Future Business Journal 4 (2018) 139–156

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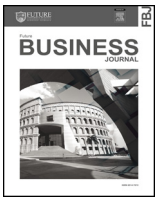
Future Business Journal

journal homepage: www.elsevier.com/locate/fbj



Does managerial behavior of managing earnings mitigate the relationship between corporate governance and firm value? Evidence from an emerging market

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ARTICLE INFO

Keywords:
Corporate governance
Firm value
Discretionary earnings management
Opportunistic behavior
Kasznik model
Moderating effect

ABSTRACT

The relationship between corporate governance and managerial choices for value creation is a topic of continuing interest for researchers. One of most significant managerial decisions that affect value is Discretionary Earnings Management (DEM) which is the judgmental adjustments in firm's reported accounting earnings by managers to upsurge firm value temporarily. Effective corporate governance structure to control this opportunistic behavior of mangers can presumably make accounting earnings more reliable and more informative for the stakeholders and hence, increase firm value. Based on 1944 firm year observations for listed firms in Pakistan, this study aims at to analyze the role of corporate governance in enhancing firm value along with the moderating role of DEM using models proposed by Kasznik (1999) and Beatty, Ke, & Petroni (2002) for detecting earnings management practices of managers. The results report that corporate governance significantly and positively influences firm value confirming the positive role of corporate governance in mitigating agency problem and enhancing the firm value. Moreover, corporate governance mechanisms may mitigate the managers' opportunistic behavior of manipulating the reported earnings. Furthermore, the results report that the behavior of managers is opportunistic towards managing earnings and they are destroying the current and subsequent firm value by manipulating the reported accounting earning. Finally, this opportunistic behavior of managers to manipulate earnings is negatively moderating the well-established positive relationship of corporate governance and firm value.

1. Introduction

The researchers in corporate finance have long recognized the widespread separation of ownership and control in firms that has created the potential agency problem which may be costly. The mangers have substantial freedom to pursue their personal benefits at the expense of shareholders' wealth due to limited incentive of shareholders to monitor the behavior and performance of managers (Kolsi & Grassa, 2017). The core objective of shareholders is to earn returns on their invested capital, whereas managers are likely to be focusing on their personal goals such as consummation of perquisites (Jensen & Meckling, 1976), power and prestige of running a large organization (Hubbard & Palia, 1995), or their job security by not investing in risky but rewarding projects (Amihud & Lev, 1981). In this regard, managers' superior access and control over the firm's resources give them upper hand and they take decisions which are aligned with their personal objectives instead those of shareholders. The principle of shareholders' wealth maximization

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https://doi.org/10.1016/j.fbj.2018.03.001
Received 20 September 2017; Received in revised form 15 January 2018; Accepted 22 March 2018
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will not motivate corporate decision making in the absence of effective corporate governance mechanisms. Since the publication of pioneer work by Berle and Means (1932), immense literature has been stimulated on the agency theory of principal and agents and researchers have tried to explore the potential adverse effects of absence of effective control mechanism and misalignment of shareholders and managers' interests.

Along with the agency phenomenon, the global financial catastrophe and investors' desire for companies to have good corporate governance system also amplified its importance. The Asian Financial Crisis of 1997 had adversely hindered many corporations in South East Asian countries putting long lasting effects on their economies (Sachs, 1998). Generally, poor corporate governance structure is assumed to be the source of these crises up to a certain extent (D'Cruz, 1999; Khas, 2002). Moreover, the financial collapse of conglomerates such as Enron, Etoys, Adelphia, World Com, Parmalat, Commerce bank, XL Holidays have ruined the investor confidence in the capital markets and cautioned the world for the need to have a transparent and fair governance system in companies. During the last couple of decades, regulators, investors, policy makers and other capital market participants have been increasingly focusing on the need for firms of have an effective monitoring and accountability system of corporate governance to minimize agency problem (Epps & Ismail, 2009).

The relationship between corporate governance and managerial choices for value creation is a topic of continuing interest for researchers. It is believed that practices of corporate governance are value enhancing (Johl, Khan, Subramaniam, & Muttakin, 2016) and a firm with effective governance system can increase its value by lowering the conflict of interest between dispersed minority shareholders and empowered managers of firms as well as by reducing information asymmetry and increasing managerial efficiency (Audousset-Coulier, Jeny, & Jiang, 2016). After the implementation of Sarbanes-Oxly (SOX) Act of 2002 in the United States, most of the countries had begun to realize the importance of effective corporate governance mechanisms to reduce agency cost and create value for shareholders. This realization has also ignited research in developed as well as developing countries of the world to investigate the impact of corporate governance on firm value (Core, Guay, & Rusticus, 2006, Sami, Wang, & Zhou, 2011), however, findings are still indecisive. Most of the researchers had documented a strong positive association between corporate governance and firm value (Gompers, Ishii, & Metrick, 2003, Cremers and Nair, 2005, Bebchuk, Cohen, & Ferrell, 2009). On contrary, some also found mixed or no evidence of relationship between corporate governance and firm value (Yermack, 1996, Lehn, Patro, & Zhao, 2007). However, Gompers et al. (2003) and Cornett, Mcnutt, and Tehranian (2009) suggested that relationship between corporate governance and firm value is endogenous which needs to be addressed more comprehensively and rigorously.

Firms possessing good corporate governance practices may outperform their counterparts due to two main reasons. Firstly, better governed firms utilize their financial and human resources in an efficient manner to make profitable investments. Investors feel secure while investing in these types of firms as they believe that less cash flows will be diverted due to mitigated agency problem and expect higher payouts which ultimately leads to increased stock price and enhanced firm value (Jensen & Meckling, 1976; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002). The findings of the popular McKinsey Survey (2000) also reported that majority of the investor respondents assigned more value to the firms with good corporate governance practices. Secondly, firms with good corporate governance may have lower required rate of return on equity (cost of equity capital) as shareholders' costs of monitoring the managers and auditing the reported earnings are much lesser (Shleifer & Vishny, 1997). Good governance practices of companies may prove to be helpful in building optimistic market reputation in capital markets and hence, funds can be acquired at lower costs. However, some researchers have also raised the question mark on this positive relationship of corporate governance and firm value due to high cost associated with implementation of effective corporate governance mechanisms in company which may counterbalance its benefits (Gillan, 2006; Chhaochharia & Grinstein, 2007; Bruno & Claessens, 2010).

One of the most significant value related managerial decisions is Discretionary Earnings Management (DEM). Earnings management is the judgmental adjustments/alteration in firm's reported accounting earnings by managers in order to upsurge firm value temporarily (Cornett et al., 2009; García-Meca & Sánchez-Ballesta, 2009; Cameran et al., 2015). Managing earnings is a choice of accounting rules, voluntary earnings estimates or information disclosures in order to affect the level or quality of reported earnings deliberately. This intentional alteration and manipulation of accounting earnings emasculate the reliability and trustworthiness of disclosed accounting information, which otherwise may be very beneficial to the stakeholders, have underlined earnings management as much important research area. Previous studies in corporate finances have found several managerial motives for discretionary earnings management including obtaining personal benefits like compensation plans (Healy, 1985); job security (Defond & Park, 1997), meeting debt covenants (Bowen, Ducharme, & Shores, 1995, Defond & Jiambalvo, 1994, Sweeney, 1994), meeting analysts and investors forecasts (Matsunaga & Park, 2001, Kasznik, 1999), setting a better listing price after going public (Teoh, Welch, & Wong, 1998), maximizing merger premium and minimizing acquisition cost when stock consideration is used by acquiring firm (Louis, 2004), and reducing loan losses (Beaver & Engel, 1996). Healy (1985) was the forerunner to provide the evidence that managers, as corporate insiders, manipulate the current period earnings on the cost of long-term firm value to increase their salaries and other monetary benefits. There are both good and bad facets of discretionary earnings management (Houqe, Ahmed, & Zijl, 2017). Stocken and Verrecchia (2004) has discussed that it can disclose insider information, and communication among insiders and capital market participants can be enhanced. Contrarily, DEM can result in an opportunistic behavior of managers (Hanna, 1999, Dechow, Sloan, & Sweeney, 1996) and earlier studies found that greater earnings manipulation and a reduced level of earnings informativeness are the topographies of a fragile investor protection framework (DeFond, Hung, & Trezevant, 2007, Leuz, Nanda, & Wysocki, 2003).

The fundamental issue of corporate governance is to ensure accountability of top management while concurrently providing executives with the autonomy and incentives to exploit wealth producing business opportunities (Braswell & Daniels, 2017). Effective corporate governance structure to control the opportunistic behavior of mangers can presumably make accounting information more reliable and more informative for the stakeholders and hence, increases firm value (Dechow et al., 1996). The reliability and

informativeness of reported accounting earnings is dependent on the quality and effectiveness of corporate governance implemented through different monitoring mechanisms in a firm (Dechow et al., 1996). The researchers had started emphasizing for the need of strict corporate monitoring and control to resist against the opportunistic managerial behavior. Cheng and Warfield (2005) also provided evidence that the propensity for earnings management is lower when interests of management and owners are more closely aligned through effective governance structure. Kang and Kim (2011) suggested that discretionary earnings management may affect the relationship between corporate governance and firm value; however more conclusive analysis is still required.

