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Value Relevance of Earnings Quality: Importance of Corporate Governance, Ownership Structure and Group Affiliations in the Listed Firms of Pakistan

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Abstract

This study is an endeavor to answer the question that does corporate governance, ownership pattern and business group affiliation effect value relevance of reported earnings quality in a sample of 300 listed Pakistani firms for the period of 2006-2018. The study uses earnings response coefficient and earning predictability as proxy of reported earnings quality. The panel data analysis shows that CEO-duality and director ownership have significant inverse effect on the quality of reported earnings i.e. the two do not contribute towards improvement of quality of reported earnings. Whereas board independence, independence of audit committee and external audit from big4, institutional ownerships have significant direct effect on the quality of reported earnings. Moreover, it is observed that these effects are relatively more prominent in the case of group firms. Furthermore, firm size, earning persistence, growth and leverage have positive association with the quality of reported earnings while beta has significant negative effect on the quality of earnings. Further, it is found that in times of financial crisis, firms improve its reporting quality to uphold confidence of the investors where group firms showed relatively more tending to pursue this practice. This study has several implications for shareholders, prospect investors, external auditors and regulators. This is the first study of its nature that has investigated the role of group affiliation with reported earning quality.

Key words: *Earnings quality, corporate governance, ownership structure, business group affiliation, ERC.*

How investors make their decisions? What factors influence their choices to choose among alternative investment opportunities? The answers to these and such other questions become even more important due to the trend to integrate that is grouping of countries for mutual cooperation and economic development which has caused structural changes (Palacios & Martínez, 2005). Moreover, financial crises became a strong stimulation for all to adopt accounting procedures, methods and standards to ensure transparency and reporting of reliable and timely information to the satisfaction of all stakeholders (Macedo et al., 2013; Carvalho & Salotti, 2013). Whereas scholars in this area are of the view that firms try to attract their investors and for the purpose they engage in manipulation of accounting records. For example, in Egypt, Mostafa (2017) found that earnings management by low operating performing firms, who are more involved in manipulating accounting records, have lesser value relevance relative to high operating performing ones. The earnings response coefficient of the farmer was reported significantly lower.

In the recent past numerous studies are conducted to examine the simultaneous association of earnings with stock returns or the importance of quality of earnings in order to predict investors' perceptions (see e.g., Ball &

Brown, 1968; Collins & Kothari, 1989; Easton & Zmijewski, 1989; and Kormendi & Lipe, 1987). Others tried to establish relationship between firms' current earnings and forecasted dividends (Mande, 1994 and; Ohlson, 1989a). Many studies in this area have used accounting-based determinates of reported earnings quality in both emerging and developed economies (Hasanzade1, Darabi1 & Mahfooz, 2013; Kallapur, 1994; Kothari & Sloan, 1992; and Kothari & Zimmerman, 1995). Study of literature reveals that strengthening corporate governance practices positively affect firms' ERC (earning response coefficient).

For instance, Beasley (1996) reported negative relationship between the non-executive directors and likelihood of financial frauds in firms. In the light of results based on panel data set of 214 Pakistani firms Latif, Bhatti, & Raheman (2017) conclude that corporate governance improves both earnings quality and value of the firms. Dechow et al., (1996) argued that earning informativeness is negatively associated with the independent directors in a board but positively associated with CEO-duality (Peasnell et al., 2000; and Chen et al., 2007). In a sample of Chinese companies Shan (2015) reported that firms which are involved in earnings management or have poor in placed corporate governance mechanisms face relatively more negative value relevance. Chen and Reezae (2012), Hodgson, et al., (2011), and Yu (2011) documented that internal governance system positively affected firms' financial reporting of earnings. Ball et al., (2000) analysed relationship between national governance system and components of ERC and reported that governance models varies with the national culture and causes variations in the properties of accounting earnings informativeness and market returns. Recently, Chiang, Kleinman and Lee (2017) investigated Taiwanese firms and found that better corporate governance improves earnings quality. Ownership pattern have close ties with corporate governance and hence relevant to firms' earnings quality and accounting disclosure practices. For instance, Warfield et al., (1995) report lesser earnings manipulation and a positive relationship between accounting earnings and stock returns in firms with more managerial ownership. Further, AL-Dhamari and Ismail (2014) document that the positive association of institutional ownership with free cash flows and earnings are subject to independence of firms' chairperson. In this vein, Firth et al., (2007) suggested a negative effect of the concentrated ownership on ERC, however, they found positive effect of the foreign ownership on ERC in China.

Pakistani studies, for example, Tabassum, Kaleem, and Nazir (2015), Parveen, Malik, Mahmood, and Jan (2016), Latif, Bhatti, and Raheman (2017), Latif, Latif, and Abdullah (2017), Saeed, Hashmi and Javid (2019) have addressed the topic but none of these studies have considered the impact of group affiliation on value relevance of earnings quality. In addition, these studies didn't address the three main variables together. The current study combines the three main factors, corporate governance, ownership structure, and group affiliation to determine if these have influence on reported earnings quality. Moreover, the above-mentioned studies differentiate based on the measurement of quality of earnings i.e. ERC. Most of the research in this area is done in developed

economies and few studies are conducted in developing economies. However, as explained below, countries in the same group have differences and therefore the topic is worth investigation in specific country environment. The existing studies do not provide consistent results and variations in results are observed. These and other similar arguments provide opportunity for this current research. The contribution of the current study is multi prongs. First, this study adds to the existing empirical evidences by using fairly large sample and long period of time. Second, this study simultaneously uses three major dimensions that are corporate governance, ownership pattern and business group affiliation. Third but most important, this study contributes in literature by giving more insights regarding the role of business groups, family dominance ownership structure on the value relevance of earning informativeness. In addition, this research also contributes to the corporate governance and auditing literature by showing impact of corporate governance variables and big4 on ERC.

In fact, the attributes of Pakistani corporate environment offer an opportunity to conduct this unique study and test the value relevance of ERC. Pakistani firms are operating in a totally different institutional structure, governance mechanisms and regulatory framework. Incidence of expropriations and other agency problems are documented that point to weak corporate law and poor enforcement mechanisms in Pakistan. The fear of expropriation is more prominent with the existence of business groups, a common form of organization that exists in developed and developing economies and Pakistan is no exception (see e.g., Ullah, Shah & Shah, 2018). Groups are expected to be less transparent in terms of disclosures; and due to their complicated structures, are found involved in practices detrimental to minority shareholders. These firms have stronger political links that insulate them from external interference and monitoring, leading to a poor quality of reporting and earnings informativeness. Thanks to the sample period, another unique attribute of this study is the investigation of impact of global financial crisis on quality reporting. Where, it is found that global financial crisis has deteriorating effect on the reporting by firms in all cases.

In nutshell, recent studies indicate that the effects of various factors including corporate governance, ownership structure and group affiliations on the quality of accounting information is not uniform; probably it is so due to differences in cultural variables and each country's environment. In the specific Pakistani environment, the topic is indeed a new or recent phenomenon and therefore it need to be investigated. In addition, it cannot be overstated as is the case with other emerging economies, Pakistan's economy is in need of investments and Pakistani firms therefore need to adopt practices to achieve the goal. Pakistan is considered a resource rich country with its significance geographic situation in the South Asia that makes it relevant to global economy. As such the case of Pakistan becomes relevant for the accounting literature. To sum this discussion, the study in the specific Pakistani environment answers the following specific research questions: Does corporate governance influence quality of reported earnings? Does ownership structure have any impact on

quality of reported earnings? Does group affiliation influence quality of reported earnings? Does external auditing have any influence on earnings quality? In addition, this study uses firm specific characteristics such as size, riskiness, leverage, growth opportunities, and earning persistence as control variables and to find if earning quality show sensitivity towards these variables? The following section provides literature/ theoretical base for the above expected relationships.

Review of Literature

This section covers theoretical foundation and empirical work done on the topic and highlights gap for this research study.

