executives (Jensen, 1993; Lipton et al., 1992) or difficulties in communication and coordination (Ozkan, 2007; Yermack, 1996), leading to higher possibility of earnings management. While many studies (Chin et al., 2006; Rahman et al., 2006) found that board size is associated with earnings management, others (Bédard et al., 2004; Peasnell et al., 2005) showed that earnings management is less prevalent in firms with larger boards. In Pakistan, the boards are dominated by executive and non-executive directors (grey directors) representing controlling families or controlling shareholders (Javid et al., 2010), therefore board size is less likely to have impact on corporate decisions. Consistent with this, Kamran and Shah (2014) found that board size does not affect earnings management decisions in Pakistan. However, ineffectiveness of larger boards may provide entrenched managers opportunities to manage earnings in Pakistan. Thus, it was hypothesized that:

Hypothesis 4: Board size has a positive or no association with earnings management.

**Board Independence and Earnings Management**

Greater board independence is assumed to be related to effective monitoring, greater transparency and adequate disclosure of financial figures (Gonza’lez et al., 2014; Peasnell et al., 2005). Independent directors (external), as less colluding with the management, provide better control over the company’s progress and facilitate the process of financial accountability (Cheng et al., 2006; Karamanou et al., 2005). This suggested a relation between board independence and quality of financial information provided to outside shareholders. Several studies (e.g., Gonza’lez et al., 2014; Jaggi et al., 2009; Johari et al., 2008) showed that the board independence reduces earnings management. Nevertheless, if external directors were in a secret relationship with the management, it would have negative impacts on the internal governance mechanism (Core et al., 1999), leading to less transparency and inadequate disclosures.

Although board independence has been the key feature in the Code of corporate governance, the inclusion of an independent director in board remains a voluntary choice in Pakistan since the issuance of the Code in 2002 till 2012. Furthermore, the assessment criteria for the independent director has been weak till the revision of the Code in 2012 (see, Javid et al., 2008; Kamran et al., 2014). This has led the boards to be dominated by non-executive directors from within close friends of controlling/family shareholders. Thus, board independence is likely to be compromised in Pakistan. Accordingly, it was hypothesized that:
Hypothesis 5: Board Independence has positive or no association with earnings management.

- **CEO Duality and Earnings Management**
  
  In agency theory perspective, CEO duality reduces board independence and provides power and opportunity to “self-interested” CEOs to pursue their own interests rather than pursuing the shareholders’ interests (Core et al., 1999; Finkelstein et al., 1994; Jensen, 1993). Thus, given the opportunistic behavior of CEOs, CEO duality could lead to higher earnings management in the personal interests of CEOs, or in the interests of controlling shareholders or families. Empirically, while some studies suggested that CEO duality leads to higher earnings management (e.g., Davidson et al., 2005; Dechow et al., 1996), it reduces earnings reliability (Anderson et al., 2003) and increases the possibility of frauds (Chen et al., 2006), others, however, found no evidence of an association between these variables (Gonzalez et al., 2014; Kamran et al., 2014; Xie et al., 2003).

  Since higher tendencies exist towards the unethical behavior in Pakistani society (Mujtaba et al., 2011), therefore it is likely that CEOs being in more power behave opportunistically in their own interests or in the interests of controlling shareholders or families with whom they maintain close relationships. Thus, it was hypothesized that:

  Hypothesis 6: CEO duality has a positive relationship with earning management.

**DATA AND METHODOLOGY**

*Data*

The focus was on non-financial firms listed in PSX for period of 2005 to 2012. The hand collected companies’ annual reports were used because no database that covers corporate governance variables, was available in Pakistan. Data on financial variables was collected from the balance sheet analysis published by State Bank of Pakistan. Out of total 399 non-financial listed firms classified in 12 industry groups by SBP, 139 firms were dropped because they were declared as defaulters, merged/demerged, newly listed or their annual reports were not available. For the remaining 260 companies, the data was collected for at least three consecutive years, making an unbalanced panel data containing 1836 firm-year observations from 260 companies classified in 12 industrial groups. This dataset is used for estimating discretionary accruals. However, for compensation analysis, out of 1836 firm-year observations, 328 observations were dropped because in those observations, the CEO compensation was missing or zero. Thus, our final sample contains 1508 firm-year observations from 225 firms for the period of 2005 to 2012.