The awareness of corporate governance is not very old in Pakistan (Shamsi, Bashir, & Panhwar, 2013). Following the enforcement of the code of corporate governance developed by Securities and Exchange Commission of Pakistan (SECP) with collaboration of Institute of Chartered Accountants of Pakistan (ICAP) in March 2002, the provisions of code were incorporated into listing requirements of firms in all stock exchanges (i.e. Karachi, Lahore, and Islamabad) in Pakistan to ensure accountability, transparency, strict audit compliance and protection of minority shareholders' interests. The code encompasses the "best corporate practices" along with compulsory requirements of Companies Ordinance 1984. These best practices provide a wide-ranging charter by which listed firms are to be directed and controlled to protect the shareholders' interests and enhance the confidence of capital market participants. Compliance to the best practices mentioned in the code was mandatory with exception of two provisions. The obligatory requirements of the code include qualifications and eligibility criteria of directors (including tenure, powers, functions, and responsibilities), directors' interest disclosure, training and meetings of board of directors, education, duties of company secretary, chief financial officer and audit committee, internal and external auditors' appointment criteria etc. The voluntary provisions were regarding the appointment of independent director and restrictions for the brokers to be board members (Nazir, 2016). The code is based upon the experiences learnt from the other economies particularly those having same common law that is also applicable in Pakistan. The important documents in this regard are Cadbury Committee Report on Financial Aspect of Corporate Governance of UK (1992), Hampel Committee Report on Corporate Governance of UK (1998), King Committee Report on Corporate Governance of South Africa (2002) and the Principles of Corporate Governance (1999) by Organization for Economic Cooperation and Development (Nazir, 2016).

Later on, SECP issued a revised code of corporate governance in April 2012 which incorporates nine revisions in the earlier code of 2002 and three introductory clauses. The voluntary provision of independent director appointment was made compulsory for at least one director. The other revisions and new clauses include minimum number of executive directors and directorships, board evaluation, appointment of non-executive chairman (no CEO duality), training of board directors, appointment criteria for CFO and company secretary, qualification and removal of head of internal audit, director's remuneration, audit committee's characteristics, and internal audit policy (Nazir, 2016). Since its inception, SECP has been charged with the responsibility to promote good corporate governance and best corporate practices in Pakistani firms. Along with implementation of code of corporate governance, SECP also established Pakistan Institute of Corporate Governance (PICG) with the collaboration of State Bank of Pakistan (SBP) and International Financial Corporation (IFC) in 2004. PICG is a nonprofit public-private initiative, limited by guarantee with zero share capital, setup under section 42 of Companies Ordinance 1984 to stimulate good governance practices and principles in the corporate sector of Pakistan. PICG is a platform to provide leadership skills of corporate governance, directors education through Board Development Series (BDS), Directors Orientation Workshop (DOW), advisory and assessment services on corporate governance, accredited directors placement services, and some other research facilities along with conduction of symposiums and seminars for general awareness of corporate governance in Pakistan (PICG, 2018).

Currently, Pakistan Stock Exchange (PSX) is the flagship capital market of Pakistan with trading floors in Lahore, Karachi and Lahore and dealing in equities, debt and derivative securities. Morgan Stanley Capital International (MSCI) reclassified PSX as an emerging market (Dawn, 2017), while the Financial Times Stock Exchange (FTSE) classified PSX as a secondary emerging market (Dawn, 2008). PSX was established after integration of individual stock exchanges of Lahore, Karachi and Islamabad in January 2016. The integration of three stock exchanges is expected to have a positive effect on growth and development of the economy as it encouraged participation in capital market investment across the country as well as foreign portfolio investment. Other than expanding the investor access and participation, the integration enhanced operational and informational efficiency of the capital market. Previously, Karachi Stock Exchange was among the world's best performing stock markets during 2009 to 2015 as equities delivered 26% return a year since 2009 and KSE-100 index increased by 500% during last decade (The Express Tribune, 2015).

Considering the above discussion, corporate governance has become an important research area in Pakistan and investigation of impact of governance mechanisms on firm value is of enormous importance; however, the research on this issue in Pakistan is still limited. A few research studies are conducted on this issue, but these were focusing on the fractional aspects of corporate governance in isolation. Some of these aspects include family ownership (Yasser, 2011; Jabeen, Kaleem, & Ehsan, 2012); managerial ownership and concentration (Afza & Slahudin, 2009; Javid & Iqbal, 2010; Sheikh, Wang, & Khan, 2013); institutional ownership (Afza & Slahudin, 2007); Board Composition and governance index (Afza & Nazir, 2012; Javid & Iqbal, 2007, 2008; Sheikh et al., 2013) etc. However, these studies have focused on a single dimension of corporate governance and none of these studies have addressed the possibility of endogeneity between corporate governance and firm value. Hence, the present study is unique in its nature to investigate the relationship of corporate governance and firm value by taking into consideration more comprehensive measures of corporate governance practices (i.e. audit structure, board structure and ownership structure) and alternative firm value measures (accounting, market, and economic value). In addition, the study also examines influence of DEM into governance-value relationship and intends to see whether earnings management practices strengthens/weakens the relationship between good corporate governance and enhanced firm value which has been a relatively ignored research area in existing empirical studies. So, the research objectives of the current study include:

- To validate the relationship between the corporate governance and firm value by covering more comprehensive measures of governance as well as alternative measures for firm value in Pakistan;
- To investigate the impact of effective corporate governance on the DEM practices of managers;
- To evaluate the role of DEM in creating/destroying the firm value;
- To analyze the moderating role of DEM in established governance-value relationship.

2. Review of literature

Importance of corporate governance in boosting the firm value is not a refuting fact. Various researchers have consensus that corporate governance is the main prop for wealth creation for all stakeholders and it is a significant characteristic that enhance the corporate value while plummeting the agency costs (Demsetz, 1983; Jermias & Gani, 2014; Shamsudin, Abdullah, & Osman, 2018). Generally, in order to minimize the agency cost and maximize the firm value, effective corporate governance system is implemented into firms by different mechanisms like audit, board and ownership structure (Fernando, 2011). Focusing on the relative importance of corporate governance, extensive work has been carried out to investigate impact of corporate governance on firm value; however, mixed and contradictory results have been found. Several researchers have found positive association (Brown & Caylor, 2006, Gompers et al., 2003, Park & Jang, 2010; Wijethilake, Ekanayake, & Perera, 2015; Rashid, Ali, & Magsi, 2018), some found mixed results (Pi & Timme, 1993, Rechner & Dalton, 1991, Yasser, 2011) and some found no connection between corporate governance and firm value (Bhagat & Black, 2001, Pham, Suchard, & Zein, 2011; Latif, Kamardin, Mohd, & Adam, 2013).

Previous literature showed that establishment of audit committee can play a significant role in the areas of internal and external auditing, risk management and financial reporting process. The board of directors delegates its authority to oversee the financial activities of a firm to its audit committee, thus making it a type of monitoring tool which enhance the quality of information flow among the stakeholders. Several previous researches showed that audit committees that are independent and active are more likely to reduce frauds and misleading financial reporting process (Menon & Williams, 1994). Generally, it is believed that a smaller audit committee can be more effective in performing its monitoring roles and to reduce the fraudulent activities in firms and hence improving firm value (Eisenberg, Sundgren, & Wells, 1998, Lipton & Lorsch, 1992). However, Bedard, Chtourou, and Courteau (2004) argued that large audit committee can ensure more effective control and monitoring on the accounting and operational processes whereas Al-Matari et al. (2012) confirmed the notion that large audit committees cannot boost the firm value because of diffusion of responsibility. Moreover, the effectiveness of audit committee can be assessed by its meeting frequency. More diligence is associated with the higher audit committee meeting frequency (DeZoort et al., 2002), audit risk can be minimized if audit committee meets more frequently (Stewart & Munro, 2007) and firm value can be enhanced (Azam, Hoque, & Yeasmin, 2010). Aldamen, Duncan, Kelly, McNamara, and Nagel (2012) have also confirmed this positive relationship between audit committee meeting frequency and firm value, however; Ojulari (2012) failed to find any association between audit committee activity and firm value. Furthermore, the role of external auditor quality in mitigating the agency problem is proven, however; research on external audit quality is very limited. In this regards, Fooladi and Shukor (2012) provided empirical evidence that big four auditors have significant positive impact on returns on assets of sample companies in Malaysia. Knechel (2016) and Habbash and Alghamdi (2017) also confirmed these findings about audit structure and firm value.

Moreover, it has been strongly argued in literature that effectiveness of board of directors as the mechanism of governance is fundamental for the enhancement of firm value (Bhagat & Black, 1999, Jiraporn et al., 2009; Latif et al., 2013; Fauver, Hung, Li, & Taboada, 2017). Board of directors is the most superior authority in company to monitor and keep managers accountable as well as for the smooth operations of the company along with providing the managers a long-term vision and strategies. The earlier studies have found mixed evidence on the relationship of firm value and different elements of board structure as a mechanism of corporate governance structure. Predominantly, board size, board composition and independence, CEO duality, board meeting frequency and participation along with characteristics of directors have been empirically examined by various researchers in governance literature such as Yermack (1996), Dalton, Daily, Johnson, and Ellstrand (1999), Cho and Kim (2007), Kim and Yoon (2007) Latif et al., (2013), Jermias and Gani (2014) and Fauver et al. (2017). The results suggested that higher corporate performance is accomplished when outside directors actively participate in the meetings of the board and to reduce the agency problem among the diverse shareholders and management.