The Value Relevance of Earnings Quality

Earnings are primary source of information about firms' successful performance and are justifiably expected to influence investors' decisions. Therefore, agents could be expected to manage earnings to magnetize investors by showing better picture of their corporations than the actual one. The managers may do so either because of signaling or opportunistic discretion (Watts & Zimmerman, 1986). The farmer increases earnings persistence and value relevance whereas the later due to concealment of information reduces earnings persistence and value relevance. Value of firm is better identified through price of its stocks. In Pakistan, Tabassum, Kaleem, & Nazir (2015) analyzed data for the period 2004-2011 of 119 firms to report negative effect of earnings management on future performance of the firms. More specifically they find that firms' future performance worsens if they do real earnings management through sales manipulation. Iqbal, Khan, & Ahmed (2015) have warned investors in Pakistan to carefully evaluate soon-to be- privatized firms. Their results show that such firms demonstrate higher performance than the actual. The efficient market hypothesis suggests that share prices reflect all relevant information. Earning response coefficient represents changes in the share prices of firms in response to unexpected earning shocks (e.g., Ball and Brown, 1968; and Collins et al., 1994). Lipe (1990) further envision that reported earnings' quality improves predicting power of future earnings. He argues that both level and persistency of the past earnings explain future earnings. As such, reporting on earnings by firms become relevant to investors. Scott (1997) stated that "the information content of reported net income can be measured by the extent of security price change or, equivalently, by the size of the abnormal market returns, around the time the market learns the current net income". In line with this view Petra (2005) states that proactive investors do consider firms' current earnings quality in making decisions. Both informativeness and value relevance of the reported earnings quality are reported to have positive association with the market returns (Warfield et al. 1995; Vafeas 2000). If a market is not strongly efficient and narrow window around announcements of earnings is used then earning response coefficient as measure of market response towards earnings shocks may not reveal full information (see e.g., Lev,

1989). The information absorption process in such markets is slower and lagged market reaction is mostly prevalent in such economies (Ullah & Shah, 2013). The intrinsic lead-lag relationship between the stock returns and accounting earnings is due the accounting information recorded during the year that is made public with a lag. However, the current year earnings do not completely reflect the accounting information for a particular year. Thus, variation in the individual firm accounting performance and timelines should lead to the variations in the forecasted earnings of firms. The same view is further supported by Gelb and Zarowin (2002) that "firms that reported timely earnings have strong impact on immediate current earnings, while firms that reported less timely or delayed earnings will have strong impact on the future that is on the upcoming earnings. The accounting reports always have an issue of conservatism due to which current year earnings incorporate losses and gains in inequitable manner (Basu, 1997). Similarly, investors show optimistic behaviour and bad news are timelier but less persistently incorporated in stock prices as compared to good news. Pope and Walker (1999) empirically verified that the market reaction towards good news and bad news is entirely different and the relationship of the accounting earnings is not simple as it is represented in ERC models. To cater for this, Collins et al., (1994) used earnings change of future period and Douthett et al., (2003) considered earnings change of current year as an additional explanatory variable and found that explanatory power of the ERC model was improved.

In addition to changes in the accounting earnings and investors' expectations about market or firm, the literature also suggests importance and relevance of firm level variables that may improve predication of market response through ERC. Collins et al., (1994) added two more variables such as earning to price ratio to represent the risk and uncertainty associated with the stock returns perceived by investors and assets growth to show that the firm has high future earnings. Similarly, capital structure decisions have direct impact on firms' risk level. Finally, firm size is an important variable that account for information asymmetry, diversification of risk, growth and earnings and reporting quality of a firm. Some of the studies considered it as a moderator variable in ERC models (Fan & Wong, 2002; and Scott, 2003).

We expect that ownership structure and business group affiliation have profound effect on the firm earnings quality. According to the efficient transaction hypothesis group affiliation could help firms to fulfill their economic and financial needs (Gordon et al., 2004). In this connection Chien and Hsu (2010) opine that economic dealings among group firms could improve performance of firms due to more efficient utilization of resources and lower transaction costs. However, in contrast to these other scholars opine that transactions among group firms could be harmful to minority shareholders. They argue that major shareholders with more control rights could use economic transactions as a mean to earn more benefits for themselves at the expense of other shareholders. Many research studies explain that financial frauds and

decreased earnings in firms across the globe are the results of transaction among group firms (Ryngaert& Thomas, 2012; Ge et al., 2010).

Ownership Structure and Earnings Quality

This section discusses the impact of the different types of ownership on the earnings' predictability.

Foreign Ownership and Earnings Quality

Corporate ownership as a mean of corporate governance entitles the shareholders to voting, cash flow, and to rights to transfer shares to any other party. The market price of shares largely depends upon that how well the property rights are enforced. The financial reporting system of a firm provides information regarding enforcement of rights and financial performance in the light of which investors make decisions.

Extant literature stresses on the role of information disclosure to attract different types of investors. For instance, Stulz (1999) suggested that corporate transparency and good governance are the sources of attraction to make foreigners to invest in a firm. Of the two hypotheses that explain the relationship between foreign owners and value relevance of earning response coefficient; the "outside expert hypothesis" suggests that foreign ownership is positively associated with the improvement in firms' disclosure standards and corporate governance mechanisms. Frydman et al., (1999) argued that relative to local investors, foreign investors who at large are independent, have more expertise, and knowledge to monitor and improve firms' governance (see e.g., Firth, Fung & Rui, 2007; and Bae & Jeong, 2007). In contrast, the "transient investment hypothesis" suggests that investments by far away located foreigners are short lived and therefore are not capable to influence the firms' financial disclosure. Hsu and Koh (2005) documented evidence of relatively more earnings manipulation in firms with high level of foreign ownership. Similar findings are reported by Liu and Peng (2008). Bae and Jeong (2007) studied the impact of corporate governance in South Korea on the value relevance of earnings and book-to-market value. They report that foreign ownership reduces the tendency of managers to manipulate earnings. Yoshikawa and Rasheed (2010) in the context of low-quality earnings explain that foreign investors have no strategic interests but chase to earn high returns only. However, in emerging economies like Pakistan firms are interested to invest and diversify and extend their services in the zone of less intense competition and more customers. Parveen, Malik, Mahmood, and Jan (2016) in Pakistan reported positive significant relationship between foreign ownership and earnings management. On the basis of the above discussions this study hypothesized that;

H_{11}: "There is a positive significant relationship of the foreign ownership with the earning quality".

Institutional Ownership and Earnings Quality

The proponents of the agency theory believe that agency costs associated with the conflict of interest between the managers and shareholders would increase with increase in the diffusion of ownership. But institutional ownership would reduce the agency conflicts due to its better monitoring capabilities (Shleifer &Vishny, 1986). Claessens and Fan (2002) in support of this view stated that institutional ownership is positively associated with improvement in the corporate governance in Asian firms. Likewise, the "efficient monitoring hypothesis" predicts that institutional investors who can better discipline corporate managers. They have the incentives, more access to information and expertise in monitoring the firms' ongoing activities (Almazan, Hartzell, & Starks, 2005). Following this hypothesis, it is assumed that increase in the institutional investors' stake in a firm would lead to improve the financial reporting behavior and earnings quality. It is believed that institutional investors have the ability to uncover major discrepancies in reported earnings and firm performance (see e.g., Balsam, Bartov& Marquardt, 2002; and Roychowdhury, 2006). Institutional investors themselves have more responsibility to ensure the safety of their shareholders hence they actively monitor firms' activities. In number of studies it is reported that institutional ownership is negatively related with the managers' ability to manipulate earnings (Mitra & Cready, 2005; Roychowdhury, 2006; Dong-lin & Gang, 2008; Tokoro & Nagata, 2012; and Al-Dhamari & Ismail, 2013). Extant literature shows various implications for institutional investors to maintain earnings quality. For example, Sengupta (1998) suggested that more and superior quality of information lowers cost of debt, Balsam et al., (2002) argued that it helps reduce discretionary accruals and abnormal returns. However, in emerging economies, like Pakistan institutional ownership is widely dispersed and could deviate from their monitoring of quality reporting. The strategic alliance hypothesis explains that institutional owners may not actively monitor and enforce managers to disclose quality information due to their affective business relationship with firms (Alves, 2012). In similar manner, others have argued that institutional investors for their private benefits sometime collude with the firms' managers to have internal information and insider trading (Pound, 1988; Sundaramurthy, Rhoades & Rechner, 2005; and Velury& Jenkin, 2006). A study in Pakistan by Latif, Latif, and Abdullah (2017) provides evidence in support of "efficient monitoring hypothesis". They reported that institutional ownership and earnings quality are directly associated.

Despite the above dual and opposite theoretical relationships, Al-Fayoumi, Abuzayed and Alexander (2010) reported absence of any significant relationship between institutional investors and earnings management practices in case Jordanian firms.

H_{21}: "There is a positive significant effect of the institutional ownership on the reported earnings quality".

Director Ownership and Earnings Quality

Director ownership means the percentage of share held by firms' directors, managers, their children and/ or spouses. The "managerial entrenchment hypothesis" predicts that higher level of managerial ownership in a firm is associated with more discretionary power and as such could possibly is associated with the wealth expropriation at the expense of other shareholders. Managers with more ownership could create information asymmetries; reduce transparency and disclosure of accounting information due to less pressure from the capital market to discipline their opportunistic behavior and to gain private benefits (Pergola, Joseph, &Jenzarli, 2009; and Fan & Wong, 2002). Gabrielsen, Gramlich and Plenborg, (2002) reported that increase in the level of managerial ownership is negatively associated with the quality of reported earnings. Fan and Wong (2002) examine the behavior of the managerial ownership in the East Asian countries and concluded that managers with more controlling rights reduces the quality of information that leads to decrease in the credibility of the reported earnings for the external investors. Cohen, Dey and Lys (2008) concluded positive relationship between the high level of managerial ownership and discretionary accruals. Thus, firms with more managerial equity are expected to have low disclosure of accounting information and poor quality of earnings.