*Detecting Earnings Management*

In earnings management research, the detection of earnings management is crucial. The use of discretionary accruals as a proxy for earnings management behavior has become a standard approach. To detect discretionary accruals, Jones' (1991) model was used which was modified first by Dechow, Sloan, and Sweeney (1995), and subsequently by Kothari, Leone, and Wasley (2005). The modified model is:

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2 Annual reports are collected from different sources including SBP, KSE and companies’ websites. As we go farther, the availability of annual reports decreases therefore sample period is restricted to start from 2005.
\[
\frac{TAC_{it}}{A_{it-1}} = \alpha + \beta_1 \left( \frac{1}{A_{it-1}} \right) + \beta_2 \left( \frac{\Delta REV_{it} - \Delta AR_{it}}{A_{it-1}} \right) + \beta_3 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \beta_4 (ROA_{it-1}) + \varepsilon_{it}
\]

Where TAC$_{it}$ is total accruals for firm i at time t calculated as a difference between income before extraordinary items minus operating cash flow, $\Delta$REV$_{it}$ is a change in firm revenues for i at time t, PPE$_{it}$ is the property, plant and equipment for firm i at time t, A$_{it-1}$ is total assets for firm i at time t-1, ROA$_{it-1}$ is Performance measure for firm i at time t as measured by return on assets.

This model has been estimated cross-sectionally each year for each industry group as per SBP classification, and the residuals of this model represented discretionary accruals – a proxy for earnings management behavior. It was indorsed that there are at least 8 observations in each year to estimate the model. Since earnings can be managed in both sides, the absolute value of discretionary accruals (|DAC|) was used as a proxy for earnings management in consistence with previous literature (Bergstresser et al., 2006; Gonza´lez et al., 2014; Wang, 2006; Ye, 2014).

**Model**

After estimating discretionary accruals, the following model was run to examine the impact of CEO compensation and corporate governance variables on the earnings management. Similar models were estimated in the extant literature (see, e.g., Gonza´lez et al., 2014; Ibrahim et al., 2011; Ye, 2014).

\[
|DAC|_{it} = \alpha + \beta_1 LNCOMP_{it} + \beta_2 BSIZE_{it} + \beta_3 B _{IND}_{it} + \beta_4 OWNCONS_{it} + \beta_5 FAMOWN_{it} + \beta_6 DUALCEO_{it} + \beta_7 FIRMSIZE_{it} + \beta_8 LEVERAGE_{it} + \beta_9 ROA_{it} + \beta_{10} MTB_{it} + \beta_{11} LOSSDUM_{it} + \varepsilon_{it}
\]

Based on Hausman's (1978) test ($\chi^2(17) = 20.88$, $p = 0.2318$), the random effect model was chosen in this study. To control the industry's specific factors and macroeconomic shocks, the industry and year dummies were used. To account for heteroskedasticity and autocorrelation in error terms, robust standards clustered at firm level are used. This model was also used to estimate family and non-family firms, low, medium and high ownership concentration, and firms having CEO duality and non-duality. The percentile of ownership concentration was used each year to categorize the observations into low, medium and high ownership concentrations in this study.

**Measurement of Variables**

Typically, CEO compensation has been reported to have various forms: base salary, annual bonus, perks, long-term incentive plans, stock options, restricted stocks and post-employment benefits (Frydman et al., 2010; Murphy, 1999). The literature classifies the executive compensations into two broad classes i.e., cash compensation and non-cash compensation based on nature and/or time-horizon of the award. Cash compensation is the remuneration paid to the executives during the fiscal year. It may include base salary and cash bonuses (see, e.g., Cooper et al., 2014; Core et al., 1999; Croci et al., 2012) or may include base salary, cash bonuses and other cash benefits (see, e.g., Balafas et al., 2014; Conyon et al., 2012; Ntim et al., 2013). Other forms are included in non-cash compensation. In Pakistan, CEOs are paid in the form of base salary, cash bonuses, perks and benefits, and post-employment benefits. Stock based compensations are virtually absent in Pakistan possibly due to family ownership
environment (see, e.g., Baek et al., 2015). Consistent with existing literature, the cash compensation included managerial remuneration and bonuses while total compensation was the sum of all the components in this study. The correlation analysis showed that there is a high correlation (0.9722; see Table 2) between cash and total compensations, therefore, the total compensation was used after log transformation as a main variable while cash compensation was used for robustness checks in the present study.