The importance of ownership structure in enhancing firm value cannot be overlooked as it is one of significant variable of corporate governance. Insider ownership plays a vital role in enhancing value of any firm as this is the way of transforming owners and manager's distinct interest into similar interests. Jensen and Meckling (1976) first brought the issue into consideration that how high managerial ownership positively influences the performance of firm by segregating shareholder into inside and outside owners. Insiders are in strong position to not only involve in non-marketable perquisite consumption, but also selecting investment projects that are more beneficial for themselves as compared to outside shareholders. As managers do not have significant stake in ownership so only a small percentage of cost of these actions is born by them. So, increasing inside ownership would decrease the probability that managers would take such perquisites or invest in such projects as they have to bear more cost relative to ownership proportion. Thus, this argument provide support to the convergence of interest hypotheses. On the other hand, entrenchment effect of high managerial ownership was first discussed and analyzed by Morck, Shleifer, and Vishny (1988). Two contradictory forces that pull managers to behave accordingly are: first their natural aptitude to utilize firm resources for their personal interest which jeopardize shareholders' interests; second is to put maximum efforts to maximize owner's wealth and increase managers' stake in ownership. Former is negatively while later is positively related to the firm performance, creating a nonlinear relationship between ownership and performance as reported by Chen et al. (2012). Many other researchers have tested the relationship of other form of ownership

structure with firm value. For instance, family ownership was found to be positively impacting corporate performance by Anderson and Reeb (2003), Maury (2006), as well as negatively by Villalonga and Amit (2006). Moreover, McConnell and Servaes (1990), Black (1998) and Navissi and Naiker (2006); Edmans (2009), Fich, Harford, and Tran (2015), McCahery, Sautner, and Starks (2016); Schmidt and Fahlenbrach (2017) documented a positive role of institutional owners in enhancing the firm value.

The varying nature of accounting accruals provide corporate executives the discretion in the determination of firms' reported earnings. With reference to the empirical studies on corporate governance and DEM practices, Xie, Davidson, and Dadalt (2003), Klein (2002), Koh (2003), Fan and Wong (2005), Anderson, Mansi, and Reeb (2004) and Garva (2015) also documented a positive role of corporate governance in restricting the earnings management behavior of managers. One important study in this regards is Cornett et al. (2009) who evaluated the earnings management practices at 46 large US bank holding companies. The study first established that the relationship between corporate governance and earnings management is endogenous in nature. Once the endogeneity had been established, the authors used simultaneous equations approach to assess the relationship between board independence, pay-for-performance sensitivity and earnings management practices of bank holding companies. Moreover, Iqbal and Strong (2010) indicated that composition of board with more independent directors and presence of outside blockholder on the ownership structure reduced the likelihood of a firm to engage in earnings management practices around the right issues in UK. Bekiris and Doukakis (2011) found that corporate governance was seemed to lower the earnings management practices in the firms. Later on, González and García-Meca (2013) documented the evidence that if board meets more frequently, this activity may reduce earnings management in the firms. Recently, Al-Najjar (2018) and Liu, Chung, Sul, and Wang (2017) also concluded that institutional blockholding and audit structure are helpful in restricting the discretionary accounting reporting by managers.

Literature has also documented different motives of earnings management either income increasing or income decreasing; however the empirical evidence on these motive is not truly convincing (Beneish, 2001). The research on the role of DEM in enhancing firm value is deficient in corporate finance literature. One school of thought has focused on real practices of earnings management like sale of investments/fixed assets to improve earnings growth (Herrmann, Inoue, & Thomas, 2003) and minimization of reported earning loss by giving price discounts or reporting lower costs and reducing the discretionary expenditures of research and development. Empirical studies argued that earnings management activities have a significantly negative impact on future performance, earnings growth and future cash flow which may be attributed to opportunistic earnings management (Healy & Palepu, 1993; Gunny, 2005; Tabassum et. al., (2014); Nazir, 2016). The other school of thought argues that managers exercise earnings management behavior in order to enhance the reported earnings due to which shareholders benefit from managed earnings (Arya, Glover, & Sunder, 2003, Bowen, Rajgopal, & Venkatachalam, 2008; Gunny 2010).

Keeping in view the mixed findings on association between DEM and firm value, Kang and Kim (2011) claimed to be first study to capture the role of earnings management in governance-value relationship. Using 1104 Korean firms' data for a period 2005 to 2007, the authors investigated the impact of board structure on the firms' market value in the presence of DEM. They concluded that managers will engage in less DEM practices when board structure is stronger enough to mitigate their discretionary powers. This discretionary behavior to manage reported earnings strengthens the casual link between corporate governance and firm value. However, they also argued that this relationship should be further verified by taking into consideration the other variables and mechanisms of corporate governance and firm value using data for longer time. Hence, the present study fills this research gap by validating the relationship between corporate governance and firm value in the presence of DEM as moderator. The current study is different from the earlier literature in many ways. Firstly, it will corroborate the relationship between corporate governance and firm value by incorporating three corporate governance mechanisms (i.e. audit structure, board structure and ownership structure) and more comprehensive measures of firm value (i.e. accounting, market and economic value). These three mechanisms have not been discussed and investigated in earlier literature simultaneously. Secondly, the relationship between corporate governance and discretionary earnings management has been thoroughly investigated. And finally, the significant contribution of the present research is to explore moderating role of DEM within the established premise of corporate governance and firm value, which is relatively an under explored research area in corporate finance literature.

3. Research design

3.1. Sample and data

The total population of the study is the listed firms of Pakistan Stock Exchange Limited (formerly Karachi Stock Exchange) on December 31, 2016 which was 560 financial and nonfinancial firms. The focus of the study is on non-financial listed firms and afterwards some filtering techniques were applied to refine the sample of underlying study. Firms which were not remained operational and listed at the stock exchange throughout the study period were excluded as the study intends to analyze the market value of the firms. So, only those firms are selected which have complete data of market as well as firm specific information such as governance and accounting numbers. After applying these filters, the initial sample was 208 non-financial firms from 17 sectors, which was 37% of the total population of the study. The data regarding the sample firms has been obtained for the period of 2004 to 2016 generating a total of 3133 firm year observations. The rationale for taking 2004 as base year is that the code of corporate governance was implemented in Pakistan in late 2002, the effective implementation could be assumed to be from 2004 which is the first financial year after the implementation of code. The data has been collected from the annual reports of firms, respective websites of companies and stock exchange, and business recorder etc.

Moreover, after data collection on different variables of the study, the initial screening process has observed some outliers in the data which could create bias in results and disturb generalizability of the study. So, data trimming technique of standardized

variables (z-score) was applied and this process has eliminated further 46 firms with extreme values from the sample. The final sample of the study used to produce the results in upcoming section of this research is 162 non-financial listed firms. This final sample overall represents 29% of total population of KSE listed firms during the study period. Furthermore, the year 2004 was used as lag year to estimate some study variables (i.e. to estimate earnings management accruals); hence a total 1944 firm year observations were used for 162 firms and 12 years for the subsequent analysis.

3.2. Econometric Models

To investigate research objectives, the present study is based on four levels of analysis. Firstly, it investigates the relationship between corporate governance mechanisms and firm value incorporating the reverse causality between these variables. Secondly, it examines the impact of corporate governance mechanisms on DEM practices of sample firms. Thirdly, role of DEM is examined on the firms accounting, market and economic value to identify the efficient or opportunistic behavior of managers. Finally, it explores the moderating effect of DEM practices on the established governance-value relationship. At the first place, following set of models have been estimated to assess the comprehensive relationship of corporate governance and firm value:

$$Value_{it} = \alpha_0 + \alpha_1 \sum_{(j=1)}^{n} CG_{it} + \alpha_2(FirmSize_{it}) + \alpha_3(LVRG_{it}) + \alpha_4(Age_{it}) + \alpha_5(IndustryDummy_{it}) + \alpha_6(YearDummy_{it}) + \varepsilon_{it} \ldots\ldots \quad (1)$$

Whereas:
$Value_{it}$ = Firm value including accounting, market and economic value variables for firm i for time t;
CG_{it} = Vector of corporate governance variables, including audit, board, ownership and an integrated measure of corporate governance index (see annexure for details of corporate governance variables measurement)
$Firm\_Size_{it}$ = Size of the company as control variable for firm i for time t
$LVRG_{it}$ = Leverage ratio of firm i for time t
Age_{it} = Age of firm i for time t
ε_{it} = residual

At the second level, the impact of corporate governance mechanism on discretionary earnings management practices of firms has been estimated through following empirical models:

$$DEM_{it} = \beta_0 + \beta_1 \sum_{j=1}^{n} CG_{it} + \beta_2(FirmSize_{it}) + \beta_3(LVRG_{it}) + \beta_4(Age_{it}) + \beta_5(IndustryDummy_{it}) + \beta_6(YearDummy_{it}) + \varepsilon_{it} \ldots\ldots \quad (2)$$