However, the "interest alignment hypothesis" suggests that higher level of managerial ownership in firms align the interest of managers and shareholders. For instance, Berle and Means (1932) in their seminal work reported the existence of widely dispersed ownership in the UK and US listed firms and evidenced the existence of conflicts between the widely dispersed shareholders and managers (Jensen & Meckling, 1976). Shleifer and Vishny (1997) argued that concentrated ownerships give benefits in those countries where there is weak enforcement of property rights or inefficient judicial system. In firms where there is low or no equity stake of managers, are more inclined towards masking their accounting performance for their own perks and benefits or due to fear of removal from the job due to low performance (e.g. Healy & Wahlen, 1999; Shuto, 2007; Yang, Lai, & Tan, 2008). However, issuing stock to the managers may increase their motivation to work as a shareholder and adopt more transparent polices and disclosure standards that reflect the true performance of the firms. Furthermore, due to the managerial ownership, managers of the firms try their best to provide quality accounting reports to gain investors' confidence and attract prospect investors. Similarly, Warfield, Wild and Wild (1995) argued that managers with more ownership will try their best to gain confidence of the capital markets by providing timely and quality reports about their firms' earnings. For a sample US firms they found that managerial ownership is positively related with the quality of reported earnings and negatively related with the earnings management practices.

In emerging economies like Pakistan, managerial ownership is more because most of the firms are either newly established and/or belong to families. In the banking sector of Pakistan director ownership is found to be negatively

related to earnings management that is measured through total and discretionary accruals (Parveen et al., 2016) . Similar findings are also reported by Latif and Abdullah (2015) who reported negative association between insider ownerships and earnings management.

The study of La Porta eta al., (1999a) further explains that concentrated ownership with the top three shareholders is observed in those companies belonging to different emerging economies with weak institutional structure and poor enforcement of law. The level of ownership concentration directly affects the type of agency problem between the firm managers and shareholders. There is a radical shift in the literature on agency problem in emerging economies during the last decade, the conflict of interests between the managers and the shareholders is shifted to the conflict between the large controlling shareholders (insiders) and minority shareholders (outsiders) known as agency type II (see Albuquerque & Schroth 2010; Barak & Lauterbach, 2011; Johnson et al., 2000b; and Liu & Magnan 2010). This study hypothesized that;

H_{31}: "There is significant relationship between the director ownership and reported earnings quality".

Business Groups affiliation and Earnings Quality

In Pakistan, weak corporate law and poor enforcement mechanisms increase fear of expropriation among minority shareholders. This fear is more pronounced with the existence of business groups, a common form of organization that exists in economies across the world with Pakistan being no exception. Chung, Ho and Kim (2004) argued that firms in emerging economies dominated other firms through cross shareholdings and affiliations with business groups. Groups are reputed to be less transparent in terms of disclosures and have more opportunities, given their complicated structures. Such firms are observed to engage in questionable practices at the expense of minority shareholders. These firms have lower external interference and monitoring due to their political links and therefore have poor quality of reporting and earnings informativeness (Miyajima & Kuroki, 2006; Tokoro & Nagata, 2012; and Yoshikawa & Rasheed, 2010). Johnson et al., (2000) suggested that possibility of expropriation by the business groups is more due to the difference in cash flow rights of the minority shareholders and majority shareholders of the firms belonging to group. This expropriation is probably more in business groups due to weak accounting disclosures of the intergroup dealings such as related party loans, purchases and sales of assets at lower rates. An unpublished research study in Pakistan by Bhutta, Knif, and Sheikh (2016) finds that group affiliation and earnings management show positive or direct relationship. The presence of difference in quality of reporting and earnings informativeness is also revealed by Wolfenzon (1999) and Shleifer and Wolfenzon (2000) who developed different models to detect this phenomenon in firms belonging to different groups (Tokoro & Nagata, 2012). We therefore hypothesize that:

H_{41}: "Group affiliation is significantly related with the earnings quality".

Corporate Governance and Earnings Quality

Extant literature explains that corporate governance and quality of earnings information are closely associated. The need of effective governance was identified by Jensen and Meckling (1976) who argued that managers in the absence of appropriate control mechanisms could pursue their personal goals at the expense of the owners of a firm (Chin et al., 2006). Hence, it is appropriate to account for corporate governance factors such as board composition, CEO-duality, and Independent audit committee while investigating firms' quality of earnings information. Existing research studies, mostly conducted in developed countries, show that improved corporate governance lowers the tendency of agents to plot earnings (see for example Duh *et al.*, 2009; Peasnell *et al.*, 2005; Klein, 2002; Beasley, 1996; Agrawal & Knoeber, 1996). We take the above different aspects of corporate governance to see how these influence earnings qualities.

Board Composition and Earnings Quality

Corporate board is entrusted the authority by the widely dispersed shareholders to monitor and review decisions of the opportunistic management and therefore composition of the board becomes important pillar of corporate governance. As Latham (1999) document that board is often controlled by the management, therefore, the role of the external directors in the board is getting more attention. The proportion of independent directors in board is increasing with the expectations that they could better secure the interests of the minority shareholders (Byrd & Hickman, 1992; and Fama, 1980). Davidson, Goodwin-Stewart and Kent (2005) argued that earnings management practices would be low when majority members of the board are independent and the quality of reported earnings will be high. Empirical literature show that the percentage of independent directors of board is negatively related with the fraudulent financial reporting (see e.g., Dechow, Sloan & Sweeney, 1996; Klein, 2002; Peasnell et al., 2005; and Marra et al., 2011). It is therefore hypothesized that:

H_{51}: *"There is negative relationship between the outside members in the board and quality of reported earnings."*

Audit Committee Independence and Earnings Quality

High quality audit could reduce earnings management practices and improves informativeness of reported earnings (Francis & Wang, 2008; Francis & Yu, 2009). DeFond and Jiambalvo (1991) argued that the presence of an independent audit committee is expected to reduce the overstatement of accounting earnings. Davidson, Goodwin-Stewart and Kent (2005) found lower level of earnings management in firms with more independent directors. Furthermore, the supervisory role of the board independence is compromised in managing quality reports (Bradbury et al., 2006). Marra et al., (2011) suggested

that in addition to board independence, the presences of non-executive members in the audit committee is positively associated with the quality of reporting and negatively associated with the earnings manipulations. Therefore, it is hypothesized that:

H_{61}: *"There is positive relationship between the independent audit committee and quality of reported earnings."*

CEO-Duality and Earnings Quality

Extant literature explains the association of CEO-duality with corporate governance practices in the light of conflict of interest hypothesis (Jensen, 1993; and Lipton & Lorsch, 1992). Fama and Jensen (1983) are of the opinion that competitive survival of the firms would be at risk where the CEOs dominate the boards due to dual position holdings. Yermack (1996) documented that market value of firm is high in case of separation of the CEO from chairperson. This implies that the CEO-duality weakens the internal control system and reduces the quality of reporting or informativeness because they tend to expropriate minority shareholders. Therefore, boards with non-CEO chairperson are expected to increase the disclosure and informativeness of accounting reporting. This in turn will reduce the probability of expropriations by the CEO through earnings management practices. Therefore, it is expected that:

H_{71}: "There is a negative effect of the CEO-duality on the firm reported earnings quality."

External Auditor and Earnings Quality

Cohen et al., (2004) suggested that external audit is an important corporate governance mechanism that can improve the quality of financial reporting (Mazumder, 2014). Existing literature suggests that the quality of external audit is positively related with the quality of reported earnings and informativeness of accounting reports (Beasley, 1996; Beekes et al., 2004; Ferreira et al., 2011; Firth et al., 2007, and Warfield et al., 1995). Teoh and Wong (1993) also opined that investors associate quality of reported earnings with quality of external audit. In support of their view they reported that auditors' reputation is positively associated with the informativeness of earnings which in turn affect the market response towards firms' prevailing stock prices. On the basis of the above discussions, it is expected that:

H_{81}: *"There is a positive relationship between external audit quality and firm reporting quality."* `

Methodology

This section includes discussion on the sample of the study, data collection and research modeling used to test the hypotheses.

Sample and Data Collection

Secondary data on the variables is extracted from annual reports of the 300 non-financial firms listed in Pakistan Stock Exchange. The sample period is from 2005 to 2018. The sample is further divided in firms which have associated ownership called "group-firms" and firms that do not have associated ownership called "standalone-firms".