Ownership concentration (OWNCONS) has been measured as a proportion of voting shares held by the largest shareholder (Holderness, 2017; La Porta et al., 1999). Family ownership is introduced as an indicator variable (FAMOWN) taking value of one of those firms that fulfill one of the conditions: 1) a person or family group hold at least 25% of voting shares in the firm directly or indirectly, 2) two or more family members sit in the board of directors (Achleitner et al., 2014; Wang, 2006).

Board size (BDSIZE) is measured as a number of sitting directors on the board. Although, Code of corporate governance (2012) in Pakistan requires the representation of independent director on the board, this was a voluntary requirement until year 2013. Furthermore, the disclosure regarding independent director was very much inconsistent across the companies. Therefore, the ratio of non-executive directors to board size was used as a measure of board independence (B_IND). CEO duality (DUALCEO) was incorporated as a dummy variable taking value of one if the CEO is also the chairman of board of directors, and zero otherwise.

Other control variables have been typically associated with incentives to manage earnings (see Frankel et al., 2002; Ibrahim et al., 2011). There was a tendency that larger firms would have larger discretionary accruals. Furthermore, larger firms tended to have more analysts. Firm size (FIRMSIZE) was measured as log of total assets. Debts were accompanied with debt covenants which could not be avoided, therefore firms with higher leverage had more incentives to manage earnings. Leverage (LEVERAGE) was measured as a ratio of total debt to total assets. The firms with better performance (ROA) tended to have more accruals and would more likely to meet or just beat the analyst expectations, suggesting performance as an important factor that influences earnings management. Similarly, firms having more opportunities for growth had greater incentives for earnings management. Growth opportunities were measured by the market to book (MTB) ratio as a proxy. Another important factor that can influence the earnings management was loss, because firms with loss had different incentives to manage earnings. The loss (LOSSDUM) was incorporated as a dummy variable obtaining a value of 1 if firm reports loss in a specific year. Lastly, the industry dummies have been also included for controlling industry’s specific unobserved factors.

**EMPIRICAL RESULTS**

**Descriptive Statistics**

Table 1 presents the descriptive statistics. Pooled average of absolute discretionary accruals (|DAC|) is 7.93 percent with standard deviation of 12.19. Average |DAC| reaches to its maximum level in year 2008 with value of 11.55 percent and standard deviation of 28.10 percent. They were possibly because of three reasons: 1) the effects of financial crisis, 2) the unrest due to the political issues and general elections and 3) the start of energy crisis in Pakistan, leading to more camouflaged earnings. Apart from that, overall trend has been mixed over the sample period.
Both average total and cash compensation have gradually increased and nearly tripled over the sample period. Total compensation has increased from Rs4.817 million in 2005 to Rs13.060 in 2012 while cash compensation has increased from Rs3.353 million in 2005 from Rs.9.378 million in 2012. Consistently, lower median value comparing to the mean value indicates that the distribution of compensation has been positively skewed, meaning that greater number of CEOs has been receiving pay that is less than overall average pays.

Average board size of pooled sample was slightly above 8 with standard deviation of 1.57. Recently, similar average board size of 8 is reported for Indian firms (see, Jameson et al., 2014). This was possibly due to resemblance in institutional setting in India and Pakistan which is characterized by concentrated and family ownership structure. The average board size in Pakistan is lower than the board size recently reported for the US (mean 9.54 and median 9) and China (mean 9.372 and median 9) where ownership is either widely held, or state has the major stake in the firms (see, Conyon, 2014; Huang et al., 2015). On average, firms seem to keep 63% of non-executive directors on the boards. However, B_IND had slightly a downward trend over time which may be a result of decrease in board size within the study period. The non-executive directors are always an easy choice when a firm’s board size is needed to be reduced.