Discretionary accruals are commonly used as a proxy to detect earnings management in a firm. Earlier studies have used two different approaches to detect earnings management using accruals (discretionary + non-discretionary) in a firm, namely balance sheet approach and cash flow approach (Shah, Zafar, & Durrani, 2009). However, Collins and Hriber (2000) argued that balance sheet approach to estimate accruals and detect earnings management is proven to be inferior in most of the cases and researchers should follow the cash flow approach which is less sensitive to economic conditions in a country. Therefore, following Collins and Hriber (2000), the present study uses cash flow approach to measure the Total Accruals (TA) as:

$$TA_{it} = EAT_{it} - OCF_{it}$$

Whereas:
TA_{it} = Total Accruals for firm i for time t
EAT_{it} = Earnings after tax for firm i for time t
OCF_{it} = Operating Cash flows for firm i for time t

Following Nazir (2016), the present study used Kasznik (1999) model for estimating discretionary accruals as:

$$TA_{it} = \gamma_0(1/Assets_{it-1}) + \gamma_1(\Delta REV_{it} - \Delta REC_{it}) + \gamma_2(PPE_{it}) + \gamma_3 \Delta OCF_{it} + \varepsilon_{it} \ldots\ldots \quad (3)$$

Whereas:
ΔOCF_{it} = change in operating cash flows of a firm i for time t
γ_{0-n} = Estimated parameters of the models
ε_{it} = residual
All variables are to be scaled by beginning level of total assets

As suggested by Greene (2005), the accruals estimation models contain multiple lag values in variables, particularly in dependent variable and if we estimate these accrual models using simple regression, the problem of autocorrelation between the residual and

lagged endogenous variables might arise and results could be biased and unreliable. Boujelben and Fedhila (2011) suggested using the "Arellano-Bover/Blundell-Bond linear dynamic panel data estimation", which is an estimation procedure with system GMM. This method includes the lagged differences of the dependent variable as instruments in the level equation and resolves the problem misspecification. So, the Kasznik (1999) model has been estimated again using "Arellano-Bover/Blundell-Bond linear dynamic panel data estimation" and its predicted residual values have been used as DEM variable for onward analysis.

Sireger and Utama (2008) and Kang and Kim (2011) argued that opportunistic behavior of managers may influence the accounting and market value of the firm by affecting the earnings informativeness and signaling to the market. Managers may be efficient in managing reported earnings, so it will enhance firm value. On the other hand, firm value may deteriorate if opportunistic behavior is shown by firm managers. To validate this relationship, the present study also examines the impact of discretionary earnings management on the firm value by estimating the following model;

$$Value_{it} = \delta_0 + \delta_1(DEM_{it}) + \delta_2(FirmSize_{it}) + \delta_3(LVRG_{it}) + \delta_4(Age_{it}) + \delta_5(IndustryDummy_{it}) + \delta_6(YearDummy_{it}) + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots \quad (6)$$

Finally, at the fourth level, the present study explores the moderating role of DEM in the established governance-value relationship. To perform this analysis, the moderating regression analysis has been conducted as:

$$Value_{it} = \eta_0 + \eta_1(CGI_{it}) + \eta_2(DEM_{it}) + \eta_3(CGI_{it})^*(DEM_{it}) + \eta_4(FirmSize_{it}) + \eta_5(LVRG_{it}) + \eta_6(Age_{it}) + \eta_7(IndustryDummy_{it}) + \eta_8(YearDummy_{it}) + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (7)$$

4. Results and discussion

4.1. Summary statistics

Overall descriptive statistics for scale variables are reported in upper panel of Table 1 whereas dichotomous variables are presented lower panel. These summary statistics are categorized in small and large firms based on total assets. The sample firms are quite profitable in terms of accounting measures of ROA as well as market measure of Tobin's q. Large firms are relatively more profitable with 6.19% ROA and 1.61 q, whereas small firms have 3.96% ROA with 1.33 value of Tobin's q. The general perception of the market participants is also positive about the fundamental position of sample firms and investors are placing a higher value on book assets of firms in terms of Tobin's q. The Tobin's q value for all sample firms is 1.36 which is greater than par indicating that there are positive perceptions and anticipations about the future of the firms. In addition to the earlier studies which used only accounting (ROA, ROE) and market measures (Tobin's q), the present study added EVA as economics value measure of firms. EVA is not used frequently in

Table 1
Summary statistics for study variables.

Variable	Small Firms		Large Firms		Full Sample	
	Mean	SD	Mean	SD	Mean	SD
ROA *(%)*	3.96	12.13	6.19	8.38	5.18	9.98
Tobin's Q	1.33	1.41	1.61	1.43	1.36	1.47
EVA *(billion PKR)*	-29.63	955.024	3748.18	9919.63	1046.36	5328.76
EVA/TA	-0.018	0.634	0.066	0.613	0.025	0.376
DEM *(%)*	-0.22	11.63	-1.49	10.17	-1.61	10.41
Leverage *(%)*	53.51	26.33	53.20	22.20	52.14	24.48
Total Assets *(billion PKR)*	974	546	54,864	60,443	17,109	37,382
Age *(years)*	35.40	16.38	36.34	19.32	36.63	19.99
AC Size	2.5401	1.0777	3.5214	1.10	2.9551	1.0888
AC Independence	0.7929	0.1878	0.8015	0.2094	0.7713	0.2118
AC Activity	4.0679	0.5954	4.2160	0.4941	4.1234	0.5404
Board Size	7.6666	1.1538	9.2623	2.3558	8.2199	1.6761
Board Independence	0.3365	0.2329	0.4437	0.3197	0.3699	0.2696
Board Activity	4.8641	1.1016	6.0555	3.8149	5.3310	2.3838
Board Participation Rate	0.8189	0.1284	0.7974	0.1464	0.8175	0.1281
Inside OS	0.2299	0.2309	0.0815	0.1693	0.1805	0.2254
Family OS	0.2189	0.2395	0.0819	0.1773	0.1793	0.2323
Institutional OS	0.1297	0.1208	0.1321	0.1207	0.1174	0.1136
Foreign OS	0.0508	0.1524	0.0715	0.1665	0.0601	0.1571
Associated Co. OS	0.2425	0.2865	0.4365	0.2883	0.3111	0.2993
CG Index	15.49	2.84	17.03	2.22	16.21	2.59
CGI *(% of total)*	53.42	9.811	58.72	7.671	55.88	8.941
Dichotomous Variables	**Frequency Case = 1**	**%age**	**Frequency Case = 1**	**%age**	**Frequency Case = 1**	**%age**
EAQ	260	49.38	418	79.39	1231	58.45
CEO Duality	133	25.26	63	11.97	436	20.70
Blockholder	263	49.95	315	59.83	1112	52.80

empirical research of finance as value measure, particularly, with reference of CG and firm value relationship. The average economic value as measured by EVA for all firms is PKR1,046 billion. Pakistani firm are generating 2.5% EVA relative to their total assets. However, there is a greater variation in this variable as indicated by its higher standard deviation. Consistent with the results of ROA and q, absolute EVA is much less for small firms as compared to large firms in the sample, i.e. negative PKR 29.63 billion, whereas large firms are generating PKR 3.75 billion in terms of EVA which is 6.6% of their total assets. With respect of Discretionary Earnings Management (DEM) practices, our sample firms are involved in income decreasing earnings management activities which might be due to tax evasion proposition. Overall, DEM is negative 1.61 for all firms, whereas this propensity of income decreasing activities is more in large firms. Mangers of large firms are indulged in more income decreasing DEM practices which is evident from higher negative value of DEM, i.e. -1.49%. With respect to control variables, the sample firms are quite large in size with average assets value of PKR17,109 billion with approximately half of their assets are being financed from external source of financing.

Next, with respect of corporate governance related variables, internal audit committee comprises of approximately 3 members with almost 77% independent members meeting each quarter. These statistics are quite similar for small and large firms. Mostly, the internal audit committees of sample firms constitute of non-executive directors to oversee the operations of a firm. The code of CG issued by SECP also encourages the participation of non-executive members on audit committee and board of directors. Moreover, as for as the reputation and quality of external audit is concerned, a total of 58% firms get their annual financial accounts audited by any one of big four external audit firms. This tendency of hiring the services of big four auditors is greater in large firms where this ratio is approximately 80% whereas almost 50% of sample small firms are obtaining the services of big four auditors to get their financial statements audited. Moreover, the average board size of sample firm is eight directors with approximately 37% board independence and 21% firms having CEO duality where CEO is also holding the position of chairman. On average, boards meet five times in a financial year to supervise the operational and strategic issues of firms with active participation rate of 82% from its directors. Compared to smaller firms, large firms of the sample are following sterner corporate governance mechanism where board size is relatively large, with high board independence, less frequency of CEO duality, and more board activity in terms of meeting. However, participation rate of directors in board meeting is high in small firms pointing out the fact that directors more actively participate in the meetings of board of directors for small firms.