Research Modeling

The following regression models are estimated:

$$EQi,t = \alpha + \beta DOi,t + \beta FOi,t + \beta INSTOi,t + \beta BIi,t + \beta IACi,t + \beta CEO.dualityi,t + \beta Ext.Audi,t + \beta Sizei,t + \beta Growthi,t + \beta LEVi,t + \beta Yearsi + \beta Iindustryt + \mu i,t\_\_\_\_Eq\ -1$$

$$ERCi,t = \alpha + \beta DOi,t + \beta FOi,t + \beta INSTOi,t + \beta BIi,t + \beta IACi,t + \beta CEO.dualityi,t + \beta Ext.Audi,t + \beta Betai,t + \beta E.Persistancyi,t + \beta Sizei,t + \beta Growthi,t + \beta LEVi,t + \beta Yearsi + \beta Iindustryt + \mu i,t\_\_Eq - 2$$

Earnings Quality *(EQ)* and Earnings Response Coefficient *(ERC)*

Earnings quality and earnings response coefficient is used for the accounting quality of reports. The value relevance of the accounting earnings is based on the conceptual frame work of FASB and IASB. Lip (1990) argue that the quality of earnings is measured through its predictability i.e. the ability of the firm reported past earnings to forecast the expected future earnings. If the quality of the current reported earnings is high then the current earnings will be more informative in predicting the future earnings. Chaney, Faccio and Parsley (2011) argue that accounting analysts in doing forecasting of firms' earnings consider both current and future performance of earnings. Hence, if current earnings could better predict corresponding future earnings then the former are assumed to be superior in quality (Francis et al., 2004 and Crabtree & Maher, 2005). Ashbaugh and Pincus (2001) also suggested that current earnings quality to predict the future earnings are treated as an important component of firm market valuation. In similar manner, Affleck-Graves et al. (2002) suggested that low quality of reported earnings leads to low earnings predictability and increased information asymmetry. Thus, firms with lower level of earnings quality and predictability are negatively associated with the accuracy of analyst forecasts (Imhoff & Lobo, 1992; and Pincus, 1983). Lipe (1990) suggested that "the future earnings predictability is measured by regressing the current earnings on lagged earnings"

$$Earnings = \alpha + \beta Earning_{\ t\_1} + \mu_{i,t} \dots\dots\dots\dots Eq\ -\ 3$$

Where, *Earnings* represent profit before extraordinary items divided by total assets at the beginning of the year t. While *Earnings*_t-1 is the lag value of

profit before extraordinary items divided by total assets. The above equation is estimated for each firm year rolling it for ten years window ranging from t-10 to t. The μi,t represents the error term and proxy for earnings shock of a firm i at time t. The magnitude of the future earnings can be computed by computing variance of earnings shock. If the value of variance of the earnings shock = 0 then the past earnings perfectly predict the future earnings. This predictability increases or decreases with the increase or decrease in the variance of the earnings shock. This study follows the technique used by the Francis et al., (2004) in computing earnings predictability by taking square root of the variance of the earnings shock. This study proxy quality of reported earnings with the earnings predictability, thus, large or small value of the earnings predictability implies less or more value of reported earnings quality.

The alternate measure of quality of reported earnings used in this is study is the earnings response coefficient *(ERC)*. Easton and Zmijewski (1989) explain that *ERC* is a measure of the ratio of incorporation of new information in accounting earnings to the abnormal stock returns. As such it shows the extent to which new information incorporated in the accounting earnings is reflected in the stock returns (Teoh & Wong, 1993). It is important to note that *ERC* is highly related with the firm future dividends. Thus, any unexpected earnings may revise the investors' perception about the future dividends which in turns may affect the share prices (Cho & Jung 199; Collins & Kothari, 1989; and Dhaliwal & Reynolds, 1994). Abdel-Khalik and Solomon (1998) argued that *ERC* represents the responsiveness of the market returns to the favorable earnings announcements. In simple words *ERC* is the relationship between the accounting earnings reported in the financial statements and response of the market prices to the quality of information provided in those reported earnings (Das & Lev, 1994; Collins & Kothari 1989; Easton & Harris, 1991; Liu & Thomas, 2000; Lipe et al., 1998; and Kormendi & Lipe, 1987). This study follows the computation method of Warfield et al., (1995) and Gabrielsen et al., (2002) for the computation of ERC.

$$\mathrm{RETi,t} = \alpha + \beta\mathrm{EPSi,t} + \mu\,\mathrm{i,t} \ldots\ldots\ldots\ldots\ldots\ldots \mathrm{Eq} - 4$$

Where *RET* stands for 15 months stock returns consisting of 12 months of each year plus 3 months after the fiscal year, where three months are added to account for the lagged response of investors. *EPS* is the earning per share of a firm i for the year t scaled by share price at the beginning of the year.

Director ownership (*DI*) in model 1 and 2 is computed as the ratio of shares held by the firm directors, their spouses, and/or their children divided by total outstanding shares. Financial ownership (*FI*) is computed as the ratio of shares held by financial institutions to total shares, while foreign ownership (*FO*) is computed as the ratio of shares held by foreign investors to total shares. The corporate governance variables, board independence (*BI*) is computed as the ratio of non-executive directors to total directors in a board and independent

audit committee (*IAC*) is measured with 1 if members of the audit committee are non-executive directors otherwise its value is 0. Likewise, CEO-duality is equal to 1 if the position of CEO and chairperson is held by one person otherwise 0. The quality of external audit quality is given value as 1 if the audit firm belongs to big 4 i.e. (KPMG, Deloitte, PwC and Ernst &Young) otherwise zero.

Control variables

Firm Size

Large firms have the capacity and afford processing and distribution of more information. It means that reports of these firms have more information as compared to small firms. Firm size is measured as log of total assets (Ben-Nasr et al., 2009; Katz, 2009; AND Koh, 2003).

Riskiness of firm (Beta)

Since investors are said to be rational and risk averse therefore investors' response to the unexpected earnings and accounting earnings shock would be mild in case of riskier firms. Collins and Kothari (1989) concluded a negative relationship between the firm riskiness and earningS quality. Thus, riskier firms are expected to have low *ERC*. In this study measure of firm riskiness, beta is computed through capital asset pricing model using daily returns data (Easton & Zmijewski, 1989).

Leverage

A firm is expected to make payments of interest on regular basis which is deducted from the firm's earnings and the rest of profit is distributed to the shareholders. The more the deduction the greater will be the chances of manipulation of accounting record. Dhaliwal et al., (1991) reported that the higher the level of debt the lower the quality of reported earnings. Therefore, the quality of earnings and its informativeness is associated with the level of debts used by the firm. In this study leverage is computed as the ratio of debts to total assets.

Growth Opportunities

A firm with more growth opportunities is expected to have more attraction for the market due to growth in future earnings. Collins and Kothari (1989) reported high value of *ERC* for the firms with more growth opportunities than firms with less growth opportunities. The quality of earnings or informativeness is positively associated with the firm growth (Easton & Zmijewski, 1989). In this study growth is measured as ratio of market value to book value of firm.

Earning Persistence

Earning persistence means that up to how much time in future the current earnings will persist. Kormendi and Lipe (1987) reported direct association between current earnings persistence and *ERC*. Thus, the higher *ERC*

value is expected with the increase in firms' current earnings persistence. This study measured earnings persistence as a change in the earnings per share.

Results

This section reports descriptive statistics, correlation and regressions results and discussion on the results.

Descriptive Statistics

Tables 4.1, 4.1.1, and 4.1.2 show that on average *ERC* and earnings quality of group firms are more than the stand-alone firms. The significant difference in the mean values of the *ERC* and earnings quality informativeness of accounting reports of group firms is weak than the stand-alone firms. Similarly, on average beta, growth, size, earning persistency and leverage of group firms are more than the standalone firms. The corporate governance variables and ownership structure variables of group-firms and stand-alone firms are significantly different such as CEO-duality, external audit from big4 firms, director ownership, institutional ownership, foreign ownership of the group-firms on average are also more than and stand-alone firms. However, the group firms audit committee is less independent than the stand-alone firms. While non-executive members in board relative to the total members are almost the same in group as well as stand-alone firms.

Table 1. *Descriptive Statistics - All Firms*

Variable	Obs	Mean	Std.Dev.	Min	Max
ERC	2943	0.053	0.224	0.020	0.219
EQ	2948	0.376	0.113	0	0.891
CEO-duality	2945	0.245	0.43	0	1
Board Independence	2943	0.555	0.271	0	1
Independent Audit Committee	2943	0.701	0.691	0	1
Big4	2943	0.425	0.494	0	1
Director Ownership	2943	0.246	0.266	0	0.975
Institutional ownership	2943	0.301	0.154	0	0.59
Foreign Ownership	2943	0.048	0.19	0	0.298
Firm growth	2943	0.044	0.145	0	0.89
Size	2943	0.204	0.641	0.151	0.841
Beta	2943	0.995	0.488	0.291	2.819
Lev	2944	0.124	0.201	0.006	0.328
Earnings Persistence	2943	0.117	0.196	0.015	0.136

In the table, ERC stands for the earnings response coefficient which represents the market response to the quality of accounting earnings. It is computed by following Warfield, et al., (1995) and Gabrielsen, et al., (2002). EQ represents earnings quality which is measured by following approach of Lipe (1990) and Francis, et al., (2004). CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms is equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets.