<table>
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<tr>
<th>Variables</th>
<th>Statistic</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<th>2012</th>
<th>Overall</th>
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<tr>
<td>Absolute</td>
<td>Mean</td>
<td>N/A</td>
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<td>7.36</td>
<td>11.55</td>
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<td></td>
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<td>8.44</td>
<td>28.10</td>
<td>8.58</td>
<td>6.29</td>
<td>7.48</td>
<td>8.43</td>
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<td>DAC</td>
<td>%a Mean</td>
<td>4817</td>
<td>5530</td>
<td>6512</td>
<td>7562</td>
<td>8396</td>
<td>9449</td>
<td>10628</td>
<td>13060</td>
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<td>703</td>
<td>9094</td>
<td>11028</td>
<td>1278</td>
<td>12519</td>
<td>13493</td>
<td>19935</td>
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<td>Mean</td>
<td>In Rs.'000</td>
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<td>3384</td>
<td>4153</td>
<td>4553</td>
<td>4999</td>
<td>5459</td>
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<td>Cash</td>
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<td>In Rs.'000</td>
<td>2000</td>
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<td>(BDSIZE)</td>
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<td>8.15</td>
<td>8.08</td>
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<tr>
<td>Board %age</td>
<td>Mean</td>
<td>(B_IND)</td>
<td>64.32</td>
<td>64.31</td>
<td>63.90</td>
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<tr>
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<td>Median</td>
<td>(FAMOWN)</td>
<td>0.75</td>
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<td>0.76</td>
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<td>(OWNCONS)</td>
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<td>33.07</td>
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<td>33.36</td>
<td>33.61</td>
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<td>0.33</td>
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<td>0.36</td>
<td>0.35</td>
<td>0.33</td>
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</table>
In our sample, about 75% observations were from family firms and, quite expectedly, this ratio was stable overtime as a family firm in year 2005 is very likely to remain a family firm in year 2012. In addition, more than 30% of average voting shares held by the largest shareholders indicating a highly concentrated ownership environment. Interestingly, OWNCONS has had slightly increasing trend over time. On average about 34% of CEOs also held the position of chairman board of directors. DUALCEO showed maximum values i.e. 36% in 2008, 2009 and 2010, the years characterized by financial crisis, energy crisis and political change. However, the recent downward trend in 2011 and 2012 is consistent with more emphasis on strong corporate governance practices in Pakistan. This is similar to the UK and China where emphasis in on separating the post of CEO from the chairman, and unlike the US where it is usual to combine these two positions (Conyon et al., 2012).

**Correlation Matrix**

Table 2 shows the correlation matrix. Only firm size measured by log of total assets, and the leverage measured by ratio of total debt to total assets have some significant correlations with $|\text{DAC}|$. Firm size is negatively correlated with $|\text{DAC}|$ with coefficient values of -0.09, indicating that larger firms are more likely not to engage in earnings management activities. Leverage has some significantly positive correlations with a proxy of earnings management with value of 0.06. This gives the impression that higher debt firms have more incentives to manage earnings. They possibly need to show the better picture of the company to debt financers who require companies to achieve certain landmarks. Surprisingly, all other variables including compensation variables do not appear to have any significant correlations with absolute discretionary accruals.
### Table 2. Correlation Matrix

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<tr>
<td>CEO Duality</td>
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<td>-0.29*</td>
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<td>-0.19*</td>
<td>-0.09*</td>
<td>0.09*</td>
<td>-0.04</td>
<td>-0.02</td>
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<td>0.08*</td>
<td>-0.04</td>
<td>0.16*</td>
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**Regression Results and Discussion**

Table 3 exhibits the regression results for earnings management behavior taking absolute discretionary accruals as a proxy for EM. To get more insight, absolute discretionary accruals are divided into two components, income increasing and income decreasing discretionary accruals, on the basis of the sign of estimated discretionary accruals. We also estimated the same model after splitting observations on the basis of family vs non-family, low, medium and high ownership concentrations, and CEO duality vs non-duality. As suggested by Hausman (1978) test, all models are estimated using random effects based on the generalized least square (GLS) method. All the standard errors are adjusted for heteroskedasticity and serial correlation.