The ownership structure variables of CG are summarized next. The study includes fraction of shares held by inside, family, institutional, foreign, and associated companies as composition of ownership whereas external block holder dummy has been used as a measure of ownership type in a firm. The shares held by corporate insiders are used as most common measure of ownership structure in earlier empirical researches. The average level of Inside ownership in our sample firms is 18% of total shares outstanding. However, the level of ownership held by insiders is much greater in small firms where Inside ownership is 23% of total share ownership as compared to large firms where only 8% shares are held by insiders in firms which they are managing. Similar sort of variation is also visible in Family ownership variable. With the passage of time, the level of family ownership is declining in Pakistani firms and these are converging towards more market oriented governance and control structure from family controlled firms (Yasser, 2011). Share ownership held by financial intuitions in our sample is 11.74%, on average for all firms whereas the ownership stake of foreigners in Pakistani firms is 6% of total shares outstanding. There are not large variations for these variables for institutional and foreign ownership variables. Foreigners are important as they bring capital as well as technological skills to the firms where they invest. The low level of foreign shareholdings in Pakistani sample firm may be attributed to lower capital inflow through foreign direct and portfolio investment because of the unstable political conditions and unfavorable business environment of Pakistan. Along with this, the associated companies (parent, subsidiary, related party) own approximately 31% ownership in the sample firms indicating the influential role of group affiliation and parent-subsidiary benefits of economies of scale. Naqvi and Ikram (2004) have also argued that Pakistani firms affiliated to a group are significantly different from un-affiliated firms in terms of value. This share ownership by affiliated companies is high in large firms as compared to their smaller counterparts.

The other measure of ownership type is the presence of external block holder to protect the interests of minority shareholders from insiders. In the sample firms, external independent block holder is present in 52.8% of the sample firms. Lastly, to have more integrated and comprehensive analysis, a CG index (CGI) was constructed using 29 CG provisions. The CGI was measured on an internal scale which may range from zero to 29 where higher score is indicating better quality of CG. Moreover, we also calculate CGI percentage which is the actual score of CGI divided by 29, the maximum score. Table 1 reports that the mean value of CGI is 16 where small firms have 15.49 and large firms have an average score of CGI at 17. The level of governance quality of Pakistani firms is approaching to almost half of maximum possible score with similar patterns observable in small and large firms of the study. Overall, the descriptive pointed out that the sample firms possess on average good quality CG on different mechanism as well as on CGI. The sample firms are of moderate size with better value and these are somewhat involved in income decreasing DEM practices.

4.2. Empirical results and discussion

With respect to empirical analysis, at the first level, the present investigates the relationship between various corporate governance mechanisms (audit, board, ownership, CGI) and firm value (accounting, market, and economic) using the sample data. Table 2 presents Pearson correlations coefficients to look for any possibility of multicolinearity among independent variables of the study. As all the coefficient values are less than 0.60 threshold value, it can be safely argued that there exist no multicolinearity among the independent variables of the study and we can proceed to further empirical analysis. Table 3 presents the results of regression analysis for impact of corporate governance practices on firm value, segregated by firm size. AC Size is the first variable of audit structure which was found to have significant positive relationship only with Tobin's q which is a market value measure. Larger size of the audit committee is perceived positively by external capital market participants and they assign higher q value to the firms

Table 2
Correlation coefficients for independent variables.

Variables	Size	Lev	Age	DEM	A_Size	A_Ind	A_Act	EAQ	BoS	BoI	Duality	B_Act	B_Part	Inside	Family	Inst.	Block	Foreign	Assoc.
Lev	-0.026	1																	
Age	0.041	-0.0226	1																
DEM	-0.062	-0.0221	0.0055	1															
A_Size	-0.056	-0.1035	0.0031	0.004	1														
A_Ind	0.0199	0.0805	0.1004	0.096	-0.117	1													
A_Act	0.1218	0.0283	-0.077	-0.031	0.1153	-0.01	1												
EAQ	0.2414	-0.2413	0.1104	-0.005	0.0085	0.1204	0.1114	1											
BoS	0.3432	-0.0303	0.0771	-0.042	-0.515	0.1259	0.0673	0.2199	1										
BoI	0.1616	0.0321	0.0774	0.0308	-0.008	0.3836	0.0948	0.1936	0.164	1									
Duality	-0.145	0.1712	0.0051	-0.026	-0.084	-0.074	-0.0426	-0.279	-0.163	-0.191	1								
B_Act	0.1914	0.0002	-0.042	-0.007	-0.044	-0.127	0.0324	0.0835	0.0137	-0.052	-0.0075	1							
B_Part	-0.084	0.1099	-0.014	0.0046	0.1419	0.0125	-0.0413	-0.031	-0.325	0.0061	0.0862	-0.1567	1						
Inside	-0.213	0.1536	-0.059	-0.012	0.0067	-0.197	-0.0869	-0.262	-0.181	-0.276	0.1678	-0.0219	0.1344	1					
Family	-0.212	0.136	-0.071	-0.012	-0.028	-0.225	-0.1219	-0.326	-0.165	-0.275	0.1908	-0.016	0.1217	0.4862	1				
Inst.	0.0688	-0.0264	0.0394	0.0296	-0.013	0.0637	0.1164	0.1164	0.0594	0.1161	-0.0477	-0.0744	-0.0605	-0.151	-0.188	1			
Block	0.0679	-0.0087	-0.002	0.0413	-0.083	0.1951	0.0588	0.0594	0.0496	0.0927	-0.0112	-0.0016	-0.0375	-0.344	-0.322	0.0726	1		
Foreign	0.0083	0.0402	-0.01	-0.01	0.0682	0.0989	0.0867	0.117	-0.034	-0.063	-0.0682	-0.0688	0.0219	-0.166	-0.172	-0.011	0.114	1	
Assoc.	0.2119	-0.0795	0.0343	-0.000	-0.034	0.137	0.0687	0.2089	0.1492	0.1388	-0.0992	0.0377	-0.122	-0.579	-0.576	-0.081	0.311	-0.0219	1
CGI	0.2348	-0.2242	0.0475	0.0175	-0.020	0.1994	0.0276	0.3949	0.2524	0.1522	-0.2876	0.1155	0.0052	-0.207	-0.288	0.3115	0.225	-0.0402	0.0623

Table 3
Empirical results of impact of corporate governance on firm value.

Variable	Small Firms			Large Firms			All Firms		
	ROA	Q	EVA	ROA	Q	EVA	ROA	Q	EVA
Intercept	20.64***	100.45	54.89	-0.204	-255.6***	-3.457	8.49***	-44.97	11.04
AC Size	0.068	1.051*	0.606	0.055	0.051***	-0.285	-0.025	1.134**	0.104
AC Ind	0.049*	0.573	0.033*	0.006***	0.336**	0.003***	0.041***	0.421**	0.008***
AC Activity	0.025***	0.011	0.216***	-0.011	-0.169	0.014*	0.005	-0.013	0.072**
EAQ	0.004*	0.381**	-0.042	0.003*	0.653***	0.045	0.016***	0.574***	0.028***
BoS	0.176***	1.754***	0.618	0.024***	1.485***	0.231**	0.034***	1.135***	0.009**
BoI	-0.009	0.162	-0.215	-0.054	0.172*	0.028*	0.000	0.042**	0.072*
CEO Duality	-0.009**	-0.453***	0.172	-0.005**	-0.239*	-0.031*	-0.002***	-.0293***	-0.033*
B_Activity	0.005	0.058	-0.002	0.003	0.025	0.002*	-0.001	-0.021	0.001**
B_Part	0.047**	-0.537	0.404*	0.112*	0.285	0.045	0.084***	-0.146	0.114**
Inside	-0.0246*	-1.478**	-0.107	-0.079**	0.153	-0.310	-0.006**	-1.041***	-0.056
Family	0.009**	-0.355	0.408	0.107*	-0.975*	-0.194**	0.014*	-0.298**	-0.007***
Institutional	-0.0176	-1.651***	0.558	-0.067*	-0.731	-0.021	-0.022*	-0.881	0.098*
Foreign	0.021	0.286	0.103	0.098***	0.033**	0.082**	0.027**	0.619**	0.011***
Associated Co	0.014	1.688*	0.103**	0.043**	0.034*	0.111*	0.026	1.223***	0.047*
Block	0.003*	-0.246	-0.001	0.003**	-0.038	0.033*	0.003**	-0.123	0.001**
CGI	0.287***	1.53***	0.445**	0 .025***	2.131***	0.026**	0.169***	0.874***	0.035**
Size	–	–	–	–	–	–	0.005***	0.003*	0.016***
Leverage	-0.212***	-0.3245	0.175	-0.157***	-1.161***	-0.009**	-0.199***	-0.076	-0.055*
Age	-0.001	0.023***	0.001	0.001	0.004	-0.001	0.001*	0.009***	0.001*
Ind Dummy	0.000	-0.015	0.002	0.000	0.061***	0.001	-0.001**	0.013	-0.001
Year Dummy	-0.01***	-0.051	-0.028	0.000	0.125***	0.002	-0.004***	0.021	-0.005
F-Value	*18.29***	*17.04***	*1.70**	*15.67***	*13.82***	*1.80**	*127.97***	*113.70***	3.46***
Adjusted R^2	*0.3002*	*0.2621*	*0.0415*	*0.2154*	*0.1421*	*0.0126*	*0.2940*	*0.1640*	0.0751
RMSE	*0.1014*	*0.2137*	*0.4013*	*0.0742*	*0.3259*	*0.2495*	*0.0838*	*0.3403*	*0.1752*