Table 2. *Descriptive Statistics - Group Firms*

Variable	Obs	Mean	Std.Dev.	Min	Max
ERC	1487	0.181	0.467	0.060	0.219
EQ	1481	0.292	0.1	0	0.891
CEO-Duality	1487	0.331	0.337	0	1
Board Independence	1487	0.554	0.304	0	1
Independent Audit Committee	1487	0.427	0.716	0	1
Big4	1487	0.562	0.497	0	1
Director Ownership	1487	0.309	0.215	0	0.781
Institutional ownership	1487	0.381	0.077	0.019	0.46
Foreign Ownership	1487	0.059	0.243	0	0.381
Firm growth	1487	0.264	0.173	0	0.582
Size	1487	0.594	0.145	0.074	0.668
Beta	1487	0.924	0.429	-0.859	2.129
Lev	1488	0.431	0.293	0.006	0.828
Earnings Persistence	1487	0.021	0.194	0.291	0.121

Note: For the variables' definitions refer to Table 1.

Table 3. *Descriptive Statistics - Standalone Firms*

Variable	Obs	Mean	Std.Dev.	Min	Max
ERC	1456	0.041	0.217	0.020	0.119
EQ	1497	0.113	0.116	0	0.489
CEO-Duality	1458	0.286	0.452	0	1
Board Independence	1456	0.555	0.261	0	1
Independent Audit Committee	1456	0.629	0.683	0	1
Big4	1456	0.182	0.486	0	1
Director Ownership	1456	0.276	0.273	0	0.975
Institutional ownership	1456	0.273	0.164	0	0.31
Foreign Ownership	1456	0.043	0.166	0	0.241
Firm growth	1456	0.150	0.166	0.091	0.198
Size	1456	0.173	0.505	0.129	0.281
Beta	1456	0.241	0.355	0.331	1.444
Lev	1456	0.204	0.114	0.055	0.328
Earnings Persistence	1457	0.121	0.197	0.155	0.136

Note: For the variables' definitions refer to Table 1.

Mean Comparison Test for Group-Firms Vs Standalone-Firms

In Table 4, the mean comparison test results show that group firms are statistically different from the stand-alone firms in terms of corporate governance, ownership structure patterns and financial characteristics. The t-calculated values of almost all variables are significant and reject the hypothesis that mean values of considered variables of group firms and stand-alone firms are the same. However, the t-calculated values of the foreign ownership and the board independence are found insignificant which suggests that there is no significant difference in the foreign ownership and board independence in case of group and stand-alone firms. On the basis of the above results it can be concluded that the overall makeup of the group firms and stand-alone firms are different in terms of corporate governance variables, ownership structure and financial characteristics. Thus, the group affiliation causes the group firms to

differ from non-group firms in Pakistan that can be further verified in the following different regression models.

Table 4. *Mean Comparison Test - Group and Standalone Firms*

Variables	Mean differences	t-value	P-value
ERC	0.141	4.19	0.000
QE	0.179	5.77	0.000
CEO-Duality	0.045	2.07	0.000
Board Independence	-0.001	-0.04	0.483
Independent Audit Committee	-0.202	-6.10	0.000
Big4	0.381	11.25	0.000
Director Ownership	0.033	2.52	0.000
Institutional ownership	0.108	4.11	0.000
Foreign Ownership	0.016	1.50	0.140
Firm growth	0.114	4.04	0.000
Size	0.421	14.83	0.000
Beta	0.683	19.07	0.019
Lev	0.227	7.43	0.000
Earnings Persistence	-0.100	-2.19	0.000

Note: For the variables' definition refer to Table-1

Table 5. *Pearson Correlation*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1) ERC	1.000												
(2) EQ	0.022	1.000											
(3) CEO-duality	0.180*	0.170*	1.000										
(4) Board Independence	-0.50*	-0.07*	0.101	1.000									
(5) Independent Audit	-0.25*	-0.38*	0.022*	0.071	1.000								
(6) Big4	-0.30*	-0.01*	-0.056	0.036	0.281*	1.000							
(7) Director Ownership	0.350	-0.37*	0.060	-0.149	-0.218	-0.31*	1.000						
(8) Institutional Ownership	-0.22*	-0.125	-0.635*	-0.138	-0.038	0.047	-0.068	1.000					
(9) Foreign Ownership	-0.040	-0.030	0.010	0.024	-0.015*	0.057	-0.018	0.250	1.000				
(10) Size	-0.070	-0.051	0.007	0.017	0.692	0.597*	-0.660*	-0.510	-0.451	1.000			
(11) Beta	0.190*	0.048	0.064	0.116*	0.180	0.098	-0.184	-0.125	-0.032	0.593*	1.000		
(12) Growth	-0.010	-0.034	0.093*	0.053	0.146	0.244	-0.118*	-0.130	0.006	0.108	-0.03	1.000	
(13) Lev	-0.050	-0.025	0.082	0.004	-0.026	0.057	0.016	0.148	0.503*	0.062	-0.03	0.007	1.000

Pearson Correlation

Table 5 reports correlation between variables. The strength of correlation between the variables rules out the issue of multicollinearity among them. Both *ERC* and earnings quality have positive linear association with CEO-duality, and beta of firms. However, there is negative association of *ERC* and earnings quality with board independence, independent audit committee, big4, institutional ownership, foreign ownership, size, growth, and leverage. These results suggest that the CEO-duality, director ownership and beta of firm reduces the quality of reported earnings, while increase in board independence and independence of the audit committee, external audit from big4, institutional ownership and foreign ownership is expected to improve the quality of reported earnings. Furthermore, larger firms, firms with more growth opportunities and debt are expected to have improved quality of reported earnings.

Regression of ERC, Corporate Governance Facets, Ownership Structure and Group Affiliation

Table 6 presents results of the different regression models to test the impact of corporate governance, ownership structure and group affiliation on the value relevance of reported earnings quality which is measured through ERC. The first and second column shows names of the variables, and the estimated values of coefficients in case of all firms. Third and fourth columns show coefficients values for group and stand-alone firms respectively. The lower part of the table shows estimated values of R^2 and Hausman test. The values of F-test in all regression models are statistically significant. The values of R^2 ranges from 0.21 to 0.25 which shows that 21 to 25% changes in the dependent variable are explained by the explanatory variables. The results of the Hausman test of the models suggest that fixed effect estimation is preferable.

The coefficients of the CEO-duality have significant positive relationship with *ERC* in case of all firms and group firms but negative insignificant relationship is found in case of stand-alone firms. Thus, the presence of CEO-duality is associated with the low quality of reported earnings in case of group firms only. Yermack (1996) suggested that CEO-duality weakens the internal control system and reduces reporting informativeness and increase the probability to expropriate minority shareholders. Similarly, director ownership shows positive and significant relationship with *ERC* in all the three cases implies that the higher level of managerial ownership reduces the quality of reported earnings. However, the affect is more severe in case of group firms. These results are in line with the study of Ballesta and Meca, (2007) who argued that managers with more ownership reduce transparency and disclosures of accounting information due to less pressure from the capital market to discipline their opportunistic behavior (Pergola, Joseph, & Jenzarli, 2009). Furthermore, these results are also supportive of the view that dominant managers create information asymmetry with the aim to gain private benefits on the behest of the lower transparency and lesser disclosures of financial accounting details (Fan & Wong, 2002). Furthermore, Gabrielsen, Gramlich and Plenborg (2002) also

reported negative association between managerial ownership and quality of reported earnings.

Further, the results show that the presence of more independent directors on board, independence of the audit committee and external audit from big4 has significant negative relationship with *ERC*. Thus, an increase in these improves the quality of reported earnings. These results of independence of audit committee and external audit from big4 are in line with the extant literature. For example, DeFond and Jiambalvo (1991) suggested that the presence of an independent audit committee reduces the overstatement of accounting earnings and accounting errors. Similarly, Cohen et al., (2004) and Mazumder (2014) suggested that external audit as an important corporate governance mechanism is likely to improve the quality of financial reporting. The study of Dechow, Sloan and Sweeney (1996) tested the effect of the board composition on quality of reported earnings and found that the percentage of independent director on board is negatively related with the fraudulent financial reporting (see also Beasley, 1996; and Uzun, Szewczyk & Varma, 2004). Furthermore, these results are also similar to the results of Peasnell et al., (2005) who reported negative association between the earnings manipulation at times of losses and independent members on the board (Klein, 2002). In a similar manner Davidson, Goodwin-Stewart and Kent (2005) found lesser earnings management efforts in firms with more numbers of independent directors in the audit committee (Dechow et al., 1996).