The results did not seem to suggest that CEO compensation is related to earnings management in Pakistan. Full sample as well as income increasing and income decreasing discretionary accruals were not being influenced by CEO compensation (see column 1 to 3). This finding was inconsistent with Healy (1985), Holthausen et al. (1995), Guidry et al. (1999), Balsam (1998) and Ye (2014). Thus, despite more possibilities of opportunistic behavior apparently as suggested by the contexts characterized by weak legal systems, weak corporate governance practices and low investor protection, CEOs did not seem to be opportunistically managing the firms’ performance to get higher compensation. The coefficient of CEO compensation was also insignificant in subsample regressions (see columns 2 through 10). This suggests that family ownership, ownership concentration and CEO duality do not influence the relationship between CEO compensation and earnings management in Pakistan. Thus, overall, the first
hypothesis related to CEO compensations which induced earnings management was comprehensively rejected. Although, it has been reported in Pakistan that CEO compensation has positive association with firms’ accounting performance. However, it was not found that CEOs manipulate earnings to get higher compensations. In addition, corporate governance environment played no role to strengthen or weaken the relationship between CEO compensation and earnings management.

Concentrated ownership seemed to have positive influence on earnings management. Consequently, our hypothesis that in the presence of weak legal systems and investor protection, ownership concentration is related to higher earnings management was accepted. This finding is inconsistent with Kamran and Shah (2014) in Pakistani context who did not find any association between ownership concentration and earnings management. However, this finding was consistent with other studies (e.g., Fan et al., 2002; Ye, 2014) in Asian context, but contrasting to González and García-Meca (2014) in the context of emerging markets of Latin America. In this study, it was also found that the positive influence of ownership concentration on earnings management is mainly driven by a positive association between the ownership concentration and income decreasing discretionary accruals (see column 3). Large shareholders might be engaged in moving the current income into the future, or they may be using conservative accounting as a tool to eliminate agency problems. While comparing family vs non-family firms, there seemed to be no difference in the relationship between ownership concentration and earnings management (see column 4 & 5). However, when firms with CEO duality and non-CEO duality were compared, the positive relationship appeared to be significant in firms with CEO non-duality (see column 9 & 10). This suggested that CEO duality plays its role in providing true financial figures to the shareholders. Thus, CEO duality seemed to reduce agency problems in Pakistan.

The coefficient of family ownership is not significant in column 1 but in column 3, family firms do seem to be inducing income decreasing discretionary accruals. This seemed consistent with the argument that if managers were internal or a part of family group, there would be more likelihood that managers become entrenched (González et al., 2014; Kamran et al., 2014) and lead to earnings management, possibly because of the desire to minimize taxes and political costs or other long term objectives of controlling shareholders or families (Ali et al., 2007). Similar to the ownership concentration, family ownership is related to earnings management in firms that have CEO non-duality (see column 9 & 10). This again suggested that CEO duality plays a positive role in mitigating agency problems in Pakistan. Ownership concentration did not seem to have any impact on the relationship between family ownership and earnings management, as the coefficient of family ownership was weakly significant only at medium level of ownership concentration. At lower and higher levels, this coefficient was insignificant. Overall, the hypothesis that family firms have more earnings management as compared to non-family firms, can be partially accepted.

Inconsistent with existing study (Kamran et al., 2014) in Pakistani context, board size seemed to have some positive influence on earnings management, indicating the ineffectiveness of the larger boards in reporting the true financial figures. Notice that the influence of the larger boards on earnings management was driven by the strong relation between board size and income decreasing discretionary accruals (see column 3). However, this relationship was stronger in family firms, where ownership concentration is low and CEO and the chairman
position is held by different executives (see column 4,6 & 10). The hypothesis that the larger boards do not reduce earnings management was accepted as no evidence and significance were found.

**Table 3. CEO Compensation, Corporate Governance and Earnings Management**

The dependent variables is absolute discretionary accruals estimated using Kothari et al. (2005) modification of Jones' (1991) Model, CEO Compensation = log of total CEO compensation, Family Ownership = a dummy variable taking value of one for family firms and zero otherwise, Ownership Concentration = concentrated ownership as measured by voting shares held by the largest shareholder, CEO duality = a dummy variable taking value of one if CEO is also the chairman in board of directors, Board Size = number of sitting directors on the board, Board Independence = ratio of non-executive directors to board size, Firm Size = log of total assets, Leverage = ratio of total debt to total asset, Return on Assets = net income divided by total assets, Market to Book ratio = market value divided by book value per share, Loss Dummy = a dummy variable taking value of one if company is in loss.