* represent the level of significance at 10%
** represent the level of significance at 5%
*** represent the level of significance at 1%

having larger audit internal committees. AC Ind[1] has strong statistically significant positive relationship with all the value measures supported the early notion that independence of the audit committee leads to improved value. The current research has also incorporated the effect of external auditor quality and size measured by a dummy variable if the firm is being audited by any one big four auditors operating in Pakistan. The results strongly supported the earlier notion that good quality external audit not only reduce the chances of errors and frauds inside the firm but also ensure transparent and fair disclosures to the external stakeholders. The significant positive relationship of EAQ and all measures of firm value indicates that quality of external audit not only refrains the managers to be involved into manipulating activities but also provide confidence to external stakeholders that the accounting information they are receiving is fair, transparent and unbiased. The results of audit committee structure indicate that large, more independent audit committees meeting more frequently enhances the firm's accounting, market and economic value (Sun et al., 2014). These results are almost similar for both subsamples of the study and have been supported by earlier researcher such as DeFond and Francis (2005); Fan and Wong (2005); Fooladi and Shukor (2012), Bouaziz (2012); Hamdan, Sarea, and Reyad (2013).

The second important corporate governance mechanism is board structure and composition. It has been strongly argued in literature that effectiveness of board of directors as the mechanism of governance is fundamental for the enhancement of the profitability and value of firm (Bhagat & Black, 1999; Nazir, 2016). Board of directors is the most superior authority in organizations to monitor and keep managers accountable as well as for the smooth operations of the company along with providing the managers a long-term vision and strategies. The present study uses board size, board independence, CEO duality, board meeting frequency, and participation as measures of board structure to evaluate its impact on firm accounting, market and economic value and results are reported in Table 3. The results reported that board size, independence and board participation are positively influencing the firm value. Larger boards are better monitor and are associated with better firm value in terms of accounting, market and economic value. The independence of board of directors is positively perceived by external stakeholders and investors who assign greater q value to firm assets and require lower rate of return which enhance market value and EVA. Increased participation by directors in board meetings may be linked with increased value as various issues are being discussed in board meetings. Only larger number of meetings conduction is not enough to improve firm value rather participation is more important in this regard. CEO power by occupying position of CEO along with chairman of the board might be increased where CEO can act upon his own believe and according to agency theory, may cause inferior firm value. The results of the present study are also in favor of agency theory where CEO duality is found to be negatively and significantly related with accounting, market and economic value measures of Pakistan firms. Some

[1] Along with ratio of non-executive directors to total audit committee members as a measure of AC Independence, the present study also examined the effect of non-executive chairman of audit committee as AC Ind variable, however; results are quite similar.

researcher (Bhagat & Black, 1999, O'Connell & Cramer, 2010, Brown & Caylor, 2006, Pi & Timme, 1993, Yermack, 1996) also documented similar results. Moreover, empirical results are also not different in case of sub samples of small and large firms.

The importance of ownership structure in enhancing firm value cannot be overlooked as it is one of significant and most researched element of corporate governance. According to the results reported in Table 3, Inside and Institutional ownership structure have produced negative results with firm value, for full sample as well as both subsamples, consistent with entrenchment and strategic alliance hypotheses, respectively. The increased level of inside ownership by managers, executives, CEO and directors leads to lower returns on assets and shareholders' equity.[2] Although literature on inside ownership and advocates of agency theory has proposed that insiders must be rewarded with stock ownership which may create a sense of belongingness in managers and will induce them to work for optimal shareholder wealth and firm value (Agrawal & Knoeber, 1996, Jensen & Meckling, 1976).

In addition, ownership holdings by foreigners and associated companies are found to be positively related with firm value in case of overall and large firms. However, in case of small firms, foreign ownership is positive but not statistically significant. Increased foreign ownership not only enhanced accounting performance but also been perceived positively by investors and sustain long term economic value because of effective monitoring of foreigners as they have high ownership stakes and long-term involvement into business in which they are investing as well as advanced technologies, capital resources, and efficient managerial skills associated with higher foreign ownership. That is the reason that foreign ownership is statistically significant in case of large firms subsample and overall sample only. Moreover, high level of ownership of associated companies mitigates the potential agency conflict by minimizing the information asymmetry. Shared skills and resource integration by same group companies also deliver benefits of economies of scale and reduced transaction costs of business operation which leads to increased return on capital. Moreover, affiliation of the firm with some recognized groups also enhances investors' confidence and create positive perceptions in capital market regarding big size and group affiliation which eventually improves the market and economic value as well (Aydin, Sayim, & Yalama, 2007, Uwuigbe & Olusanmi, 2012).

Family ownership have mixed findings in our results and this variable is positively related with internal accounting measures of ROA and for small firms whereas negatively associated with q and EVA for large firms and overall sample. Increased family ownership may enhance firm short-term accounting performance, however; neither investors are giving value to firm in the form of Tobin's q nor family members performing their role in enhancing long term economic value of firm. Family owned culture is very much prevalent in Pakistan and most of the business firms are controlled by family members (Yasser, 2011), particularly smaller firms as indicated by our summary statistics. Family involvement into business is drawing private benefits, are sole decision making and controlling authority which is the major cause of the destruction of long term value. Moreover, most of family businesses are run by decedents which are the second or third generation of founders, is another reason of lower firm value (Jabeen et al., 2012). The composite measure of governance quality as measured by CGI, also proven to be positively influencing firm value for different subsamples of the study as well as different measures of value. These results are robust to endogeneity problem as well as confirmed by Hausman specification test.[3] With respect to control variables, firm value is being positively influenced by size and age of the firms, whereas leverage is negatively affecting value of firms. There are industrial and yearly variations also present in the estimations.

On the second level, the present study analyzes the effective role played by governance system in reducing judgmental and discretionary earnings management and results are reported in Table 4. It is evident from the results, that EAQ, BoS, B_Activity, Inside, Institutional, Block, and CGI are playing their role in reducing the corporate DEM practices. It is strongly believed that a well-reputed audit firm helps in ensuring the creditable and reliable accounting information disclosures for external stakeholders which is free from errors and frauds. If the managers are aware of the fact that their firms are being audited by an unbiased and reputable audit firm, they will focus on true performance enhancement instead of judgmental and temporary earnings management practices. Larger boards meeting more frequently with high participation rate of directors is helpful in reducing the earnings management practices. Consistent with stewardship of larger boards, earnings management can be minimized if there are more directors on the board. Moreover, Xie et al. (2003) supported that frequent meetings of board can also have a strong monitoring mechanism for lower earnings management. González and García-Meca (2013) contended that effective monitoring can be done by board if board meets more frequently, and this activity may reduce earnings management practices in the firms.

Moreover, higher inside ownership tends to reduce the opportunistic behavior of managers and; if they have more ownership stake in the firm, they are more concerned with the long-term value of firm, and not short term temporary increase in accounting returns. These results are in accordance with Reynald and Banderlipe (2010) who documented that increased managerial ownership is more than enough to limit managerial incentive to manage earnings. Along with this, greater institutional shareholding and presence of external blockholder in the firm are also negatively related to the earnings management practices of firms. Higher level of

[2] After finding the presence of non-linearity in the relationship of Inside and value, the present study has also tested for the inflection points of inside ownership where it converges to increasing trend. It has been found that at less than 15% inside ownership, firm performance is negatively related to Inside, whereas 15%-25%, insiders' interests are converged and firm performance increases and finally, firms with inside ownership greater than 25% may have inferior performance in terms of ROA, Q and EVA. These threshold points are similar to Morck et al. (1988) however; direction is inverse. Morck et al. (1988) proposed an inverted U-shaped curve where performance increases, then decreases and finally increases and managers entrenched between 5 to 25% level of inside ownership. Contrarily, the present study has found a U-shaped which is –ve, +ve, and –ve relationship of inside ownership and firm performance.

[3] In order to perform Hausman specification test to detect endogeneity between firm value and CGI, the present study estimated model (i) as; $Perf_{it} = \alpha + \beta CGI_{it} + \varepsilon_{it}$ .....(i)

The, the unstandardized predicted values of CGI and residual are saved as CGI_pre and CGI_res. At the second stage model (ii) is estimated as;

$CGI_{it} = \alpha + \gamma_1 CGI\_pre_{it} + \gamma_1 CGI\_res + \varepsilon_{it}$ .....(ii)

The coefficient γ_2 is found statistically insignificant, that means that there is no endogeneity between firm value and CGI and both are exogenously determined.

Table 4
Empirical results of impact of corporate governance on DEM.