Institutional ownership is found to have negative, significant relationship with the *ERC* in the three cases. These findings suggest that quality of earnings improves with the increase in the ownership of financial institutions. These results support the "efficient monitoring hypothesis". Institutional investors have the incentives, more access to information and expertise in monitoring the firms' ongoing activities (Almazan, Hartzell, & Starks, 2005). These results are also in line with the findings of Velury and Jenkins (2006) who reported that increase in the level of institutional ownership is positively associated with the reporting of earnings in accordance with the Financial Accounting Standards Board's (FASB). Moreover, Roychowdhury (2006) showed that high level of institutional investors reduces the possibility of earnings management practices and improves quality of reported earnings (Al-Dhamari & Ismail, 2013; Dong-lin & Gang, 2008; and Tokoro & Nagata, 2012). Foreign ownership is found to have insignificant relationship with *ERC* in all cases and hence supports the "transient investment hypothesis" that suggests that foreign investors have shorter holding horizons and are located at far distances due to which they become unable to monitor and improve the firms' financial disclosure.

Conventional variables show interesting results. The negative coefficient of firms' growth is significantly related to *ERC* only in case of all firms. Size of firm, beta and earnings persistence has negative relationship with *ERC* in all cases. Thus, large firms and firms with earnings persistence and riskier firms are more transparent in disclosures and report high quality information for their

shareholders. Similarly, leverage has significant negative relationship with *ERC* only in case of group firms. Thus, increase in the firm leverage is expected to improve the quality of financial reporting of the group firms. Thus, on the basis of these results it can be concluded that corporate governance and ownership structure have significant effect on the reported earnings quality of the firms. Further, their role becomes more prominent in case of business groups, where the probability of low-earnings quality reporting is more.

Table 6. *Panel Regression of All Firms, Group Firms & Standalone Firms*

Variables	***(All-Firms)***	***(Group-Firms)***	***(Standalone-firms)***
	ERC	***ERC***	***ERC***
CEO-Duality	0.046***	0.070**	-0.0107*
	(0.000)	(0.020)	(0.060)
Board Independence	-0.142*	-0.660***	-0.244***
	(0.75)	(0.327)	(0.116)
Independent Audit Committee	-0.035*	-0.085***	-0.076*
	(0.018)	(0.011)	(0.039)
Big4	-0.046***	-0.306***	-0.080*
	(0.020)	(0.117)	(0.041)
Director Ownership	0.192	0.273***	0.299*
	(0.239)	(0.129)	(0.151)
Institutional ownership	-0.369*	-0.580***	-0.626*
	(0.188)	(0.048)	(0.326)
Foreign Ownership	-0.169	-0.319	-0.042
	(0.755)	(0.224)	(0.122)
Firm growth	-0.035*	-0.007	-0.049
	(0.071)	(0.115)	(0.042)
Size	-0.269**	-0.255***	-0.294**
	(0.134)	(0.102)	(0.152)
Beta	0.052**	0.058*	0.048**
	(0.020)	(0.032)	(0.023)
Earning Persistence	-0.036***	-0.037***	-0.036***
	(0.004)	(0.010)	(0.004)
Leverage	0.005***	-0.008***	0.006
	0.000	0.000	0.090
Constant	0.692	0.533	0.877
	(0.610)	(1.531)	(0.661)
Year Fixed Effect	YES	YES	YES
Firm Fixed Effect	YES	YES	YES
Obs.	2936	1480	1456

R-squared	0.21	0.25	0.25
Hausman Test	19.36(0.000)	13.34(0.000)	12.14(0.000)

Table 6 shows the regression results of all firms, group firms and stand-alone firms, where the dependent variables is ERC stands for the earnings response coefficient which represents the market response to the quality of accounting earnings. It is computed by following Warfield, et al., (1995) and Gabrielsen, et al., (2002). While the explanatory variables include CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms are equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Regression of Earnings Quality, Corporate Governance Facets, Ownership Structure and Group Affiliations

Table 7 show further reconcile the impact of corporate governance, ownership structure and group affiliation on the value relevance of reported earnings quality measured through earnings quality (*EQ*). The F-values in all regressions suggest that the models are statistically significant. The values of R^2 range from 0.11 to 0.18. In addition, fixed effect estimation is preferred due to Hasuman test statistics. The CEO-duality shows significant positive relationship with *EQ* in all three cases and suggests that CEO-duality reduces the quality of governance system that directly hurt the informativeness of reports. Similarly, the positive relationship of director ownership and *EQ* in all cases reconciles with the prior results that high level of managerial ownership reduces transparency and creates information asymmetry with the aim to gain private benefits (Pergola, Joseph, & Jenzarli, 2009).

The presence of more independent directors on board, independence of the audit committee and external audit from big4 has significant negative relationship with *EQ* in case of all firms and group firms only and indicates that these improves the quality of reported earnings. However, the relationship of external audit from big4 is insignificant with *EQ* in case of stand-alone firms. One possible explanation could be that small numbers of firms perform audit through big4 in case of stand-alone firms as reported in the descriptive section.

Institutional ownership's negative and significant relationship with *EQ* in all regression estimations are similar to results in Section 4.4 and are in line with the "efficient monitoring hypothesis". Contrary to the results in the previous section, foreign ownership has negative and significant relationship with *EQ* in case of group firms only. It could be explained that due to more investments of foreign investors in group firms as reported in the descriptive statistics relative to the stand-alone firms; foreign investors are keen to monitor these firms and contribute towards improvement in earnings quality of the group firms. Firms' growth has significant negative relationship with *EQ* in case

of all firms and stand-alone firms, while it is insignificantly related with *EQ* in case of group firms. Size has significant and negative relationship with *EQ* in case of group firms only. Thus, large group firms are more transparent in disclosures and reported high quality information for their shareholders. Similarly, leverage has significantly negative relationship with *EQ* in case of all firms and group firms, while it shows insignificant association with *EQ* in case of stand-alone firms. Thus, an increase in the group firms' leverage improves the possibility of quality of financial reports. These results in general are not different than the results reported in Table 4.4 and predict significant effect of corporate governance, ownership pattern and group affiliations on the value relevance of quality of reported earnings of listed Pakistani non-financial firms.

Table 7. *Panel Regression of All Firms, Group Firms and Standalone Firms*

Variables	***(All-Firms)***	***(Group-Firms)***	***(Standalone-firms)***
	QE	***EQ***	***EQ***
CEO-Duality	0.070***	0.090***	0.060***
	(0.010)	(0.035)	(0.011)
Board Independence	-0.021*	-0.029*	-0.004
	(0.013)	(0.017)	(0.018)
Independent Audit Committee	-0.009*	-0.008***	0.014*
	(0.005)	(0.002)	(0.007)
Big4	-0.009**	-0.021*	-0.002
	(0.004)	(0.011)	(0.009)
Director Ownership	0.030**	0.036**	0.040**
	(0.014)	(0.016)	(0.017)
Institutional ownership	-0.109***	-0.240**	-0.063*
	(0.030)	(0.118)	(0.036)
Foreign Ownership	-0.035	-0.067***	-0.051
	(0.021)	(0.022)	(0.090)
Firm growth	-0.008**	-0.002	-0.010***
	(0.003)	(0.005)	(0.004)
Size	-0.010	-0.039**	-0.007
	(0.008)	(0.015)	(0.010)
Leverage	-0.045***	-0.067***	0.054
	(0.000)	(0.000)	(0.900)
Constant	0.302***	0.185**	0.322***
	(0.051)	(0.081)	(0.064)
Year Fixed Effect	YES	YES	YES
Firm Fixed Effect	YES	YES	YES

Obs.	2912	1478	1445
R-squared	0.11	0.18	0.17
Hausman Test	19.36(0.000)	13.34(0.000)	12.14(0.000)

Table 7 shows the regression results of all firms, group firms and stand-alone firms. Where the dependent variable is EQ which represents earnings quality and is measured by following approach of Lipe (1990) and Francis, et al., (2004). CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms is equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Robust Check

Like in the case of other emerging economies, the impact of global financial crisis of 2007-2008 was also felt in Pakistan. We assume that in the years of crisis the reporting quality may be different than the normal years due to crisis affected earnings. But at the same time the firms are expected to maintain the confidence of the investors through reported set of information. To capture this, the study includes financial crisis dummy variable in the regression models. This shall help to verify if the quality of reported earnings is the same or different from the quality of reports during the normal years. Table 4.6 and 4.7 shows that financial crisis significantly and negatively affects reported earnings quality of the firms where the effect is more prominent in case of group firms.