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<td>(0.328)</td>
<td>(0.329)</td>
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<td>(0.465)</td>
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<td>Board</td>
<td>Independence</td>
<td>Firm Size</td>
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Despite the Code of corporate governance in Pakistan that strongly emphasizes on board independence, there was not found any impacts of board independence on earnings management decisions. The coefficients of board independence remained insignificant in all the columns. This supported our hypothesis that board independence is compromised in Pakistan and has no influence on corporate decisions. In Pakistan, non-executive directors are generally hired from within family, or proxy directors are employed to act on behalf of the controlling family (Javid et al., 2008; World Bank, 2005). This made the boards not to take independent decisions.

CEO duality had significant negative coefficients (see column 1), suggesting that CEO duality reduced the earnings management. This finding was inconsistent with Kamran and Shah (2014) as they did not find any influences of CEO duality on the earnings management. The negative association between CEO duality and earnings management appeared to be driven by strong negative association between CEO duality and income increasing discretionary accruals. This indicated that there is less exaggeration of earnings in Pakistan if CEO holds the position of chairman as well. Furthermore, this relationship was consistent over family vs non-family firms. However, CEO duality reduced the earnings management at a higher level of ownership concentration. At low and medium levels of ownership concentration, the coefficients remained negative but lost their significance (see column 6, 7 & 8).

It was not found that firm size had a convincing effect on earnings management behavior. However, there was weak evidence that larger firms resisted income decreasing discretionary

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accruals (see column 6). Leverage seemed to be related to the tendency to increase reported income. This was an indication of debt covenants driven EM.

Robustness Checks
Robustness analysis was conducted to further confirm the results. Firstly, all the continuous variables were winsorized using 1% level at both tails to eliminate potential outliers, and all models were re-estimated. But, the results did not change qualitatively. Second, discretionary accruals were estimated using Jones' (1991) model and the modification of Jones’ model by Dechow et al. (1995). However, the results remained qualitatively similar to the results reported above, except that the negative relationship between CEO duality and absolute discretionary accruals was more pronounced. Third, the models were re-estimated using CEO cash compensation, however due to the high correlation between total CEO compensation and cash compensation, the results remained qualitatively similar to what was reported.

CONCLUSIONS
The study aimed at examining how CEO compensation and corporate governance practices affected earnings management behavior in Pakistani market which is characterized by concentrated/family ownership environment with weak investor protection laws. The data from non-financial firms listed in PSX for period 2005 to 2012 was used. It was found that CEO compensation did not induce earnings management, and this result was consistent over family vs non-family firms and at different levels of ownership concentration. Thus, despite greater likelihood of opportunistic behavior, unlike Anglo-Saxon context, CEOs in Pakistan did not seem to engage in earnings management to increase their compensation. With respect to the ownership structure, it was found that the concentrated ownership led to higher level of earnings management. Further analysis showed that both concentrated and family ownerships were positively related to the income decreasing discretionary accruals. These results indicated potential expropriation of minority shareholders’ interests by larger or family shareholders through opportunistic earnings management. Concerning board structure variables, it was found that the quality of reported earnings was better when CEO also holds the position of chairman of the board of directors. This was contradictory to corporate governance reforms in Pakistan, which assume CEOs as being opportunistic, require the separation of CEO position from the position of chairman of the board of directors. CEO duality in Pakistan seemed to reduce agency problems. Furthermore, it was documented that larger boards were related to higher earnings management, mainly to income decreasing earnings management. Thus, larger boards seemed to be ineffective and related to the expropriation of interests of the minority shareholders. Board independence did not seem to contribute towards earnings management decisions in any direction. Possibly, board independence was compromised in Pakistan due to the interlocking directorship, pyramid structure and direct relationship between owners and managers. Given the results, this study has important managerial and practical implications for developing markets as corporate governance systems are evolving in these markets.

Although, it was found that the executive compensation was not related to earnings management, however the directors’ total wealth may have an impact on the earnings management decisions, therefore, future research should be aimed at exploring how directors’ wealth can influence earnings management decisions. Similarly, exploring the impact of the
presence of family vs non-family directors and CEO on the earnings management decisions is another important question to examine in emerging markets. Moreover, the effectiveness of the institutional investors can test to limit the earnings management behavior of family firms.

References