Variables	Audit	Board	Ownership	CGI	All Variables
Intercept	9.751***	11.18***	10.35***	10.74***	9.921***
AC Size	0.031				0.010
AC Ind	0.043***				0.044***
AC Activity	-0.003				-0.003
EAQ	-0.002***				-0.004***
BoS		-0.017***			-0.018**
BoI		0.011			-0.001
CEO Duality		-0.013			-0.013*
B_Activity		-0.001*			-0.002*
B_Part		-0.002			-0.001**
Inside			-0.001**		-0.000*
Family			-0.005		0.003
Institutional			-0.017*		-0.020*
Foreign			-0.006		0.004
Associated Co			0.003		-0.010
Block			-0.002***		-0.004***
CGI				-0.031***	-0.002***
Size	*-0.003*	*-0.003*	*-0.003**	*-0.003**	*-0.003**
Leverage	*-0.019*	*-0.015*	*-0.016*	*-0.015*	*-0.017*
Age	*0.000*	*0.002*	*0.000*	*0.000*	*0.001*
Industry Dummy	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*
Year Dummy	*-0.004****	*-0.005****	*-0.005****	*-0.005****	*-0.004****
F-Value	*13.80****	*12.94****	*12.28****	*14.15****	*11.84****
Adjusted R^2	*0.1911*	*0. 1471*	*0.1074*	*0.1444*	*0. 1351*
RMSE	*0.1031*	*0.1033*	*0.1035*	*0.1033*	*0.1034*

* represent the level of significance at 10%
** represent the level of significance at 5%
*** represent the level of significance at 1%

institutional stake in business is restraining the earnings management activity because of efficient monitoring performed by financial institutions. It is documented in the literature that monitoring cost of institutional investors is relatively lower and these institutional investors also have an incentive to monitor the managers due to their long term substantial ownership stake in business which leads to lower earnings management practices. Koh (2003), Jiraporn and Gleason (2007) and Mitani (2010) also supported the efficient monitoring hypothesis of institutional investors in mitigating the earnings management practices. CGI also augmented the findings reported earlier by negatively influencing the judgmental management of corporate earnings by resourceful insiders in case of Pakistani firms. Firm size is also negatively and significantly effecting the corporate earnings management practices. Moreover, negative coefficient of year dummy indicating that earnings management practices are decreasing over time, might because of effective implementation of corporate governance system in recent times.

In contradiction to the expectation, the results show that more independent internal audit committees are related to higher earnings management practices in firms. Van der Zahn et al. (2008) and Baxter and Cotter (2009) found that independence of the audit committees is not relevant in reducing the earnings management activity in the firms. The positive results of AC Ind and DEM may be attributed to the lack of real independence in Pakistani firms where even non-executive directors are serving more on the internal audit committees who are affiliated with some other company of the group. Consequently, they are involved in income increasing activities which is the ultimate goal of a parent company. Further, outside non-executive directors have less information about the current operational level activities of the business where earnings management is being occurred and they have to depend on the information given by executives of the company (Paul, Friday, & Godwin, 2011). Moreover, Xie et al. (2003), Mustafa and Youssef (2010) and Chapple, Ferguson, and Kang (2009) claimed that earnings management can only be reduced if audit committee has independent members with accounting knowledge and financial expertise and this phenomenon is also present in Pakistani firms where qualified and accounting expert directors are rarely found serving as director on the board of firm, particularly on the internal audit committee.

On the other hand, in contradiction to the expectation, the results showed that more independent internal audit committees and boards are related with higher earnings management practices in firms. Baxter and Cotter (2009) found that independence of the audit committees is not relevant in reducing earnings management activity in firms. The positive results of AC Ind and BoI may be attributed to the lack of real independence in Pakistani firms where even non-executive but affiliated directors are serving on the internal audit committees. Consequently, they involve in income manipulating activities which is the ultimate goal of a parent company. Further, outside non-executive directors have less information about the current operational activities of business where earnings management is being occurred and they have to depend on information given by executives of the company (Paul et al., 2011). Moreover, Xie et al. (2003) claimed that earnings management can only be reduced if audit committee has independent members with accounting knowledge and financial expertise, a phenomenon which is also not present in Pakistani firms where qualified and financially expert directors are rarely found serving on the board of firm, particularly on the internal audit committee.

Table 5
DEM and performance.

Variables	Current Performance			One Year Subsequent Performance			Two Years Subsequent Performance		
	ROA	Q	EVA	ROA	Q	EVA	ROA	Q	EVA
Intercept	7.67**	-116.7**	12.83	8.23*	98.67**	9.12	5.12	53.23	5.35
DEM	-0.001	-5.21**	-61.98***	-1.87***	-0.65**	-9.44***	-0.535**	-4.31**	-9.65***
Size	*0.007*	*0.094***	*0.012**	*0.011**	*0.012**	*0.045*	*0.087**	*0.123**	*0.012*
Leverage	*-0.205*	*-0.434***	*0.045*	*-0.234**	*-0.123**	*0.023*	*-0.299*	*-0.453*	*0.176*
Age	*0.000*	*0.001***	*0.000*	*0.001*	*0.001**	*0.000**	*0.001*	*0.002*	*0.054*
Ind_Dummy	*-0.001*	*-0.004*	*-0.000*	*-0.002*	*-0.031*	*-0.001*	*-0.005*	*-0.006*	*-0.125*
Year Dummy	*-0.003*	*0.057***	*-0.006*	*-0.002*	*0.031*	*-0.052*	*-0.054*	*0.045*	*-0.010*
F-Value	*81.33****	*11.71****	*13.77****	*71.65****	*10.87****	*12.12****	*6.12****	*4.65****	*6.41****
Adjusted R^2	*0.2712*	*0.1473*	*0.1127*	*0.2652*	*0.1491*	*0.1165*	*0.2134*	*0.1010*	*0.0911*
RMSE	*0.0851*	*0.4307*	*0.3765*	*0.1051*	*0.2345*	*0.3810*	*0.0981*	*0.2534*	*0.3633*

* represent the level of significance at 10%
** represent the level of significance at 5%
*** represent the level of significance at 1%

Cornett et al. (2009) and Park and Shin (2004) also found a positive association between board independence and DEM and they also attributed this positive link to the lack of real independence where outside directors failed to reduce the earnings management practices and opportunistic behavior of managers.

The research on the role of DEM on firm value is deficient in corporate finance literature. Empirical studies argued that earnings management activities have significant negative impact on future performance, earnings growth and future cash flow which may be attributed to opportunistic earnings management (Healy & Palepu, 1993; Siregar & Utama, 2008a, 2008b). Some others researchers contended that managers exercise earnings management behavior in order to enhance the reported earnings due to which shareholders benefit from managed earnings, named as beneficial earnings management (Arya et al., 2003; Bowen et al., 2008). Due to the mixed evidence on whether earnings management is beneficial or opportunistic, the impact of DEM has been analyzed in the present study and results are reported in Table 5.

There is no significant relationship found between DEM and accounting value measures of ROA. Sireger and Utama (2008) claimed that if earnings management is significantly increasing the firm value, it is named as beneficial/efficient earnings management, otherwise; this is opportunistic. There is no statistically significant association is found between DEM and accounting value of firms. Moreover, long term performance measure of EVA is declining with increased DEM. These results confirm the notion that managers of Pakistani firms are opportunistically managing the reported earnings. Chen, Rees, and Sivaramakrishnan (2010) reported that accrual based earnings management is negatively impacting the firm value. These findings are also similar to those of Mizik and Jacobson (2007) and Anjum, Saif, Malik, and Hassan (2012) who discussed earnings management as the opportunistic behavior of managers. In Table 5, DEM is negatively impacting the one-year and two-year subsequent firm value of sample firms and these coefficients are statistically significant. This confirms the belief that earnings management practices in Pakistani firms are purely opportunistic and not efficient or beneficial for value creation. Corporate managers are not creating value in terms of accounting profits as well as long term value rather destroying it. These results could be strongly supported by earlier evidence provided (Gunny, 2010, Tabassum, Kaleem, & Nazir, 2014, Teoh et al., 1998).

Up till now, the present study has concluded that effective CG mechanism may enhance firm short term and long-term value. Furthermore, if firm has efficient corporate governance system, it can mitigate the agency issue and refrain its managers to involve in subjective manipulation of reported accounting earnings which may damage current as well as subsequent value. However, there are some contrary results found in establishing CG and DEM relationship which raise an important question that how this DEM behavior of firms moderates the established relationship of CG and firm value. To resolve this issue, a moderated regression analysis has been conducted for CG and DEM with firm value and results are presented in Table 6. A significant positive association is found between CGI and all three measures of firm value. As discussed earlier, good governance enhances the firm value both in long term and short term. This is consistent with many other earlier studies. Moreover, DEM practices not only irrelevant to firms' current performance but also destroying subsequent long term firm value which is also consistent with many prior studies as well as our earlier results of Table 5. Importantly, the interaction variable of CGI and DEM is negative for all the firm value measures; however, it is statistically significant only for Tobin's q and EVA. The discretionary earnings management practices of managers are negatively moderating the relationship between corporate governance and firm value. If the managers are involved in earnings manipulation, the market and economic value will decline even for the firms with good quality of corporate governance. This is consistent with Kang and Kim (2011) who found similar findings. Their study also confirms that earnings management leads to lower the performance of firms and this discretionary behavior of managers to manage reported earnings also moderates the relationship between corporate governance and market value of firms as measured by Tobin's q.