Table 4.2 shows a high correlation of firm size with independence of audit committee, audit from Big4, director ownership, institutional ownership and riskiness of a firm. Therefore, in Table 4.8 to 4.10 in appendix – A, interaction terms of size with these variables are included in the main regression model in case of full sample, stand-alone and group firms however estimated separately for each of the term to avoid the possible multicollinearity issue. The interaction terms will account for the additional impact on the quality of reported earnings due to high correlation of size with the other stated variables. In general, results of other variables in Table 4.8 (all firms) are similar to that reported in the previous sections whereas the effect of the interaction term is found in all estimations. Further, results of stand-alone firms in Table 4.9 and group firms in Table 4.10 show that the effects of the interaction terms are different with respect to their statistical significance. More specifically, statistical significance of the interaction terms is more in case of group firms relative to stand-alone firms. Moreover, size interaction with institutional ownership, independent audit committee, audit from big4, and beta is negative and therefore increase quality of reported earnings. However, the size interaction with director ownership show positive and negative association with earnings quality in stand-alone and group firms respectively. Hence, it is concluded that director

ownership helps in improving quality of reported earnings in case of group firms and not otherwise.

Conclusion and Future Scope of the Study

Weak corporate governance mechanisms, poor enforcement of law, plenty of business groups, and family dominance are some of the peculiar attributes of an emerging economy like Pakistan. These attributes increase information asymmetry and reduces the quality of reporting. Considering it as an opportunity, the present study is conducted to examine the effect of corporate governance, ownership pattern and business group affiliation on value relevance of the earnings quality in Pakistani listed non-financial firms. In this study, earnings response coefficient and earnings predictability are used as proxies of reported earnings quality. A sample of 300 listed firms for the period of 2006-2018 is used for the analysis. The results of the panel data modeling show that the CEO-duality and director ownership weaken the internal control system and reduces the quality of reporting or informativeness due to the probable expropriation. Furthermore, managers with more ownership reduce the transparency and more disclosure of accounting information due to less pressure from the capital market to discipline their opportunistic behavior. Thus, the dominant managers create information asymmetry with the aim to gain private benefits from the low transparency and disclosure of financial accounting details. However, board independence, independence of audit committee, external audit from big4 and institutional ownership have significant effect on the quality of reported earnings. These effects are more prominent in case of firms belonging to different groups. Internal audit committee independence and external auditor directly affect the contents and correctness of the information available in the financial reports. Furthermore, the financial institutions are assumed to have more expertise and knowledge relating to improvement in the quality and informativeness of the financial reports. Firm specific variables show that firm size, earnings persistence, growth and leverage has significant effect on the quality of reported earnings while beta has significant adverse effect on the quality of earnings. Moreover, it is found that global financial crisis has deteriorating effect on the reporting by firms in all cases. Whereas, interaction terms of size with other variables reveal that these have statistically stronger impact on reporting quality by group firms than stand-alone firms.

Implications and Future Research Suggestions

The findings are expected to be of great importance in the field of financial analysis. The finding that CEO-duality and director ownership reduces quality of reported earnings and that board independence, independence of audit committee, external audit from big4, and institutional ownerships increase the quality of reported earnings both have practical value for potential investors. In particular, the findings that these effects are relatively more prominent in the case of group firms suggest that investors shall be more watchful in case of such firms. The findings also provide guidelines to regulatory and controlling bodies

to devise rules and regulations in this regard to protect all investors, in particular minority shareholders. The finding about big4 indicates that different rules and regulations shall be made for different auditors. Finally, whereas the existing studies in different developed and developing countries offer mixed results, the current study provides consistent and robust findings specifically related to Pakistani firms.

Results of the current study are based on data of Pakistani firms; we suggest that more studies shall be executed in environment similar to Pakistan. Results similar to this current study could reinforce the findings and thus will provide more reliable basis for designing policies, rules and regulations to control negative effects of poor-quality earnings reporting. We also suggest that the results of the study can be further improved by increase in sample size, while cross country analysis could provide the insight that if the impact is same or different across the globe. Moreover, further studies can also consider additional/ new variables. For example, auditor time period association with firms as it can influence auditing of the firms. Similarly, quality and implementation of law in a country can also impact quality of financial reporting where better quality and efficient judicial system will minimize the chances of poor financial reporting by firms. One of the limitations of the current study is that it does not cater for these possibilities. Another limitation is that this study is related to the peculiar Pakistani environment and thus cannot be generalized to countries different than Pakistan. Furthermore, future studies could make use of other relevant proxies of quality of informativeness and quality of reported earnings to assess reliability of prevailing findings.

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Table 8: Panel Regression of All Firms, Group Firms & Standalone Firms in Crisis

Variables	*(All-Firms)*	*(Group-Firms)*	*(Standalone-firms)*
	ERC	*ERC*	*ERC*
CEO-Duality	0.036***	0.060**	-0.0109*
	(0.000)	(0.020)	(0.060)
Board Independence	-0.152*	-0.660***	-0.254***
	(0.75)	(0.327)	(0.116)
Independent Audit Committee	-0.031*	-0.081***	-0.079*
	(0.018)	(0.011)	(0.039)
Big4	-0.047***	-0.308***	-0.084**
	(0.020)	(0.117)	(0.041)
Director Ownership	0.172	0.281***	0.301*
	(0.239)	(0.129)	(0.151)
Institutional ownership	-0.378*	-0.583***	-0.637*
	(0.188)	(0.048)	(0.326)
Foreign Ownership	-0.269	-0.139	-0.072
	(0.755)	(0.224)	(0.122)
Firm growth	-0.034*	-0.009	-0.059
	(0.071)	(0.115)	(0.042)
Size	-0.289**	-0.257***	-0.296**
	(0.134)	(0.102)	(0.152)
Beta	0.062***	0.063*	0.048**
	(0.020)	(0.032)	(0.023)
Earning Persistence	-0.037***	-0.033***	-0.035***
	(0.004)	(0.010)	(0.004)
Leverage	0.005***	-0.008***	0.006
	0.000	0.000	0.090
Financial Crisis	0.229**	0.702**	-0.234
	(0.106)	(0.273)	(0.217)
Constant	0.692	0.533	0.877
	(0.610)	(1.531)	(0.661)
Year Fixed Effect	YES	YES	YES
Firm Fixed Effect	YES	YES	YES
Obs.	2936	1480	1456
R-squared	0.22	0.21	0.23
Hausman Test	14.16(0.000)	13.52(0.000)	13.12(0.000)

Table 8 shows the regression results of all firms, group firms and standalone firms; where the dependent variables is ERC stands for the earning response coefficient which represents the market response to the quality of accounting earnings. It is computed by following Warfield, et

al., (1995) and Gabrielsen, et al., (2002). While the explanatory variables include CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms are equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets. Financial crisis represents dummy variable for year 2007 and 2008 with value of 1 otherwise 0. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Table 9: Panel Regression of All Firms, Group Firms & Standalone Firms in Crisis

Variables	*(All-Firms)*	*(Group-Firms)*	*(Standalone-firms)*
	QE	*EQ*	*EQ*
CEO-Duality	0.070***	0.090***	0.060***
	(0.010)	(0.035)	(0.011)
Board Independence	-0.021*	-0.029*	-0.004
	(0.013)	(0.017)	(0.018)
Independent Audit Committee	-0.009*	-0.008***	0.014*
	(0.005)	(0.002)	(0.007)
Big4	-0.009**	-0.021*	-0.002
	(0.004)	(0.011)	(0.009)
Director Ownership	0.030**	0.036**	0.040**
	(0.014)	(0.016)	(0.017)
Institutional ownership	-0.109***	-0.240**	-0.063*
	(0.030)	(0.118)	(0.036)
Foreign Ownership	-0.035	-0.067***	-0.051
	(0.021)	(0.022)	(0.090)
Firm growth	-0.008**	-0.002	-0.010***
	(0.003)	(0.005)	(0.004)
Size	-0.010	-0.039**	-0.007
	(0.008)	(0.015)	(0.010)
Leverage	-0.045***	-0.067***	0.054
	(0.000)	(0.000)	(0.900)
Financial Crisis	0.178***	0.179***	0.191***
	(0.015)	(0.014)	(0.035)
Constant	0.302***	0.185**	0.322***
	(0.051)	(0.081)	(0.064)

Year Fixed Effect	YES	YES	YES
Firm Fixed Effect	YES	YES	YES
Obs.	2912	1478	1445
R-squared	0.11	0.18	0.17
Hausman Test	19.36(0.000)	13.34(0.000)	12.14(0.000)

Table 9 shows the regression results of all firms, group firms and standalone firms. Where the dependent variable is EQ which represents earning quality and is measured by following approach of Lipe (1990) and Francis, et al., (2004). CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms are equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets. Financial crisis represents dummy variable for year 2007 and 2008 with value of 1 otherwise 0. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Table 10: *Regression Models All Firms – ERC and Interaction Terms*

Variables	Size_Director Ownership	Size_Institutional Ownership	Size_Independent Audit	Size_Big4	Size_Beta
CEO-Duality	0.036***	0.026***	0.034***	0.036***	0.041***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Board Independence	-0.142*	-0.132**	-0.143*	-0.145*	-0.149*
	(0.75)	(0.60)	(0.75)	(0.75)	(0.75)
Independent Audit	-0.035*	-0.034*	-0.036*	-0.034*	-0.035*
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Big4	-0.036***	-0.026***	-0.034***	-0.029***	-0.046***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Director Ownership	0.392	0.292	0.195	0.182	0.152
	(0.239)	(0.239)	(0.239)	(0.239)	(0.239)
Institutional ownership	-0.269*	-0.341*	-0.359*	-0.269**	-0.369*
	(0.168)	(0.188)	(0.188)	(0.128)	(0.188)
Foreign Ownership	-0.169	-0.159	-0.139	-0.149	-0.179
	(0.755)	(0.755)	(0.755)	(0.755)	(0.755)
Firm growth	-0.035*	-0.034*	-0.036*	-0.037*	-0.032*
	(0.071)	(0.071)	(0.071)	(0.071)	(0.071)
Size	-0.249**	-0.259**	-0.249**	-0.239**	-0.229**

	(0.134)	(0.124)	(0.124)	(0.114)	(0.114)
Beta	0.049**	0.045**	0.041**	0.046**	0.032**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Earning Persistence	-0.032***	-0.037***	-0.032***	-0.035***	-0.031***
	(0.004)	(0.005)	(0.004)	(0.001)	(0.002)
Leverage	0.005***	0.004***	0.006***	0.007***	0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Size_Director Ownership	0.01 (0.393)				
Size_Institutional Ownership		-0.0439* (0.0221)			
Size_Independent Audit			-0.031* (0.017)		
Size_Big4				0.029** (0.012)	
Size_Beta					0.143
					(0.212)
Constant	0.692	0.533	0.877	0.533	0.877
	(0.61)	(1.531)	(0.661)	(1.531)	(0.661)
Year Fixed Effect	YES	YES	YES	YES	YES
Firm Fixed Effect	YES	YES	YES	YES	YES
Obs.	2936	2936	2936	2936	2936
R-squared	0.31	0.35	0.35	0.35	0.25
Hausman Test	18.16(0.000)	12.14(0.000)	12.54(0.000)	13.43(0.000)	12.59(0.000)

Table 10 shows the regression results of all firms. Whereas, the dependent variables are ERC stands for the earning response coefficient which represents the market response to the quality of accounting earnings. It is computed by following Warfield, et al., (1995) and Gabrielsen, et al., (2002). While the explanatory variables include CEO-duality is equal to 1 if both the chairperson and executive director position are held by one person otherwise 0. Board Independence is the percentage of non-executive directors to total directors on board. Independent audit committee is equal to 1 if all the members of the committee are non-executive members otherwise 0. Big4 represents the external audit from big four firms are equal to 1 otherwise 0. Director ownership is the percentage of shares held by the directors their children and spouses divided by total shares. Institutional ownership is the percentage of shares held by the financial institutions to total shares. Foreign ownership is the percentage shares held by the foreign to total shares. Size is measured as log of total assets. Beta is measured through CAPM by using daily stock returns for each year. Growth is measured as book to market ratio and leverage is measured as debts to total assets. An interaction of size with director ownership, size with institutional ownership, size with audit committee, size with big4 and size with beta are introduced. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Table 11: *Regression Models Standalone Firms – ERC and Interaction Terms*

Variables	Size_Director Ownership	Size_Institutional Ownership	Size_Independent Audit	Size_Big4	Size_Beta
CEO-Duality	-0.0104*	-0.0101*	-0.0103*	-0.0104*	-0.0103*
	(0.060)	(0.060)	(0.060)	(0.060)	(0.060)
Board Independence	-0.231*	-0.213**	-0.205**	-0.242***	-0.214***
	(0.116)	(0.105)	(0.102)	(0.116)	(0.101)
Independent Audit	-0.076*	-0.066**	-0.056**	-0.066**	-0.071
	(0.039)	(0.031)	(0.019)	(0.031)	(0.040)
Big4	-0.080*	-0.079*	-0.079*	-0.060*	-0.080*
	(0.041)	(0.040)	(0.041)	(0.031)	(0.041)
Director Ownership	0.199*	0.299*	0.278	0.298**	0.299
	(0.100)	(0.151)	(0.251)	(0.140)	(0.251)
Institutional ownership	-0.626*	-0.526*	-0.531*	-0.647*	-0.638*
	(0.326)	(0.226)	(0.221)	(0.322)	(0.320)
Foreign Ownership	-0.042	-0.032	-0.032	-0.042	-0.052
	(0.122)	(0.122)	(0.122)	(0.122)	(0.122)
Firm growth	-0.047	-0.041	-0.039	-0.037	-0.049
	(0.041)	(0.052)	(0.040)	(0.049)	(0.047)
Size	-0.294**	-0.294***	-0.294*	-0.272	-0.294**
	(0.142)	(0.132)	(0.152)	(0.152)	(0.141)
Beta	0.049**	0.046**	0.048**	0.038	0.048**
	(0.023)	(0.022)	(0.021)	(0.023)	(0.021)
Earning Persistence	-0.035***	-0.036***	-0.034***	-0.037***	-0.033***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Leverage	0.005	0.006	0.006	0.007	0.004
	0.090	0.090	0.090	0.090	0.090
Size_Director Ownership	0.167*** (0.026)				
Size_Institutional Ownership		-0.407** (0.199)			
Size_Independent Audit			-0.074 (0.064)		
Size_Big4				-0.285 (0.194)	
Size_Beta					-0.001 (0.224)
Constant	0.533	-0.350	-0.240	0.112	0.680
	(0.843)	(0.888)	(1.096)	(0.847)	(0.957)

Year Fixed Effect	YES	YES	YES	YES	YES
Firm Fixed Effect	YES	YES	YES	YES	YES
Obs.	1460	1460	1460	1460	1460
R-squared	0.33	0.28	0.27	0.29	0.28
Hausman Test	19.19(0.000)	16.26(0.000)	14.26(0.000)	14.13(0.000)	14.13(0.000)

Note: For definitions of the variables refer to Table 10. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1

Table 12: *Regression Models Group Firms – ERC and Interaction Terms*

Variables	Size_Director Ownership	Size_Institutional Ownership	Size_Independent Audit	Size_Big 4	Size_Beta
CEO-Duality	0.060***				
	0.050***	0.061***	0.051**	0.050**	
	(0.022)	(0.020)	(0.021)	(0.024)	(0.024)
Board Independence	-0.460***	-0.451***	-0.560***	-0.460***	-0.460***
	(0.227)	(0.222)	(0.224)	(0.123)	(0.205)
Independent Audit	-0.085***	-0.085***	-0.085***	-0.085***	-0.085***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Big4	-0.326***	-0.313***	-0.312***	-0.296***	-0.304***
	(0.117)	(0.117)	(0.117)	(0.117)	(0.117)
Director Ownership	0.211***	0.219***	0.221***	0.259***	0.235***
	(0.129)	(0.129)	(0.129)	(0.129)	(0.129)
Institutional ownership	-0.511***	-0.542***	-0.486***	-0.471***	-0.489***
	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
Foreign Ownership	-0.214	-0.315	-0.211	-0.309	-0.332
	(0.224)	(0.224)	(0.224)	(0.224)	(0.224)
Firm growth	-0.007	-0.016	-0.017	-0.007	-0.019
	(0.115)	(0.115)	(0.115)	(0.115)	(0.115)
Size	-0.215**	-0.205***	-0.229***	-0.235***	-0.215*
	(0.102)	(0.101)	(0.109)	(0.103)	(0.109)
Beta	0.059*	0.058*	0.058*	0.058*	0.058*
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Earning Persistence	-0.027***	-0.037***	-0.035***	-0.003	-0.012

	(0.010)	(0.011)	(0.012)	(0.022)	(0.010)
Leverage	-0.008***	-0.005***	-0.007***	-0.007***	-0.008***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Size_Director Ownership	-0.090***				
	(0.010)				
Size_Institutional Ownership		-0.039***			
		(0.011)			
Size_Independent Audit			-0.031		
			(0.057)		
Size_Big4				-0.029**	
				(0.012)	
Size_Beta					-0.143
					(0.12)
Constant	0.692	0.533	0.877	0.533	0.877
	-0.610	-1.531	-0.661	-1.531	-0.661
Year Fixed Effect	YES	YES	YES	YES	YES
Firm Fixed Effect	YES	YES	YES	YES	YES
Obs.	1480	1480	1480	1480	1480
R-squared	0.21	0.24	0.24	0.23	0.23
Hausman Test	19.36(0.000)	13.34(0.000)	12.14(0.000)	13.34(0.000)	12.14(0.000)

Note: For definitions of the variables refer to Table 10. Standard errors are in parenthesis *** p<0.01, ** p<0.05, * p<0.1