5. Conclusion

The findings of the current study revealed that corporate governance attributes to improved firm value in long as well as short

Table 6
Moderating role of DEM in CG-performance relationship.

Variables	Small Firms			Large Firms			All Firms		
	ROA	Q	EVA	ROA	Q	EVA	ROA	Q	EVA
Intercept	16.72	-47.62	39.84	2.44	-181.47**	-6.334	7.615	-117.28	12.691
CGI	0.119*	0.344*	0.412**	0.134**	0.923**	0.033*	0.014**	0.084***	0.124***
DEM	-0.047	1.241	0.145	0.458	-16.844**	0.1701	-0.112	-12.163*	-34.431*
CGI*DEM	0.078	0.007*	-0.264*	-0.694	-27.072**	-0.058*	-0.193	-2.542*	-2.342***
Size	0.017**	0.142	0.100	0.009	0.258**	-0.021	0.006***	0.093	0.012*
Leverage	-0.216***	-0.816***	0.169	-0.165***	-0.695*	0.008	-0.204***	-0.433	0.047
Age	-0.001	0.023***	0.001	0.000	0.003	-0.001	0.001	0.009	0.000
Ind_Dummy	0.001	-0.030	0.010	-0.001	0.054***	-0.002	-0.001**	-0.005	-0.003
Year Dummy	-0.008***	0.023	-0.020	-0.001	0.088**	0.003	-0.003***	0.058	-0.006
F-Value	*17.53***	*5.84***	*2.39***	*8.44***	*4.90***	*2.52***	*61.03***	*8.82***	*5.83***
Adjusted R^2	*0.2905*	*0.1070*	*0.0095*	*0.1555*	*0.0880*	*0.0120*	*0.2705*	*0.0461*	*0.0112*
RMSE	*0.1021*	*1.3351*	*.61124*	*0.0770*	*0.3671*	*.24951*	*.08522*	*0.4316*	*.37684*

* represent the level of significance at 10%.
** represent the level of significance at 5%.
*** represent the level of significance at 1%.

run. Establishment of internal audit committees as an effective internal audit system is essential for the enriched progress of a firm. Large and independent audit committees meeting more frequently not only mitigate information asymmetry problem between insiders and external stakeholder by ensuring credibility of accounting information but also exterminate the chances of fraudulent activities in firms. This enhances returns of firms' assets as well as helping it to sustain long term standing in capital markets. Moreover, the quality of annual audit by a reputable auditing firm may also be used as external monitoring system and serves the same purpose. Moreover, the findings exhibited that, larger and independent boards which are free from the dual role of CEO help in enhancing firm value. Effective participation of directors in the board make it sure that decision of management is discussed in a good manner in board meetings and effective supervision and participation improve the firm value. Further, the opportunistic behavior of the managers is also not being mitigated by the lack of real independence discussed earlier. Furthermore, family influence on the firm is very much positive and firm value is enhanced in short-term. However, market does not perceive family involvement into business as a good phenomenon and lower value is being assigned by investors to firm with higher family ownership, both in small and large firms. Moreover, resource sharing by associated companies and technological and managerial skills import by foreigners give unmatched value to the firms. Whether the DEM is beneficial or opportunistic activity, the present study also answers this question by evaluating the impact of DEM of current and future firm value. It is found that DEM activity is destroying the long-term value in future. It is leading the future value of (one and two years) in negative way and same has been found for all the value measures of the study. Lastly, this value destroying behavior of DEM of corporate managers negatively moderates the corporate governance and firm value. Firms with earnings manipulation activities have weak implementation of corporate governance system and leads to lower firm value.

The present research also provides some practical implications and suggestions for investor, policy makers and managers. For the corporate strategy formulators, the present study implicates the need and significance motivating their executives to work in the best interests of stakeholders and not to involve in manipulative activities which may destroy the long-term value. In this regard, managers must be aware of the fact that their activities are being monitored by effective audit and board structure and they will be held accountable for their managerial actions. Managers can also enhance the productivity and efficiency of board by increasing the board participation rate of directors. Increased inside ownership up to a certain threshold will serve as a motivating factor and it will improve the long-term firm value. Furthermore, the firms and managers can get benefits from the presence of foreigners on board and their managerial and other skills can be used to enhance the firm value. Along with this, presence of external blockholder and shareholder activism played by financial institutions may put the managers under strict monitoring and control.

With respect to policy makers and regulators, the study also presents some practical implications. Securities and Exchange Commission of Pakistan (SECP) must consider the effectiveness of audit committee and board independence as an important factor for the active implementation corporate governance in Pakistan. SECP has taken some very significant steps for effectiveness of corporate governance like directors training programs and restriction on the dual role of CEO in its revised code of corporate governance, however, much more is needed to be done in this context. The role of external auditor is of much importance in enhancing firm value and reducing fraudulent activities in firm and SECP should ensure that firms must have audited its financials statements from a reputable auditing firm. The audit of these audit firms is also the need of hour and monitoring system on external audit system should be applied by regulators. Moreover, SECP should instruct public limited companies to change their audit firms on regular basis so that strategic alliance between managers and external auditor should be kept at minimum. Active participation, especially by independent and non-executive directors, should also be included in the code of corporate governance as a tool of effective corporate governance system for Pakistani firms. Along with this, SECP should focus on the real independence of the board of directors which emerges as an important issue from the present study. Currently, SECP requires at least one independent unaffiliated director on the board of directors and firms also keep this to the minimum requirement. Remaining non-executive directors

are usually affiliated directors from related associated companies with the same objective the firm has. This creates the lack of real independence of board of directors and its sub-committees and this issue must be considered of much significance. Presence of external independent blockholder and encouragement of active financial institutions may also help to mitigate the agency problem in Pakistani firms which will ultimately lead to economic development.

The study also has some implications for academic researchers and opens new research horizons for future researchers because of its certain limitations. The study has conducted a detailed analysis of corporate governance mechanism, DEM and firm value. However, this research is only limited to 162 firms for thirteen years research window from 2004–2016. In future, more firms from various other industrial sectors and application of advance econometric techniques can be conducted to more generalize the results of current study. Due to unavailability of the data, the present study has also omitted some other corporate governance variables and perspectives which were difficult to obtain for sample firms in case of Pakistan. In future, academic researchers can use these variables for future research to have a deep insight into corporate governance structure of Pakistan. These alternative prospects may include pay for performance sensitivity, financial expertise of directors, tenure and experience of board members, non-executive directors' participation rate, role of board committees, blockholders' identity. With respect to future guidelines and extension, the similar research on corporate governance can be conducted to have a cross-country comparison of Pakistani alike economies, particularly south Asian countries and emerging markets. Finally, future research on corporate governance can focus on the separate analysis of service and manufacturing sector as well as separate analysis of mandatory and voluntary corporate governance practices.

Appendix A

Annexure: Variables measurement

Variable	Measurement
[Panel A: Value Measures]	
ROA	Return on Assets; measured by Earnings after interest and taxes/total assets
Q	Tobin's Q; Market value of firm / book value of assets
EVA	Economic Value added; Earrings after interest and taxes – Capital charge (capital charge = capital employed*WACC)
[Panel B: Audit Structure Measures]	
AC Size	Internal audit committee size measured by total number of audit committee members/total number of directors on the board
AC Ind	Internal audit committee independence measured by ratio of non-executive directors in audit committee to total members of audit committee members
AC Activity	Audit Committee activity measured by frequency of audit committee meetings in a financial year
EAQ	External auditor quality is a dummy variable with the value of "1" if firm is being audited by Big 5 auditing firms and "0" otherwise
[Panel C: Board Structure Measures]	
BoS	Board Size measured as natural log of total members of board of directors
BoI	Board Independence measured as; $\frac{1 \times \text{Outside Directors}}{\text{BoS Inside Directors}}$
CEO Duality	CEO duality; a dummy variable is 1 if CEO holds the position of chairman of the board as well; and zero otherwise
B_Activity	Board Activity; total number of board meetings in a financial year
B_Part	Board participation rate; measured by total participation of board members in all meetings/total required attendance
[Panel D: Ownership Structure Measures]	
Inside	Inside Ownership measure by fraction of shares owned by all insiders as a ratio to total shares outstanding
Family	Family ownership measured by no. of shares owned by family members / total shares outstanding
Institutional	Institutional ownership measured by fraction of shares held by financial institution to total shares outstanding
Foreign	Fraction of shares held in the company by Foreigners
Block	External Blockholders dummy equals to 1 of shareholding of the largest shareholder is greater than 10% and zero otherwise
Associated Co	Fraction of shares held in the company by related and associated companies including parent and subsidiary firms
CGI	CG Index is an integrated and composite measure of 29 CG provisions based upon different provisions of corporate governance structure of firm. The value of CGI ranges from 0–29 where a higher score indicates better quality of governance. We divided CGI value by 29 to obtain percentage of governance quality in the firm.
[Panel E: Control Variables]	
Firm_Size	Natural log of book value of total assets

LVRG	Total Liabilities/Total Assets
Age	Log of Age of firm, as measured by number of years since the commencement year of firm.

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